THE UNIVERSITY OF CHICAGO

EXCAVATING WAR:
THE ARCHAEOLOGY OF CONFLICT IN EARLY CHALCOLITHIC TO EARLY BRONZE III CENTRAL AND SOUTHEASTERN ANATOLIA

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In Loving Memory of Toni Acevedo

Table of Contents

List of Figures

List of Tables

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Abstract

The study of prehistoric warfare in the ancient Near East is often evoked in Near Eastern scholarship, but remains understudied in a comprehensive or objective manner. This dissertation delves into the quantification and interpretation of the evidence of warfare and interpersonal violence in the archaeological record from central Anatolia and southeastern Anatolia, from the Early Chalcolithic to the end of the Early Bronze Age (ca. 5000-2000 BCE). A holistic view of all visible signs of warfare and violence left behind in the archaeological record is presented. The data collected includes the study of violence on human remains, as well as the remains of identified 'warriors," changes in weapons technologies and in fortification systems over the course of the time period studied, evidence of destruction from within archaeological sites, iconography of warriors, kings and violence created by the cultures studies as well as contemporaneous cultures, and the use of landscape and trade routes in and around the settlements. The data utilized originates primarily from published excavation reports on central and southeastern Anatolian Chalcolithic and Early Bronze Age sites. The evidence from a total of 73 archaeological sites is collected, 35 from central Anatolia and 38 from southeastern Anatolia.

From the start of the Chalcolithic to end of the Early Bronze Age, settlements in Anatolia transformed from simple farming communities to early complex societies. It was during this era that war intensified and became codified as a part of civilization. This dissertation questions how warfare affected this change, and vise versa. An overview of the political history of Chalcolithic and Early Bronze Age Anatolia is presented in order to more fully evaluate the environment and conditions under which this alteration occurred in both central and southeastern Anatolia, before

delving into a detailed look at all available areas of archaeological evidence.

Finally, an anthropological theoretical model, based primarily on similar practice theory models originated from scholarship on prehistoric Andean warfare, is presented to organize and understand the collected data. Other models often used to understand warfare and violence in state societies of the ancient Near East, in particular circumscription theory, worlds systems theory and trade-diaspora, are considered and combined into a hybrid model that takes into account the history of thought in Near Eastern scholarship as well as the practice theory model that has only more recently been applied to this region. Warfare in this time period became a tool for achieving set goals, such as acquiring goods and creating and strengthening power of local elites. As trade increased, so did violence and warfare. By establishing the ruling elite as the ultimate warrior and by codifying violence as an important aspect of society, the threat of violence was controlled by the ruling elite to further their agenda and to solidify their power.

Introduction

Research on prehistoric warfare is at once both a common concept, and an under studied aspect within archaeological literature. Most excavation reports, annual excavation journal publications or final publications on archaeological sites will discuss any evidence of warfare or violence as part of common practice. To date, there have been relatively few attempts to understand prehistoric warfare in the ancient world on a larger level than the evidence at a particular site, or the evidence within smaller regions.

War is a very common subject for texts from the ancient and modern world, as it is an important aspect of culture. Warfare and the threat of warfare leads to advances in technologies, helps create a strong sense of identity within communities, changes the boundaries controlled by the ruling elite, and gives purpose and direction to the young men, as well as women, who fight in the battles and skirmishes. It is easy to understand why so much of human history revolves around the presence or absence of warfare and violence.

The study of prehistoric warfare is difficult. Historic warfare is a far easier study. Texts can tell archaeologists and historians alike about the circumstances of the war, whom fought whom, why they fought, and perhaps how long the hostilities lasted. Archaeology and texts work well together in the study of historic wars, with the excavations of famous battlefields or battlefield cemeteries giving further information to help supplement what is known from the written accounts.

Without texts, historians are excluded from the conversation, while archaeologists can only begin to piece together the small amounts of data left in the archaeological record that would help understand these ancient battles. There is much that cannot be known about prehistoric warfare, and much that will always be lost to us.

This dissertation is an attempt to study ancient warfare and to examine the boundaries of what

can and cannot be known from the archaeological record. The case study for this research is Anatolia, specifically central and southeastern Anatolia, from the start of the Early Chalcolithic (ca. 5500 BCE), until the end of the Early Bronze Age (ca. 2000 BCE). These two regions are of great interest in the study of ancient warfare. Central Anatolia was a region somewhat isolated from much of the rest of the ancient world through the end of the Early Bronze Age, while still being of importance to trade and trade routes from the Mediterranean down to Mesopotamia. This isolation allowed the cultures of central Anatolia to develop in relative isolation, while still maintaining some contact with the greater world of the ancient Near East. Southeastern Anatolia however, was located upon the northern edge of the Mesopotamian sphere, and was greatly impacted by the societies of this region. While there are definite and strong native cultural traits in the cultures of southeastern Anatolia, Mesopotamian influences were also visible in the material culture of the region.

By comparing these two territories, this dissertation studies the rise of warfare in two very different, though still related areas. This thesis questions how warfare became an embedded aspect of society, how society was affected by war, and how various societies affected the practice of war. The time period covered, from the Early Chalcolithic to the end of the Early Bronze Age, is ideal for this study, encompassing the earliest settled farming communities to the advent of independent city-states by the Early Bronze Age. The presence of war, its impact on society and the ways societies adapt to warfare can best be understood in this early period, as these societies were beginning to take shape. This dissertation is not an attempt to study the 'invention' of warfare or its earliest attestations. Rather, this is a study of how warfare was codified in cultures as they progressed from small, largely egalitarian farming communities to full-fledged state societies.

The evidence studied is a holistic view of all visible signs of warfare and violence left behind in the archaeological record. This includes the study of violence on human remains, changes in weapons technologies and in fortification systems over the course of the specified time period, evidence of

destruction from within the sites themselves, iconography of warriors, kings and violence created by the cultures studied as well as contemporary, nearby cultures, the use of landscape and trade routes in and around the settlements and the reaction to increases in violence on landscape use. As no texts are known from the cultures covered, texts are not considered, except when contemporary literate cultures have some bearing on the subject.

This thesis compiles published material from these two regions, accumulating all available data across the time periods to study the presence of violence in these cultures and their reaction to it. A total of 35 sites from central Anatolia and 37 from southeastern Anatolia were considered. For each site, all available evidence for each of the data sets listed above was collected. In addition, a theoretical model, based primarily on similar Practice Theory models utilized from the study of prehistoric Andean warfare, was framed around this data, in order to organize and understand it. Other models often utilized in the study of warfare and violence in state societies of the ancient Near East, in particular circumscription theory, worlds systems theory and trade-diaspora are considered and combined into a hybrid model that takes into account the history of thought in Near Eastern scholarship as well as the practice theory model that has only more recently been applied to this region.

The first chapter of this dissertation defines the various terms used in this dissertation, with particular focus on the definition warfare and violence. The previous scholarship in the study of warfare in the ancient Near East is reviewed, as well as a history of the anthropology of warfare. Finally, a study of various theories on the rise of the state in the ancient Near East is put forth, with an overview of the theoretical model utilized.

Chapters Two and Three are reviews of the social transformations known from central Anatolia (Chapter Two) and southeastern Anatolia (Chapter Three) in the time period covered by this dissertation, from ca. 5500-2000 BCE. These two chapters put forth an account of what was previously known from each of these regions during this time period, and what was added to this knowledge

through this dissertation.

Chapters Four through Nine present the compiled data compiled. Each chapter first gives a detailed introduction to the type of data collected, how it relates to the study of warfare and violence, and some of the history of previous studies on the data. Then, the collected data for each archaeological site studied is offered, first in detailed form from each site, then in table form, by time period.

Chapter Four covers the data collected on the bioarchaeology and skeletal remains. Chapter Five is concerned with weapons and weapons technologies. Chapter Six focuses on fortification systems. Chapter Seven includes known information on destruction levels from the various excavations. Chapter Eight relates the known iconography from the two regions studied, as well as some comparison from pertinent contemporaneous cultures. Finally, Chapter Nine contains the landscape and travel routes data as they pertain to the time period covered and the sites studied. All the data and observations are then studied and analyzed in Chapter Ten, which covers comparative pathways and integration of this dissertation's data. Chapter Eleven, the conclusions, fits the accumulated data into the theoretical model outlined in Chapter One.

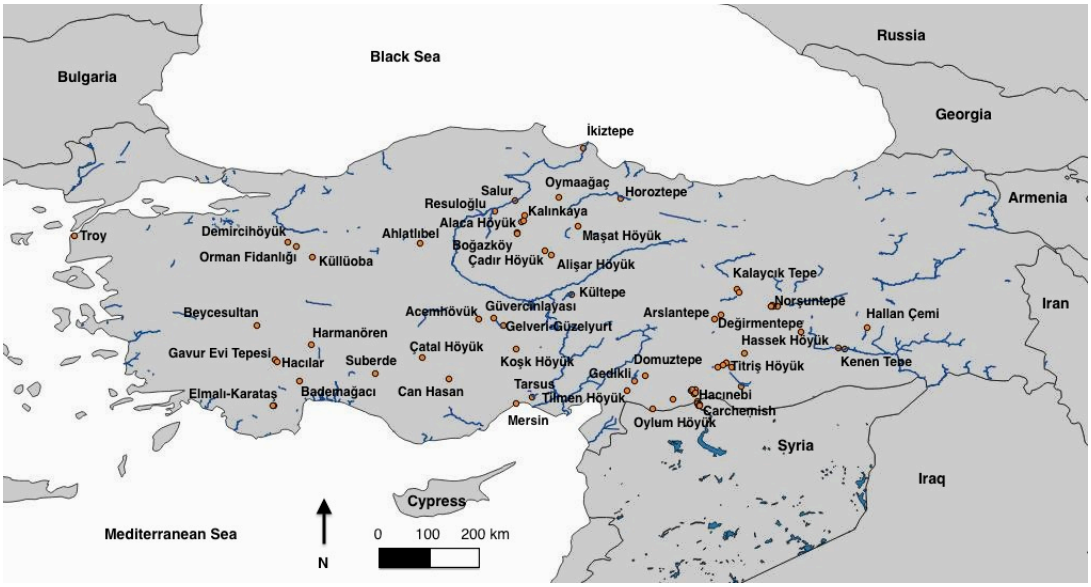
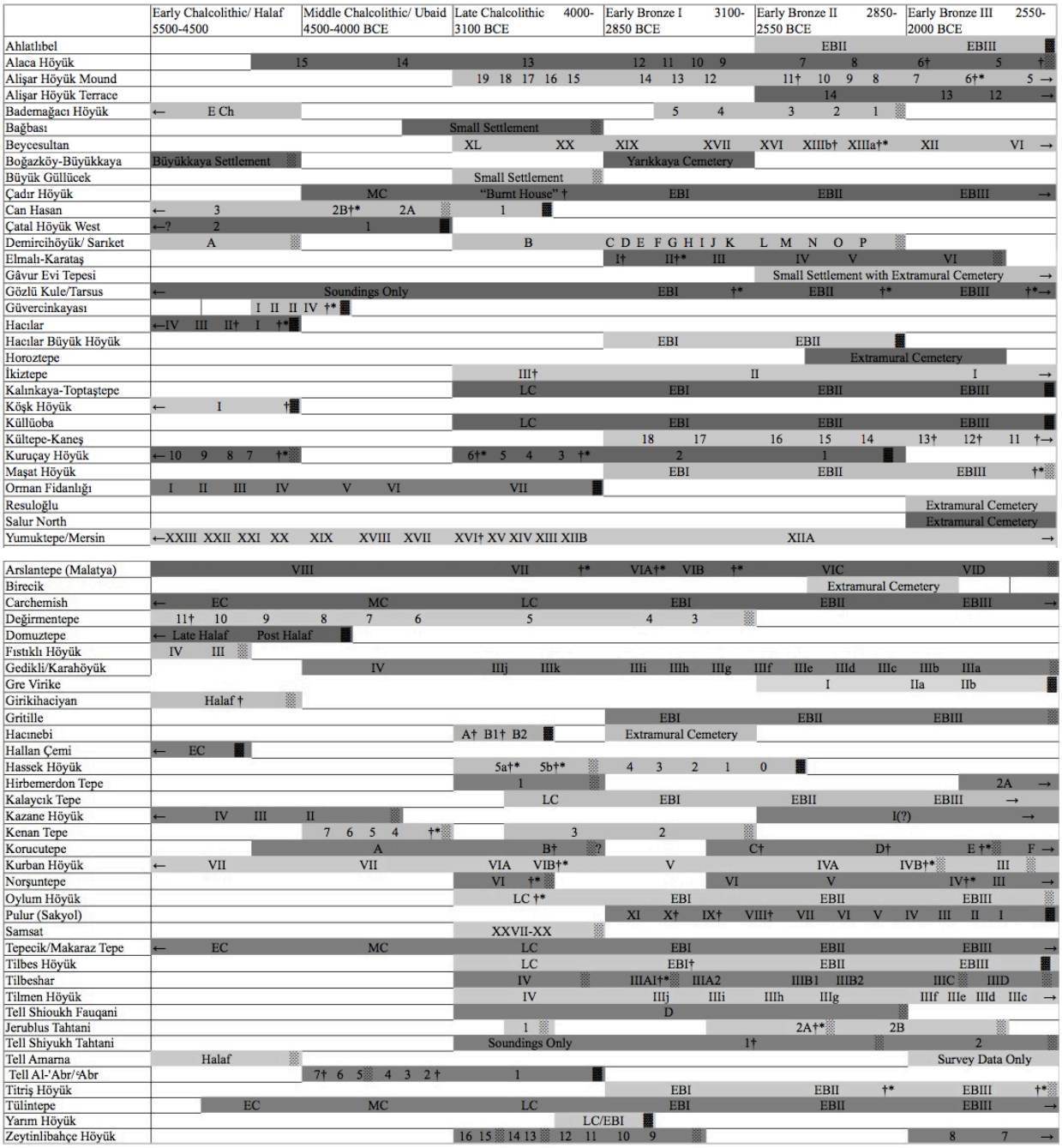


Figure 0.1: Map of Turkey with sites mentioned in the text



Key to Chronology:

†- Partial Destruction Level	†* - Entire site destroyed
⁘ - Abandoned, later reestablished	▓ - Abandoned forever

Figure 0.2: Complete Comparative Chronology

Chapter One : Archaeology of Conflict and Practice Theory

Definitions of Conflict and War

The anthropology of war is a somewhat contentious topic with little consensus. One major difficulty is how to best define the word 'war," which in itself has many different possible connotations. These range from Wright's law-oriented "temporary legal condition permitting hostile groups to carry on a conflict by armed force" (Wright 1942: 7), to Wallace's technical "sanctioned use of lethal weapons by members of one society against members of another society" (Wallace 1968) to Livingstone's simple "intergroup aggression" (Livingstone 1968), to Meade's more detailed "groups in purposeful, organized and socially sanctioned combat involving killing" (Meade 1968).

Understanding warfare, and how best to define it, is difficult in part because of the vast place in the history of mankind it occupies and the socially defined associations that come with it. For example, in the Western world, warfare is most often connected with the concept of two armies facing each other upon a field of battle, as exemplified by examples from Roman warfare to the shockingly high-casualty carnage of the two World Wars. Warfare, however, has a far older history than these examples, and has existed in many more forms than these "civilized" examples of systematic fighting. There is less evidence that such concepts of warfare existed in the ancient past.

While the term warfare does encompass a wide variety of possibilities, we must move beyond the "classical" view of European warfare and allow for other variations. Ancient warfare has been sometimes, perhaps condescendingly, been referred to as "primitive war," most especially in the important work by Keeley (1996), which placed early warfare in a different category than so-called "civilized" warfare. This is a fair observation in some ways. The absolute numbers of individuals involved in prehistoric warfare were often far lower than in later wars, such as those waged by Rome or Imperial China, to say nothing of the number of individuals engaged during the 19th and 20th centuries.

As stressed by Wileman, whether or not these numerical differences are really such a great divide is debatable. While the casualties in ancient warfare may have been far lower in absolute numbers, the actual percentage of the fighting population could have been far higher in these early civilizations, given the smaller sizes of the general populations in this time period. Warfare therefore may have placed greater stress on ancient societies (Wileman 2009: 5).

The tendency to separately group such actions as "primitive war" therefore lessens the profound stresses that warfare would have had on such societies, as opposed to that of modern societies, based largely on the smaller number of peoples involved and the impact of less advanced weaponry Therefore, while the tendency to give ancient warfare a different title than modern warfare may be tempting, for the purposes of this dissertation, all types of organized fighting between groups will still be placed under the heading of warfare. Better criteria to distinguish the categories of warfare from smaller scale interpersonal violence are not the raw numbers of dead, but the presence of organization of the violence, the justification of violence on a societal level, and the possibility of long-term violence, more than a single event.

Better definitions of warfare take more than just combat style into account. For example, Kelly defines war as:

> "armed conflict that is collectively carried out. It differs from other (often antecedent) forms of conflict such as disputes and altercations by the fact that participants employ deadly weapons with deadly force. One of the key features of war is that the deaths of other persons are envisioned in advance and this envisioning is encoded in the purposeful act of taking up lethal weapons… War entails a division of labor that goes beyond that based on age and gender alone. The inevitable intervals between acts of primitive war provide scope for rational calculation, planning, organization, and the foregrounding of the predominantly instrumental character of war. This instrumentality contrasts with spontaneous forms of collective violence such as brawls and riots, where the intentionality centers on expressing anger rather than causing previously envisioned deaths to fulfill a purpose"(Kelly 2000: 4).

The key here is that warfare takes planning and, at least temporarily, a unified group. In this definition, a raid would be considered an act of war, as it takes planning and requires the cooperation of a number of people, even without the consent from the group being raided. At the same time, the initial group sanctions the violence of war as necessary, and even good. To initiate an act of war, a group of individuals must be convinced to collectively inflict violence upon others, even when the "others" may not have harmed those individuals directly. This contrasts to murder, a more personal act not typically sanctioned by society. Murder may therefore be a punishable offence, in a way that collective violence may not be. A war may be declared in retaliation for earlier violence, but the death of any in the opposing group is considered fair, as opposed to only the one who many have committed the violence to begin with. Kelly calls this phenomenon "*social substitutability*" (Kelly 2000: 5).

In this sense then, war can only be between two (or more) groups who in some way have accepted a grouping of "us" versus "them", for without group cohesion, there cannot be the justification necessary for war and the ability to hold all accountable, even to death, for the perceived slights over which the war was waged. Even if only for the length of the war itself, the individual groups must have a sense of unity and perceive the enemy group as enough of a cohesive other that the death of one is as good as the death of any from that group, as enemy lives are considered interchangeable and all held equally responsible for the wrong perceived.

War is never a constant state of any society, but rather episodic, occurring only at certain times, when certain conditions are met. While war and the threat of war is often a major component of any society, and indeed, war and society coevolve, in no society is war constant (Wileman 2009: 2). Of course, the reasons for war can vary, from the desire for revenge to designs upon the property or lands of another group, to acts of reprisal over differences in beliefs. Otterbein has noted the distinction that neutralized societies such as tribes and bands make war not for political reasons but rather for ideas such as revenge, defense, land, plunder or prestige, while centralized societies, such as chiefdoms and

states make war for political purposes that serve the centralized government, such as conquest of new lands and their inhabitants, or for taxes and tributes (Otterbein 1970).

As noted by Bamforth "humans rarely engage in extremely expensive patterns of behavior without very good reason, and warfare... must have been extremely expensive in labour for defensive construction, not to mention its cost in human lives when one group was able to defeat another" (Bamforth 1994: 112). Warfare takes much time and preparation, and, once it is over, resources to defend an area so that such violence will not occur again. It is primarily these preparations, the creation of weapons and defenses, which are visible in the archaeological record (Bleed and Scott 2011: 43).

Another consideration is the problem of identity. This will not be a major theme of this dissertation as it is largely outside the constraints, but the study of identity remains an important concept in the literature on warfare. Ethnicity and identity are in themselves a whole separate topic on which much ink has been spilled (e.g. Arkush 2009, Orser 2001). Part of the consideration of warfare and state societies must be the "us" versus "them" mentality that is a necessary first step to any socially sanctioned violence. In order for a situation to be truly called warfare, there must be a construct of an "other". This is a complex and culturally specific concept. Identity of the other can be based on ethnic differences, differences of territory, or even, as in the cases of civil war, solely on different ideologies. The creation of the "other" is necessary in order to create a cohesive "us" to rally around.

Ferguson and Whitehead suggest that ethnic identities "gain strength from above as state agents try to map peoples for purposes of rule, from below by brokers seeking their own or their groups advancement, and in struggle, as categories for the application of violence... Group identity is defined by attachment to common symbols, among the most potent of which are constructions of 'our history.'" (Ferguson and Whitehead 2000: xx). Stanish and Haley take the position that identity is formed out of the creation of the state and corporate architecture creation, saying corporate architecture "is intentionally designed to foster ideologies of reciprocity and fairness, thereby serving to keep complex

labor organizations functioning. Power, architecture and chief-driven community labor organization are co-determinative and central to the origins of complex society" (Stanish and Haley 2005: 54)

Identity may be strengthened by presence of war, e.g. the escalation of violence and animosity can create a separate identity when none was needed before, as in the foundations to a civil war, or even, as explained by Whitehead, in the creation of a tribe when set against an outside "other". The arrival of an outside threat can cause otherwise unaffiliated local groups to band together and, perhaps for the first time, identity as a single group or at least people with similar origins/needs (Whitehead 2000). Identity is not static, but can shift due to a variety of factors, warfare being one of them. The identity of various people created due to war may fade away once the threat has passed.

With these caveats in mind, this dissertation will continue to use the word "war" to refer to the evidence of socially sanctioned organized violence, as seen in the Chalcolithic and Early Bronze Age periods of Anatolia. The term war arrives with much historical, linguistic and anthropological luggage, and covers a rather wide variety of actions, from "Western" style warfare, to what Keeley refers to as "archaic" warfare. War is then a spectrum of actions, with the commonality of organization, social substitutability, creation of separate identities, no matter how fleeting or permanent, and of course, the possibility and likelihood of violence between two or more groups. The next two chapters will delve more into the appearance of warfare in central and southeastern Anatolia during the time period covered. This dissertation does not seek to understand necessarily the origins of warfare in the ancient Near East or in Anatolia, but rather the presence, prevalence and commonality of warfare from the start of the Chalcolithic to the end of the Early Bronze Age, and what effects warfare had on the rise of the state.

The Archaeology of War

To date, scholarship on warfare in the ancient Near East in general and Anatolia in particular has been limited to overviews that include the entirety of the region and delve into few details, such as Roper's "Evidence of Warfare in the Near East from 10,000-3,400 BCE (1975), Ferrill's *The Origins of War* (1985), Hamblin's *Warfare in the Ancient Near East to 1600 BCE* (2006) and Gat's *War in Human Civilization* (2006). Indeed, many such views of ancient warfare put together into a single chapter all of human existence from the Upper Paleolithic (100,000 BCE) to the start of the Late Bronze Age (1200 BCE) (e.g. Ferrill 1985: Chapter 2; Hacket 1989: Chapter 1).

Roper advocates that the first evidence of warfare in the ancient Near East begins between 7500 to 7000 BCE and that by 5000 to 4300 BCE, fortifications and site destruction at numerous sites denote a more abundant occurrence of warfare (Roper 1975: 300, 323-330). He concludes that the earliest warfare began with the development of a sedentary lifestyle and the domestication of plants and animals, while the increase in warfare later coincided with an increase in population, trade, and the emergence of hierarchical and centralized political organization (Roper 1975: 323-300). Apparently, a common assumption regarding the origins of warfare is that it was first found in the ancient Near East, then spread elsewhere (Ferrill 1985; Kelly 2000, 2; Vencl 1984).

Theories on the origins of warfare place it anywhere from before the emergence of fully modern humans (Corning 1975; Givens 1975), to hunters and gatherer society (Ember 1978; Kelly 2000), to the onset of the domestication of plants and animals (Roper 1975) or even as late as the rise of chiefdoms and state societies (Carniero 1970; Diakonov 1974). Such perspectives take into account the presence of early fortification systems, such as Jericho's Prepottery Neolithic tower (Kenyon 1957), Çatal Höyük's Pottery Neolithic agglutinative architecture (Mellaart 1965a) and its numerous clay sling balls (Ferrill 1985: 24-25), or iconographic data such as the Narmer palette depicting pharaoh smiting his enemies (Shaw 2000: 49), as evidence of warfare before the Anatolian Chalcolithic.

The earliest known bioarchaeological evidence for war is also cited as evidence of its origins. The evidence comes from a Nubian cemetery site, categorized as number 117, near the modern town of Jebel Sabaha, dating to approximately 11,000 BCE. Here, the bodies of 59 individuals were excavated, 24 of whom (40.7%) showed signs of violent death (Wendorf 1968: 993). This case is often cited in accounts on the origins of warfare (e.g. Kelly 2000: 148-149; Ferrill 1985: 11). These accounts rarely delve deeper than this observation or take a more detailed look at any particular region. As a result, though there is a vague impression that warfare started in the ancient Near East by the Early Bronze Age, nothing more concrete or thorough has been attempted for the entire region.

This omission is notable when contrasted to other areas of the world where archaeologists and anthropologists have taken a far more in-depth study of the origins of warfare in prehistory. Using a variety of perspectives, they have considered what the archaeological record can tell about this subject. In the Andean region, for instance, research has centered around the bioarchaeological record and the beginnings of warfare (e.g. Andrushko and Torres 2011, Arkush 2005 and 2006, Arkush and Stanish 2005, Neves et. al. 1999, Standen and Arriaza 2000, Torres-Rouff and Junqueira 2006, Tung 2007). This model in particular relies on comparing types of trauma found in cemeteries from various regions and eras to already established evidence of warfare from previous archaeological data as a base point. Using the trauma found in bones, bioarchaeologists have been able to trace the changes wrought by warfare on the health of the residents of various areas affected. Moreover, research in the Andes studies how warfare and state formation are intertwined, as mentioned in the previous section (Stanish 2001, Stanish 2003, Stanish and Levine 2011).

In contrast, North American archaeologists tend to rely far more on the ethnographic record and reports of early colonialists to the area and then compare to these reports to both historic and prehistoric sites in order to understand the emergence of war to the Native Americans (Bamforth 1994, Bridges 1996, Hogue 2006, Walker and Lambert 1991). This is combined with bioarchaeological

evidence, especially of massacre sites, such as Willey's well written *Prehistoric Warfare on the Great Plains* (1990) on the Crow Creek Massacre site, as well as other studies (Jurmain et. al. 2004; Jurmain and Bellifemine 1997; Kuemin Drews 2001; Kuckelman et. al. 2001; Owsley et. al. 1977; Steadman 2008). Overall, North American archaeology has a much higher focus on the effects of contact upon native settlements, e.g. how warfare existed before and after the arrival of European colonists, with much debate on the degree to which the arrival of outside peoples had an impact on the intensity of warfare in the region (e.g. Blick 1988; Bamforth 1994; Kent 1980; Shankman 1991).

European studies of prehistoric warfare have relied largely on 19th century and early 20th century ethnographic comparisons from North America, South America, Africa, Polynesia and Papua New Guinea as a basis (e.g. Fabbro 1978; Ferguson 1992; Gat 2005; Hackett 1989; Henrich and Smith 2004; Kelly 2000' Knauft 1987; Malinowski 1941; Vayda 1976), with an archaeological component of studies of fortification systems (Burgess et. al. 1988; Keeley and Cahen 1989), and bioarchaeology (Jackes 2004).

A more recent focus, commonly called "conflict archaeology" focuses on the identification and excavation of battlefield sites and what can be learned archaeologically from historical sites (Barnes 2008; Bleed and Scott 2011; Scott and McFeaters 2010). Such studies focus largely on warfare tactics, how specific battles were fought, and what can be further learned from the archaeological record of such battlefield sites. No known battlefields have yet been discovered from prehistoric Anatolia, so such studies are largely outside the subject area of this dissertation. Overall, battlefields are underrepresented in the archaeological record, both due to the very ephemeral nature of the sites, making them difficult to define, as well as the often shallow nature of the remains from battles, so that little will often remain materially on the site even if excavated (Vencl 1984: 123).

Many of the studies cited above try to create a model with which to investigate the archaeology of prehistoric war. This is made particularly difficult due to the lack of written records, which would

tell us such important information as when the war was fought, over what conditions, who were the fighting parties, etc. Without written records, one has only what remains in the archaeological record as a basis. One of the main questions to be tackled by this dissertation is to understand what can be known, and what cannot be known, in the study of the archaeology of prehistoric warfare, using prehistoric central and southeastern Anatolia as the case study. As stated by Webster in his study on the effects of warfare on culture between the Lowland Maya and Polynesia, "Despite its ubiquity and importance [in Polynesian culture], how would we perceive such warfare archaeologically, except where durable fortifications existed? My guess is that if we had to rely *only* on archaeological materials, we would dismiss as inconsequential one of the most important components in the structure and evolution of Polynesian society." (Webster 2000: 350)

The study of warfare and the anthropology of conflict and violence can be roughly split into two methodologies: ethnographic and archaeological study. Both are valid methods and are often combined, but there will always be, of necessity, a gap between them that cannot be bridged, as both use completely different data sets in their understanding of warfare. In ethnography, information is collected regarding specific peoples, their motivations for what they do and how they change over very short periods of time, as the anthropologist examines a group over the course perhaps of a few years. The knowledge to be gained through ethnographic research is limited by the memory of those still living and their remaining written or oral histories. The motivations for actions such as warfare, as recounted or understood by those who take part, can be collected, put into a model and compared to other groups, both living and dead.

Archaeology, on the other hand, has no access to personal stories except those handed down through texts, though such sources often record the point of view of the elite and literate, and so must be taken with a grain of salt. Archaeological studies rely on the remains of material culture. Though much may be learned from such data, the emic perspective and rationale for specific acts can only be

deduced through indirect means. Even such aspects as length of wars, how they were fought, the sides taken, etc., often cannot be known without textual information. There are benefits, however, to archaeological investigations. Archaeology can study a culture and its actions over a long time period of time, from a few years to millennia, and over large areas. In contrast to ethnography, only archaeology can provide the study of societal change over the passage of such long periods of time.

Archaeology collects the story of a people, but rarely of specific individuals; warfare is about both. Years or decades of time can become highly compressed in the archaeological record. Material remains of warfare, such as human skeletal remains with signs of violence, weapons caches, or destruction levels can exist at a site, yet these artifacts may not give information on how the war itself was waged, how long it lasted, or how many people were involved. The scope of war can be exceedingly difficult, if not impossible, to tell from material remains alone. Through archaeology however, one can attempt understand the long-term impacts of warfare, and how it shapes and is shaped by a society.

As previously stated, warfare is a process, rather than a single event (Wileman 2009, Haas 2001a, Vencl 1984). Archaeologists study the effects of warfare over time on a society, in how it changes and how it evolves, rather than focusing on a single battle. As Wileman writes, "If war is to be studied properly by archaeology, we need to be able to answer the question 'What happened next?' It is possible that in attempting to identify the *effects* of warfare in some sort of organized way, we may be in a better position to recognize its *occurrence, participants* and *frequency* in the prehistoric past." (Wileman 2009: 2). Wileman attempts to better quantify the visibility of warfare in the archaeological record and to trying to create a sort of universal model for understanding evidence of warfare in the prehistoric archaeological record that can be used cross culturally, though "it is recognized that no one form of evidence alone can be accepted as proof of prehistoric warfare, and, even in combination, much data cannot be regarded as conclusive" (*Ibid*: 2).

Another problem in using archaeological evidence to study prehistoric warfare is the scarcity of known archaeological sites in both central and southeastern Anatolia. Archaeological sites are found through various means, such as through landscape survey or by accident, but not all possible sites are either known or excavated down to the prehistoric levels. Moreover, some ancient sites may leave only minimal evidence that is hard to recognize without excavation. Therefore, the amount of data we have for any given area is always going to be only a fraction of the entire picture. While there may theoretically be data out there regarding, for example, battlefields in Early Bronze Age Anatolia, as of yet no such site had yet been found or excavated. Archaeology can, however, give information about how societies adapted to war and how war affected any given society over the long term.

A difference noted is between scale, e.g. the number of people directly involved in combat or the number of deaths and intensity, or the number of battles, skirmishes, etc. in a particular area (Shankman 1992:401, Bamforth 1994: 98). Although related, there is a difference between the two concepts, and each would leave slightly different archaeological evidence. As Bamforth writes, "they usefully distinguish between what happens when people go to war (scale) and how often they go to war (intensity)" (1994: 98). Overall, the scale of war is more visible than intensity, as the effects of warfare, e.g. bioarchaeological evidence of warfare, evidence of burnt settlements, etc., are more easily identified than the length of time the fighting continued or how often battles occurred.

Ethnography can be very useful for drawing analogies between known circumstances in societies that appear to be politically and socially similar to those known archaeologically, but these are only possibilities. Anthropologists and archaeologists are ultimately left to decide which ethnographical analogies are the most useful, based on how the data fits in a particular situation.

In Anatolian archaeology, there are no known battle grounds, no knowledge of how war was conducted, how warriors dressed, the number of combatants involved, the reasons behind the warfare or at least the propaganda given to those involved in the fighting. Much is lost when only

archaeological evidence of warfare remains. What *can* then be known about warfare when so much will forever remains unknown to us?

One of the goals of this dissertation is to study many different strands of available archaeological evidence, from the obvious, such as fortification systems, to the less so, such as placement of settlements in the landscape, and combine them in order to come up with a more complete picture than any one or two strands alone could. At the same time, this dissertation will question this process. What can the archaeology of prehistoric war teach us and what can it not? How complete is the picture of the archaeology of war and where is it lacking?

A final consideration is the problem of identity, ethnicity and archaeology. As mentioned in the previous section, identifying the "us" and "them" is a major component in any study of warfare. As revealed through numerous studies (Hill 1996; Orser 2001), identity in the archaeological record is notoriously hard to understand, without resorting to the written record. The archaeological record consists largely of material and physical remains of the former inhabitants. Studying identity through material remains has been the bread and butter of archaeology since the discipline began, however, the so-called "pots are people" model has been very highly contested since the beginnings of the processual school of archaeology and anthropology (e.g. Binford 1973, Bordes and de Sonneville-Bordes- 1970)**.** Material culture alone does not necessarily inform us about the ethnic identity of a group, or even the relationship between one group and another, as having a Chinese vase in your house does not necessarily mean that you yourself identify as Chinese. The more trade increases, the more complicated the issue of material culture and identity becomes.

Another method used to study identity in the archaeological record is through the physical remains of ancient peoples. A large body of literature is devoted to the concepts of metric and non-metric measurements of the human skeleton, ethnic affiliation, the limits of such studies, and the argument that similar ethnic origins does not necessarily mean similar ethnic self identification (Blom

et. Al, 1998, Buikstra and Ubelaker, 2004, Hanihara 2008). Newer methods, such as ancient DNA analysis and isotopic analysis (Kaestle and Horsburg 2003, Verano and DeNiro 1993) seek to answer similar questions about identity, but are still problematic.

Understanding identity through the archaeological record can be quite daunting. This is not to say that nothing can be understood about identity, but rather, as with many of the aspects discussed in this chapter, identity is a difficult issue. In the context of this dissertation, given the limited pertinent data and a lack of written records, attempting to differentiate perceived identity in the sample time periods may prove to be largely improbable if not impossible.

The Anthropology of War

The study of anthropology of war began in earnest during the World War II era, largely due to the works of two men, Wright's *A Study of War* (1942) and Turney-High's *Primitive War: Its Practice and Concepts* (1949). Both men, separately, strove to understand the differences between modern war and ancient or, as they named it, "primitive" war. These studies sought to comprehend why mankind seemed destined to forever fight, a very pressing question given the time frame in which they were writing. The writers were caught in a Neo-Hobbesian and Neo-Rousseauian debate over ancient men living a life that was "solitary, poor, nasty, brutish and short" (Hobbes 1651) or the idea of the peaceful and unstained "noble savage" of Rousseau's *A Discourse on Inequality* (1754).

Both agreed that modern warfare was vastly different from ancient warfare. Modern war is fought for "rational" reasons, such as economic or political gains, territory, hegemony, etc. Primitives only fought for personal, psychological or social motives or just to relieve boredom. Only agricultural states could have true war. Only a state society had the discipline and control over its population to organize a successful war. These books were based almost entirely on ethnographic studies of

"primitive" war as waged by Native Americans, Australian Aborigines, and the natives of Papua New Guinea, as well as what the two writers considered common sense. Archaeological data of prehistoric societies was nearly non-existent in these works (Keeley 1996: 8-15).

Since the days of Turney-High and Wright, the anthropology of war has broadened considerably, to include not only ethnographic data, but also archaeological, textual and biological information. Today, the anthropology of war can be boiled down to three emphases: biocultural, materialist, and historical. These are of course general categories and within each there is a fair amount of variation and contention. Below is a short summary of the main tenants and main authors of the various schools. A full discussion is beyond the scope of this dissertation (for further discussion, see Wileman 2009; Otterbein 2009).

The biocultural or biological school focuses on the biological and ecological elements of warfare, an inborn tendency for humans to fight. This school frequently uses a Darwinian structure and includes modeling of primate behavior as a comparison to humans. The biocultural school tends to focus on the Upper Paleolithic to the Neolithic as the origin point of war (Roper 1969; Bowles 2009), viewing violence as a necessary component of the human condition, since the emergence of modern humans, or even our hominid ancestors (Givens 1975). Proponents seek signs of interpersonal violence in Neanderthal society, proposing, "human evolution has been due, principally, to warfare between hominid groups" (Corning 1975: 369). This school tends to focus on the evolutionary advantages to aggression and warrior society, as warfare reflected the need to increase reproductive opportunities and competition for natural resources (Bigelow 1975; Mathew and Boyd, 2011; Ross 1985; Vayda 1976), and made aggression and revenge the main factor in early violence. War is viewed as a factor in long-term feuds, revenge for theft or murder, as a rite of passage, a method of amusement, etc.

Some theorists seek reasons why certain societies are preadapted for warfare, before societally sanctioned violence became a codified aspect of society (Gibson 1990), though the examination of

whether mankind is naturally peaceful or violent (e.g. Kent 1980; Knauft 1987; Krohn-Hansen 1994; Fabbro 1978). Proponents seek to understand the initial reasons for warfare and how warfare is then sustained and expanded in a given society. The initial impetus for violence in a society may be for more land, or to punish a perceived slight by another group, even if war continues in the future due to other factors (Haas 1990: 9). The biocultural school owes much to the works of Chagnon and his seminal work on the Yanomamö tribe (1968), and Dyson-Hudson's "Human Territoriality An Ecological Reassessment" (1978).

The materialist school posits that warfare has its origins in tribal societies, with an emphasis on societal, rather than evolutionary, factors. Foundational works of the materialist school include Ferguson's *Warfare, Culture and Environment* (1984) and Haas' *Evolution of the Prehistoric State* (1982). Most materialists agree that warfare only begins in earnest with the invention of agriculture (Wileman 2009: 8). The materialist school includes hypotheses about population stress, such as a Malthusian idea of over population in a region and a lack of available space (Malthus 1789, Tainter 2006, Turchin and Nefedov 2009), increasing social friction due to a high population (Ember and Ember 1997), ecological and environmental stress (Ember and Ember 1992), less need for friendly relations as population grows and mates can be chosen from the same cultural group (Lambert 1997), a surplus of labor leading to war as an outlet of energy (Mercer 1989), or even the inverse, a smaller population has a decreased amount of war (Vencly 1984). In addition, the materialist school covers theories of war due to natural disasters such as earthquakes, famines and droughts (Ember and Ember 1997).

Ferguson states that the motivation for war in a materialist viewpoint "can be expressed in one general proposition: war occurs when those who make the decision to fight estimate that it is in their material interests to do so" (1990: 30). He further states there are six strategic objectives of war: "(1) to increase access to fixed resources; (2) to capture movable valuables; (3) to impose an exploitative

relationship on another independent group; (4) to conquer and incorporate another group; (5) to use external conflict as a means of enhancing the decision-makers' position within their own society; and (6) to forestall attacks by others" (*ibid*: 31).

More recently, this school has had to answer charges that their theories create a deterministic tautology, whereby given certain circumstances, war follows, when different societies may in fact react to the same set of variables in a different fashion. An argument against the materialist school points out that there are more than just the materialist reasons for war. The materialist model also calls for a certain amount of knowledge about the society, such as arguments between kin causing a war. When the archaeological evidence may only allow for a very superficial or fragmentary view of a society, such modeling proves to be unfeasible. Ethnographic studies of warfare are very useful in understanding how war can begin in pre-state societies, but they are not always useful when then compared to what is known from the archaeological record.

The historical school attempts to understand war through historical context and personal motivation (Haas 1990: xii), with foundational works such as Robarcheck's "Semai Nonviolence: A Systems Approach to Understanding" (1977) and Whitehead's *The Caribs, 1498-1820: A History of the Karinya in Colonial Venezula and Guyana* (1988). This school endeavors to understand known facts to create an historical model through which various cultures progress. Historicists often use the Service model of band, tribe, chiefdom, state (Service 1962), to understand war as a historical certainty, when certain variables are present. The historical school relies largely on ethnographic data (Ferguson 1984, Ferguson 1992), historical records (Feinman and Marcus 1998, Keegan 1976, Keeley 1996), and, to some extent, archaeological evidence (Roper 1969) of war to create a historically supported pathway to war. The model tends to focus also on social-political causes, such as increased social complexity and war as a social regulator (Marcus 1998, Marcus 2008).

Carneiro's circumscription theory (1970, 1990) has been a major theoretical contribution to this

school. Carniero applies the Service model of band, tribe, chiefdom and state, while acknowledging that this does not necessitate “inexorable progress” but that societies can fluctuate, regress and surge over time. A society cannot skip a step, going from tribe to state, but must first pass through the sequence, even if a society may not take a straight path. Carniero's circumscription theory is ecological in nature, and in the end, highly deterministic. He claims that the rise of a state society was “the outcome of a regular and determinate cultural process... Where the appropriate conditions existed, the state emerged” (Carniero 1970: 733).

Carniero understood warfare as the cause of chiefdoms, as the growing populations of autonomous villages forced warfare more and more often, the results of war changed from the simple acquisition of food, to the acquisition of land and people, so that formerly autonomous villages became under the control of other, stronger villages “and the polities thus formed were *chiefdoms*.” (Carniero 1990: 191). Carniero interprets the reason for changes in political structure to be related to circumscription, or “the pressure of human numbers on the land” (*ibid:* 192).

In terms of warfare, there are a number of previously stated hypotheses regarding its association with the rise of the state. One is that war and conflict are the impetus to social change, causing the progression from one social stepping stone to the next. As the state society, by definition, is more centrally controlled than that of a chiefdom, “waging war successfully depends on hierarchical command and control and on specialized skill” (Haas 1990, 11), thus creating the need for centralization and control in order to wage war.

A second theory advanced by Chagnon builds on circumscription theory, emphasizing material resources and access to mates as a main impetus to war. This theory understands warfare as occurring when an area reaches its threshold for the population, and thus creating competition between people and groups for those resources (Chagnon 1990).

A third regards leaders and their thirst for more power. In bands and tribes, according to this

model, the members maintain a more or less egalitarian society, where leaders only have a small amount more authority than the rest of the band or tribe, and power is more fluid. There may be a war leader when necessary, and a political leader for all other matters. This model shows that the war leader would want more power, and force the change to a chiefdom through the consolidation of his power after duties of war are over, using the war as an excuse to keep his power. In this way, the society is made no longer egalitarian through warfare (McCauley 1990: 12)

The three schools are not mutually exclusive and different theorists have utilized different aspects of the various schools and molded them into their own concept of the origins of war. What these schools in general have in common is a rather deterministic view of war, whether a Darwinian aggressive human nature, population stresses, or an increase in social complexity, all see war as inevitable and once established, time moves forever forward in a single line of progress.

Theories on the Rise of Complex Societies in the Ancient Near East

The origins of the state have been an oft returned to topic in anthropological and archaeological circles. A complete study of the history of the anthropology of the rise of the state and complexity is far beyond the scope of this dissertation, but a brief overview of the controversies inherent in any study of changes in complexity and its relationship to the ancient Near East is important.

First, a definition of the archaic state is necessary. Marcus and Feinman note that:

> **"**archaic states were societies with (minimally) two class-endogamous strata (a professional ruling class and a commoner class) and a government that was both highly centralized and internally specialized. Ancient states were regarded as having more power than the rank societies that proceeded them, particularly in the areas of waging war, exacting tribute, controlling information, drafting soldiers, and regulating manpower and labor" (Feinman and Marcus 1998: 4).

Stanish and Haley make a good argument to differentiate chiefdom and state:

> "the defining characteristic of a chiefdom is that the position of the elite is dependent on the capacity of that elite to persuade people to work together in a cooperative group that they perceive as in their own interest. States or stratified societies arise when persuasive power is converted in coercive power" (Stanish and Haley 2005: 54).

States, in particular archaic states, are largely defined through their political organization, the role of the king, their economy, level of specialization of its citizens, the centrality of the power of the government, etc. In large part, states are defined by the presence and power of a king, who has absolute power over his citizens and is the center of the government, in which the political goals of the state are largely in place primarily exist to protect the power of the king and to expand it. The inhabitants and citizens of a state usually owe their allegiance to the territory rather than to their kinship (Possehl 2000: 264-265). In a state, power is legally held and maintained, and "outlaws all other use of force as it intervenes in disputes between individuals and groups (Service 1963: xxvi). In this way, in a state, warfare is under the control of state power and only sanctioned through it, in contrast to other unauthorized violence, such as murder or small-scale feuds. This is as opposed to chiefdoms, based on kin relationships. While chiefdom-based cultures can and often would engage in war, they had a less intensely centralized power structure.

States with textual records are, of course, easier to recognize, as the infrastructure and presence of a king or chief were recorded. In the case of Chalcolithic and Early Bronze Age Anatolia, these civilizations appear entirely illiterate. Therefore, while there are more complex ways of understanding the presence of a state, such as with the availability of written records or the presence of a separate temple district or religious power (Flannery 1999, Yoffee 2005, Stanish 2004), for the purposes of this dissertation and its limits, this simpler definition will suffice.

This leaves the problem of how to differentiate between states and chiefdoms. In the case of Chalcolithic and Early Bronze Age Anatolia, the difference is quite important, as both exist in these periods, as well as possibly simpler societies. Since the entire data set for these periods will be

archaeological, we will look more what has been said regarding archaeology and understanding society. There have been many different attempts to fit archaeological data into explanatory models.

Flannery argues that deducing the difference between societies, when looking only at the archaeological record, rests on the number of levels of administrators and settlements controlled by a region, which in turn can be understood through survey of a region (Flannery 2000). Wright and Johnson have said that chiefdoms tend to control two to three levels or tiers of settlements, while states controlled at least four or more, with the ranking of cities, towns, large villages and small villages all under the control of a central power (Wright and Johnson 1975). Perhaps the level of administration in a settlement, and the differentiation between state and chiefdom is best understood, according to these authors, by the number of controlled settlement hierarchies. Another method studies differences in architecture. In chiefdoms, according to Sanders (1974), chiefs organize labor to build public works, such as temples or other public buildings, but not palaces for the chief himself, so palaces would be evidence of a state.

Feinman and Marcus mark the differences between ranked societies and states as:

> "(1) a change in the settlement hierarchy from three to four levels; (2) a change in the decision-making hierarchy from two to three (or more levels); (3) a fundamental change in the ideology of stratification and decent, such as that rulers were conceded a sacred supernatural origin (establishing their divine right to rule) while commoners were seen as having a separate descent of nondivine origin; (4) the emergence of two endogamous strata, the result of severing the bonds of kinship that once linked leaders to followers in a branching continuum of relationships; (5) the evolution of the place as the ruler's official residence; (6) the change from a single centralized leader (e.g. the chief) to a government that employed legal force while denying its citizens the use of personal, individual force; and (7) the establishment of governmental laws and the ability to enforce them... Ancient states were dynamic political systems that changed throughout their specific historical trajectories. Each state is, therefore, different in some respects from other state, but early states as a group do display similarities" (Feinman and Marcus 1998: 6-7).

There is also a problem of size. The small polities in Early Bronze Age Anatolia are often called city-states, as they only ruled over a small, autonomous region, and there is less information on how, if

at all, they ruled their surrounding countryside (Feinman and Marcus: 9-10). So how to define such settlements?

Another consideration is the effect of contact with expanding state societies on non-state societies. This particular contemplation is often applied to North American studies, evaluating evidence of warfare among North American native populations before and after European contact, the so-called tribal zone of Ferguson and Whitehead, defined as "that area continuously affected by the proximity of a state, but not under state administration" (Ferguson and Whitehead 2000: 3), a line of inquiry often based on ethnographic data (e.g. Bamforth 1994; Blick 1988; Ferguson and Whitehead 1992; Ross 1984). While there is no doubt that contact with such societies can greatly disrupt the native culture in various ways, what is less clear is if this distruption would increase or decrease the amount or type of warfare represented. Some attempt to prove that what Blick calls "high casualty warfare" emerges only with the arrival of a state society or at least contact with a state society, such as the arrival of Europeans in the New World. The idea is that while tribal societies are not completely peaceful, it is not until contact with state society that warfare drastically increases (Ferguson 1992).

State control over new lands is often separated into two types in the literature: territorial, such as the conquest of new lands, versus hegemonic, such as the conquest of the peoples and folding them into the victorious culture (Hassig 1985, 1988 2000, Littwak, 1976, Spencer 2003). This is an important distinction in understanding how states interact with their new contacts and how they wage war, if at all. In a territorial conquest, the local government is replaced by one implemented by the conquerors, and the land usually is greatly restructured. In hegemonic conquest, the local government is left largely intact, with the local institutions under the control of the conquerors and largely autonomous in exchange for loyalty (Hassig 2000: 84-85).

In ancient Near Eastern literature, there has also been much work on this question of state intrusion into otherwise less complex societies and the results of such contact. As will be more fully

explained in Chapter Three, prehistoric southeastern Anatolia was such a place of consideration, with its close ties first to the Ubaid culture, then later the Uruk and the Akkadian empire, so such a discussion is germane to this dissertation.

In a sense, this dissertation sees violence through two different lenses, that of warfare in a region that seems to be relatively unaffected by outside forces and with little contact with other peoples, e.g. central Anatolia, and warfare in a region with its own distinct cultures greatly affected, either by warfare, trade, colonization or some combination of these, by outside forces, e.g. southeastern Anatolia; In other words, the creation of a secondary state through contact with a primary state. In this way, the study of these two regions allow for an overview of prehistoric archaeology through two different circumstances. By the Middle Bronze Age, both central Anatolia and southeastern Anatolia were in frequent contact with outside forces as Near Eastern contact began to expand more and more, thrusting even the previously relatively isolated central Anatolia into the politics of the Near East, as it would continue to be even until the present day.

This dissertation, however, studies the period of time before this. Much of the literature concerning warfare and contact between state and non-state societies deals with fully formed state systems and often an ongoing campaign by the state to conquer new lands (e.g. Ferguson and Whitehead 2000). Much of what will be covered by this dissertation concerns newly minted states without much in the way of a well-planned, long term strategy. Even the Akkadian empire was creating a new concept, being the first empire in the ancient Near East. In this way, the case study of this dissertation is somewhat unique.

As previously mentioned, states are not static, coming into being and staying in the same condition until their downfall, but may rise, fall, and rise again. Marcus explains this in what she terms her *dynamic model* (Marcus 1993: 2000), based on the rise and fall of the Mayan chiefdoms of Tikal and Calakmul in the 4th century A.D. Her model studies the continuous "repetitive cycle of

consolidation, expansion, and dissolution" (Marcus 2000: 60), the build-up of a state, consolidation of land, peoples and territory, and ultimate breakdown as the previously conquered lands revert to their own autonomy. The model was also applied to Mexico at Teotihuacan (Garcia Cook 1994), prehistoric hunter and gatherer societies in New Zealand (Walter et. al. 2006), and Uruk in Mesopotamia (Algaze 1993).

Tainter further examines the rise and collapse of states on the basis of Malthusian ideals of overshoot, be it of overuse of natural resources in a given area or the overexertion of a state on its peoples, studying examples from Mesoamerica and Mesopotamia, using both archaeological and historical data. He studies examples such as the collapse of the Ur III civilization and the general collapse of numerous sites at the end of the Early Bronze Age in Mesopotamia and the Indus Valley, due to both an overuse of available resources as well as detrimental environmental conditions (2003), though he concludes that no clear examples of a purely ecological collapse are yet known from either archaeological or historical evidence. A study of ecological reasons for collapse of civilization is the topic of Chew's 2001 book, spanning from the Early Bronze Age until the Islamic period, across many cultures.

A second issue is the definition of the term "state" itself. There has been a long-standing debate over the historical accuracy of calling any archaic civilizations a "state." The term originates from Service's model of band, tribe, chiefdom and state (Service 1962). This cultural evolution-based system of emerging complexity has been criticized as being ahistorical or a tautology. The problem is not with the concept of "state" but rather the connotations of inevitability and evolutionary superiority implied in the term and the way it has been utilized in past literature. In order to bypass much of this debate, this dissertation instead will use the term complexity synonymously with the word state. The definitions mentioned in the section will be used to define the word, rather than its historical usage.

What is clear is that there is no single pathway to complexity, nor is that pathway always linear.

There are many ways in which society can become more complex over time, as well as many examples in which a society may reach a more complex state of government for a period of time, only to have this fall apart and revert once more to a less complex system. Recognizing the signs of early statehood, especially a short-lived state, is notoriously difficult due to scant evidence. In this dissertation, such possibilities will be taken into account, and the model used will attempt to include this less linear view of the emergence of complex societies.

The rise of complexity in the ancient Near East has for the most part revolved around Mesopotamia and the areas that have been affected by these changes. Less has been said directly about Anatolia itself and the rise of complexity, except in the cases, most especially in the southeast, where Anatolian civilizations have come into contact with Mesopotamian influences, whether through trade or through conquest.

Numerous attempts have been made in the last century and a half to try to explain how and why states first arose, in particular in the ancient Near East, as that is the earliest known example of such a change in social complexity. Early, largely discredited, examples include the inevitability of surpluses created by the rise of agriculture that in turn leads to the rise of a state society to oversee the surplus (Childe 1936); the "hydraulic hypothesis" that posits the invention of irrigation systems allowed the rise of the states (Wittfogel 1957); the conquest of pastoral nomads by settled agriculturalists (Oppenheimer 1926); for the purposes of long distance trade, as in Algaze's World Systems (1993); or interaction between several polities at broadly similar levels of scale and complexity as a primary factor in sociopolitical development, in the so-called peer polity system (Renfrew and Cherry 1986). Most likely, the rise of state systems is not monocausal, instead derived from multi-variable causes for the change from chiefdom to state (e.g. Flannery 1972, Wright and Johnson 1975). This dissertation does not seek to find the *reason* for the rise of the state, but rather how the rise of the state and warfare interact. There is little doubt in most modern scholarship that warfare has some impact on the rise of

complexity.

One of the largest influences in Near Eastern scholarship on rise in complexity was the work by Carniero (1970) and circumscription theory mentioned previously in this chapter. Carniero tried to explain how warfare and the rise of the state interacted, with "war as the *mechanism* of state formation" (Carniero 1970: 734). Carniero formed circumscription theory by comparing evidence from Egypt, Mesopotamia, the Indus Valley, Mexico and Peru, largely from archaeological sources.

Circumscription theory maintains that pristine states arise in areas where the agricultural resources are circumscribed, or limited by such geographical elements as mountains, deserts or oceans, limiting how much an area can expand using its own resources. Carniero maintained that warfare occurred in pre-state societies regardless of the environmental limitations, but that in such circumscribed areas, the limitations of a region became dire once population expanded beyond what the land could successfully maintain, so that warfare, the removal of peoples from one area or the taking of resources from another area became necessary. Therefore the subordination of one group to another was the natural result, and society increased in complexity from tribal villages to small chiefdoms to larger chiefdoms to full states, as a way to deal with the consequences of increases in violence. Warfare then was a method of organization and administration, as power was centralized and autonomy ended (Carniero 1970). Such modeling remains very deterministic, not leaving space for cultural variability.

Flannery stated that "archaic states were centralized systems with an administrative hierarchy in which commands traveled downward while tribute and information output traveled upward" (Flannery 1992, 1995, 2000). Flannery studied the settlement hierarchy of the city of Lagash in southwestern Mesopotamia, which at its height contained more than 20 towns and 40 villages (Flannery 2000). Lagash clearly displayed periods of cyclical rise and fall, where the area would rule a larger area, then become smaller and shrink down again. As Flannery states "treating all cities as independent capitals at all times oversimplifies the ancient rulers' constant struggles to extend their hegemony" (Flannery

2000, 21). Central Place Theory, as set forth by Flannery, remains an important model for understanding how polities interact.

Another important model to explain the rise of state societies in the ancient Near East was the adaption of the World Systems model, in particular by Guillermo Algaze. The model focuses on the Uruk period in Mesopotamia (4000-31000 BCE), which will be further covered in Chapter Three. In Algaze's understanding, the Uruk peoples created colonies that spread over Syria, Iran and Turkey, primarily to procure precious raw materials for the state. Uruk was stable in terms of agriculture, but the land was poor in other raw materials, such as metals, wood, bitumen, and ivory, which Algaze termed disequilibrium. He theorized that the Uruk culture became a state society in order to make up for this lack through state controlled long distance trade. This in turn would impose a state structure on regions where it had not previously existed, such as northern Syria and southeastern Turkey though a framework of dependency and domination in the core and periphery. Aglaze named this 'momentum toward Empire" which became more fully entrenched in the later Akkadian empire (Algaze 1993).

The World Systems model was based on the writings of Wallerstein (1974), who developed a European capitalist model based on hierarchically organized division of labor, being used to enforce economic dependency. In this model, the primary states do not take over the entire region, just certain key areas, leaving the remainder largely under control of the native peoples. The controlling state would however, control key water ways and travel routes in the dependent regions, while maintaining only informal economic control with some shows of force in order to reinforce supremacy but without full time standing armies (Algaze 1993).

The core dominates the periphery through some combination of military, technological, ideological, or organizational superiority, controling all long distance exchange within the periphery, and changing the organization of long distance exchange structure in the periphery. The core controls the periphery directly through colonial rule or through local rulers dependent on the core, and it relies

on labor being cheaper in the periphery than in the core, creating an unequal or asymmetric exchange system. This model, however, has not been universally accepted. Criticism of the model centers on the lack of archaeological evidence for large amounts of traded goods in Iraq, such as metals, wood or exotic stones, or massive amount of finished goods from Mesopotamia found in periphery sites (Stein 1999).

A third model and a response to the World Systems model was Colin Renfrew's peer-polity system. This model centered around the interaction between several polities at broadly similar levels of scale and complexity as a primary factor in sociopolitical development. In the peer-polity model, no hierarchical differences exist between polities, so there are no peripheries. This would result in the possibility of either asymmetrical or symmetrical trade. Here, exchange was not the primary causal factor affecting developmental trajectories. Instead, politics and ideology between polities was the key factor. Evidence of the model included the direct control by Uruk over Susa and its peripheries, and colonial enclaves in Syria and Anatolia (Renfrew and Cherry 1986). Stein pointed out, however, that the periphery is not helpless, can also set the terms of interregional interaction to their own advantage, even if the core is more powerful (Stein 1999).

Stein theorized the distance-parity model. In this system, the further the distance, the larger the decay in ability of the core to project its power into the periphery. This would alter the nature of the interregional interaction, so world system is just one modality in a broader range of forms of political and economic relations among complex societies The greater distance of the core to the periphery, the less their hegemonic power, so peripheries do not get the dependency that is part of the world systems model. The further away, the more symmetric the trade relationship must be, as control cannot be exerted through military and personal might (Stein 1999).

The many theories of social change in the ancient Near East are useful ways to compile and understand data from various time periods and regions. Many of these theories tend to be based on the

supposition that states arose from single factors, or leave little room for individual agency or cultural differences. It is through a possible merging of the understanding of the rise of social complexity in the ancient Near East and the more dynamic practice theory model that perhaps more can be understood regarding how the rise of complex societies and warfare interact. This dissertation does not seek to reinvent the wheel, but to take what has already been understood regarding the ancient Near East and look at it from a new angle.

History and Application of Practice Theory

The practice theory has become a popular model for understanding warfare in some areas of the world. This model incorporates aspects of both the materialist and historical schools and adds the elements of agency and culture, progression and regression (Stanish 2001, Stanish and Levine 2011, Arkush 2006, Nielson and Walker 2009). Practice theory itself dates back to the work of Bourdieu (1977) and his models of *habitus.* This model seeks to incorporate the concept of practice, "culturally informed and historically contextualized action" (Nielsen and Walker 2009: 4), into otherwise already defined archaeological systems.

Arkush defines practice theory as one that

> "bridges the realms of individual action and 'structure,' allowing both cultural persistence and cultural change to be seen as the cumulative result of many actions- often routinized or habitual- taken by many individual agents. In these actions, individuals reproduce and embody fundamental, shared beliefs about the ordering of the world. As people face new challenges and changing situations, they actively reformulate existing practices to further their interests (social, economic, and political) and to make sense of the world they inhabit." (Arkush 2009:191).

Practice agency then allows for greater individual action and agency in the course of history, as well as for cultural variation in specific societies. This model accepts greater variation in societies than is often allowed by the earlier biocultural, materialist or historical schools. This is important as a model

of "primitive" war advocated by Keeley (1996) and applies well to the Native Americans of North America, but does not always line up well with the evidence found in Anatolia. In practice theory, similarities between cultures are recognized while still allowing for variation between cultures. For example, war is highly individualized to a particular culture, in the symbols created for it, the reasons a society engages in it, and the type of war undertaken, be it a large scale conflict involving hundreds to thousands of people or only small skirmishes in which little blood is drawn. Practice theory also allows for various motives for violence, including population pressure or even a symbolic reasons, while still considering the commonalities of war across culture, such as weapons types and fortifications that alter the effectiveness of warfare (Arkush 2009: 193). Warfare and its conditions are a result of the constraints and pressures on a society, and how its individual agents choose to react to those variables.

The formation of an archaic state is not a straight line to the rise in complexity as envisioned by Service, but more like a teeter-totter, moving up and down, backwards and forward, a vacillating process. Amongst this back and forth are alternating periods of war (competition) and peace (cooperation) (Stanish and Levine 2011). Stanish calls this the "evolution of cooperation," with war and trade as the two parts of state formation, both leading to cooperation within a society to achieve communally useful material and political ends.

This theory examines not just how states emerged from a single site at a precise time period, but rather from the "interaction of many non-state polities across a regional landscape over many generations as the context in which first-generation states develop. Intensive and sustained interaction among many smaller polities seems to be critical to the emergence of increasingly complex political units" (Stanish and Levine 2011: 1).

In order for two polities to engage in warfare, they first must have some sort of interaction with each other, and, most likely preceding periods of cooperation through trade. The two polities may then have oscillating periods of cooperation and competition. It is through this interaction that senses of

identity and the possibility of violence can begin again (*ibid*).

Through practice theory, aspects of Carniero's circumscription theory can be reinvigorated, removing its deterministic aspect, implying not that the circumscription of a polity will necessarily lead to warfare and state formation, but rather that it will lead to interaction with other polities and open the possibility of warfare once the two polities are known to each other. Thus, instead of viewing societies as mere blocks responding in set ways to given stimuli, they are agents able to make rational decisions based on how each will best gain advantage. Practice theory attempts to understand such interactions utilizing aspects of game theory, economic theory, and circumscription theory.

> "Using various aspects of game theory and cultural transmission theory, we conceptualize the emergence of archaic states as a process in which people cooperate in increasingly larger (higher populations per bounded polity) and more complex (specialized and hierarchical) political and economic organizations. These processes of early state formation, as evidence in the archaeological record, can therefore be seen as the 'amalgamated behaviors of multiple agents'" (Stanish and Levine 2011:1).

Therefore, both internal and external forces are factors that the agents of the individual polities can react to as best suit their situation, permitting the possibility for state creation. In this way, as in game theory, agents take the given variables, be they political, ecological, etc., and make decisions that both give them the most advantage as well as the best way to restore stability to their lives and again reach a form of equilibrium. Thus, though the population pressure posited by Carniero was likely never reached, there were other aspects of circumscription that can still be taken into account.

> "In a context of sufficiently high regional population densities, conflict emerges as a viable strategy for highly cooperative groups to acquire more resources and protect themselves against political adversaries. In effect, organization intergroup conflict is a type of *within-group* cooperation, albeit in a form of behavior that is used in a decidedly non-cooperative manner *against other* groups. Groups that successfully organize themselves to raid others will acquire external resources and, in the long run, will be at a selective advantage against groups that are less well organized" (Stanish and Levine 2011: 2).

Before the beginning of state societies, one would expect an increase in warfare as well as trade

goods, leading in the end to the emergence of a few dominant sites over others that become smaller, less powerful and likely submissive to the newly developed center.

An important aspect of practice theory focuses on the Janus-like single entity formed by the interaction of warfare and trade. Taking the example of the Uruk expansion as briefly discussed above, the Uruk expansion was a period of highly increased interaction between the Mesopotamian world and southeastern Anatolia. This contact previously existed, but in this period it was at its highest point, causing a large number of very visible effects in the local population, even if they were not being directly controlled by the Uruk peoples, as was once thought. Practice theory helps better explain the Uruk expansions into Anatolia, as local populations first interacted and then increased that interaction over time, with the Uruk as the high point of this movement, only to have it all break apart at the end of the Late Chalcolithic, with a movement then towards more local culture and towards central Anatolia as new trading partners, away from Mesopotamia. The Akkadians thus became less trading partners and more of a bother. This will be further detailed in the third chapter.

Each period, from Halaf to Uruk, paved the way for the next stage where even more influence was pressed upon the southeastern Anatolian peoples, while full control was never taken, the Akkadians tried to do so later in the Early Bronze period. The study of warfare in the archaeological record traces increases in outside influence over time, while also studying internal cultural changes.

This dissertation researched the connections between war and the rise of the state in central and southeastern Anatolia, while allowing for regression and changes, as well as for the agency of the civilizations studied. Using archaeological evidence to study how the various factors often attributed to warfare, such as circumscription/population growth or central place theory, can give us information about how the inhabitants of these polities responded to such stimuli and what the end result was. Thus, using a practice theory model, we can re-examine the different models already proposed regarding the formation of complex societies in the ancient Near East. This will allow us to ask questions of the

model and of the data acquired, such as how do warfare and the rise of the state interact? Is there a correlation between the rise of complexity in central Anatolia and an increase of warfare? Is there a visible back and forth between rise in complexity and collapse?

Chapter Two : Social Transformations in Central Anatolia from 5500-2000 BCE

Introduction

In the majority of the literature, central Anatolia refers to the Central Plateau region of Anatolia. This chapter presents an overview of social transformations in this central region from the start of the early Chalcolithic, at about 5500 BCE, to the end of the Early Bronze Age, at about 2000 BCE. With the exception of later texts that refer back to this time period, such as the tale of the "Queen of Kanesh" (Hoffner 1997), no texts are known from this region during this time period, so all the information from this chapter is based on archaeological research. As a result, gaps in our knowledge of the area and time period remain.

For this dissertation, central Anatolia refers to the area from south of the Yeşilirmak River in the north, to the Mediterranean in the south, to the eastern edge of the Sakarya River in the west and the Ceyhan River in the east, incorporating the Lake District, the Konya Plain, the central Plain, and Cappadocia, but not the Taurus or Pontus Mountain regions, the Troad or the Aegean (See Figure 2.1). This does not imply that this region was a single unified political entity, or even that the settlements in this region had any sense of unification, affinity, or cultural ties to each other. What the settlements have in common is, in general, similar cultural norms and material remains. This indicates some amount of communication between the various settlements and perhaps a common origin.

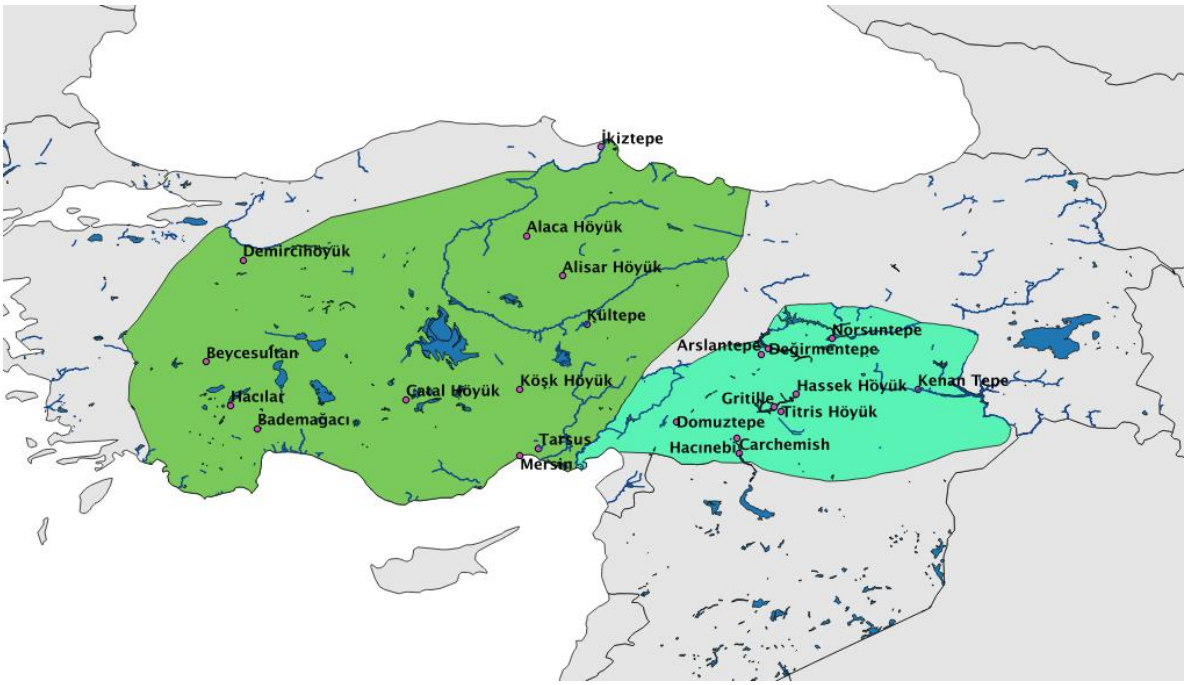


Figure 2.1: Map of Central Anatolia with Key Sites

The settlements in this region have more in common with each other than they do with settlements outside of this region. This does not indicate, however, that external ties did not exist. For example, much has been made about similarities between the style of the standards and jewelry excavated from the so-called "Royal Tombs" of Alacahöyük and various materials excavated from contemporaneous and older Caucasian settlements to the west (e.g. Makkay 1993; Bryce 2005; and Akugal 1962). During this period, there was considerably less contact between settlements in this region and areas outside. Evidence of trade is present, but unlike in southeastern Anatolia, as will be explained in the following chapter, large numbers of foreigners were not present in the region, setting up colonies or trying to conquer or control these native settlements.

Overall, central Anatolia has a continental climate, with chill winters and warm dry summers. The annual mean rainfall is 350-400 mm, enough to allow for dry irrigation. The vegetation is steppe-like in the lower valleys, surrounded by highlands, with the Pontic mountains to the north and Taurus Mountains to the south, and the Kızılırmak and Sakarya rivers flowing throughout (Özbaşaran 2011:100). This area also covers a number of microclimates, including the Lake District, Cappadocia, and the Konya Plain, each with their own particular climates and natural resources. Cappadocia is best known for its volcanoes (Hasandağ) both active and extinct or dormant, and thus its high number of obsidian sources. The Konya plain has its own volcanoes (Karacadağ, Karadağ), as well as a number of lakes.

The central Anatolian region was inhabited quite early, with signs of human habitation at least as early as the Middle Paleolithic (Slimak 2004). The region is full of natural resources that would have been quite enticing to early humans, including ample amounts of wild edible plants and animals (Asouti and Fairbairn 2002), numerous fresh water rivers and lakes, and unique raw materials, such as the Karadağa and Hasandağ obsidian sources, ideal for stone tools and early trade. "Highlands with forested slopes, open steppes, wetlands, and pluvial lakes offered a suitable and biotically diverse environment for the communities that lived there" (Özbaşaran 2011: 1170). From the earliest settlements, inter-community exchanges are visible in the archaeological record, mainly through the movement of obsidian lithics (Matthews 2002; Schoop 2005).

The time period covered in this dissertation, 5500-3000 BCE, is split into three phases. The terms applied, Chalcolithic, Neolithic and Bronze Age, are based on an older concept of how cultures change and evolve, and do not always in the end align perfectly with data on newly discovered cultures, or the many complexities of various individual cultural zones or specific

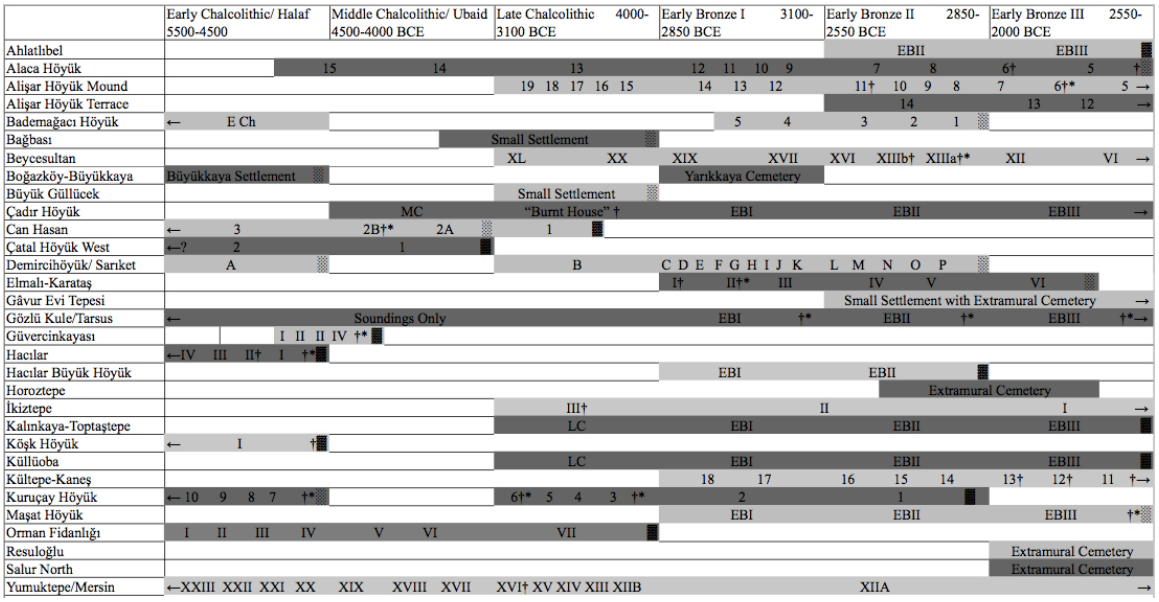
sites. As Yakar states, such terms "hardly define the diverse subsistence models, technological complexity, or social organization of Anatolian society" (Yakar 2011: 58).

For a more concrete example, the signature change from Pre-Pottery to Pottery Neolithic seemed to have limited effect on the actual populations involved. The invention of pottery did little to change the day-to-day life of ordinary people, yet for the archaeologists who study these cultures, the invention of pottery greatly enables certain popular techniques of dating, chronology and characterization. Thus, what is a major milestone in the understanding of archaeologists was likely far less important to those civilizations who utilized it. For the most part, archaeological designations such as the Early Bronze Age III or the Middle Chalcolithic are based on ceramic chronologies. In the case of the Late Chalcolithic/Early Bronze I transition in central Anatolia, despite over a century of archaeological research, these two periods remain quite difficult to differentiate, as the ceramic styles remain fairly consistent across the time period (e.g. Summers 1993:29). Thus, these two periods are best distinguished through absolute dating methods such as carbon dating.

Due to convention, these terms remain in use throughout the archaeological literature, and so will be employed in this dissertation, as attempts to rename these conventions (e.g. Yakar 2004) have largely been ignored by the Anatolian archaeology community. To better reflect cultural continuity and change in the settlements studied in this dissertation, the time periods are split up as follows: Early and Middle Chalcolithic (5500-4000 BCE), Late Chalcolithic to Early Bronze Age I (4000-2850 BCE), and Early Bronze II and III (2850-2000 BCE). The Early Bronze Age IV (2000-1900) will not be as it is more a transitional period to the Middle Bronze Age than a part of the Early Bronze Age and not all scholars agree upon its importance or even existence as a distinct and recognizable era. I use this three-period convention due to the

difficulties in distinguishing further within these time frames, as more cultural continuity exists between the Late Chalcolithic and the Early Bronze Age I than between the Early Bronze Age I and II. The same three divisions will also be utilized for the study of southeastern Anatolia, as will be discussed further in the following chapter.

The various scholarly interpretations of Anatolian periods and cultural practices create major chronological issues. For example, in southeastern Anatolia, the commonly employed chronology is based largely on similarities to the Levant and Mesopotamia, while central Anatolia is synchronized with Aegean or even Trans-Caucasian chronologies. For example, Pre- and Pottery Neolithic divisions sit relatively well with Neolithic sites in southeastern Anatolia, while working less so in central Anatolia. Another problem is misdating, such as the mis-categorization of a site with levels in the Early or Middle Chalcolithic to the Late Neolithic, based on outdated chronological sequencing as opposed to more absolute methods of dating such as radiocarbon. This dissertation attempts to find a middle ground by using the chronology used by Yakar (2011, 2003. 2002) and applying it to both central and southeastern Anatolia (See Figure 2.2)



Key to Chronology:

†- Partial Destruction Level	†* - Entire site destroyed
▒ - Abandoned, later reestablished	▓ - Abandoned forever

Figure 2.2: Central Anatolian Comparative Chronology

The dearth of excavations from the prehistoric periods in central Anatolia poses further problems. A number of surveys of various regions in central Anatolia are published, such as the Project Paphlagonia Regional Survey in North-Central Turkey (Matthews and Glatz 2009), the Alişar Region Survey (Branting 1996), Mellaart's survey of Central Anatolia (1954), or overviews of the Central Plateau by Özdoğan (2007). This has led to further knowledge on regional ceramic and explanations of cultural migrations of populations from Caucasia and Greece (e.g. Matthews 2007; Gerrad 1998; Krisiansen and Larsson 2005; Thissen 1993), though only through the presence or absence of different pottery types. Far less is known about styles and changes in architecture, burials, and other aspects of material culture, leading to an emphasis on pottery styles in this region, with far less information on other aspects of the archaeological record (Efe and Efe 2007).

Paleolithic to Neolithic Central Anatolia

The central Anatolian region has few known archaeological sites pre-dating the Neolithic. Known sites include such the Paleolithic sites of Kaletepe Deresi 3 (Slimak et.al. 2008; Slimak et.al. 2006), Dursunlu (Güleç et.al. 1999), Çeçetepe (Yakar 1991), Etiyokşu (*ibid*) and Avla Dağ (*ibid*). The central Anatolian site of Pınarbaşı had early layers that date to the Epipaleolithic (Watkins 1996).

The Neolithic (10,000-6000 BCE) in this region is better understood. Key sites include Aşıklı Höyük (Esin and Harmankaya 1992), Çatal Höyük (Mellaart 1967), Pınarbaşı (Watkins 1996), Musular (Duru and Özbaşaran 2005), Koşk Höyük (Özten 2007), Boncuklu (Baird 2007), and Suberde (Bordaz 1973), though now over 40 sites, both large and small, are known, excavated or discovered since the late 1950s (Özbaşaran 2011: 102). Less is known about the Neolithic in central Anatolia than in the southeast. The Neolitihic period begins later in central Anatolia than it does in the southeast. While a number of sites from southeastern Anatolia are known with aceramic levels, far less is known about this era in central Anatolia. Whether this is because of sparse habitation in the region or excavation bias remains unclear.

Year round occupation in central Anatolia began around the 8500 BCE, with evidence of long-term year around occupation from Pınarbaşı, Musular and Aşiklı Höyük, such as round, largely semi-subterranean plastered and painted domestic structures with permanent, built furnishings, including hearths, benches and storage bins. These earliest settlements relied entirely on wild plants and animals for subsistence. Wild plants included einkorn, emmer, and durum wheat, wild barley, pistachio, almonds, wild grains, herbs, fruits and animals such as wild aurochs, equids, sheep, goats, horse, boar, fallow and red deer, wolf, fox, hare, and various birds and fish (Özbaşaran 2011: 106-107, 109). The use of locally sourced and knapped obsidian tools

were common, with an obsidian knapping site found at Kaletepe (Binder and Balkan Atlı 2001; Cauvin and Balkan Atlı 1996; Özbaşaran 2011). Similar subsistence continued through the eight millennium BCE, at Can Hasan III (Martin et. al. 2002) and Suberde (Bordaz 1973), with similar wild plants and animals, but with rectangular, free-standing architecture.

The use of space in many of these early Neolithic sites was surprisingly continuous. At Asıklı Höyük, buildings were built and rebuilt in the same location for at least ten building phases; the same house space was reused over centuries of settlement. Even the location of middens was reused in a similar fashion (Özbaşaran 2011: 108).

Well-known Neolithic sites of the seventh millennium include Çatal Höyük East (Hodder 1996), Pınarbaşı (Watkins 1996), Erbaba (Bordaz 1973), Can Hasan I (French 1998), Tepecik-Çiftlik (Esin 2001), and Koşk Höyük (Öztan 2007). In general, settlements were comparatively large. Çatal Höyük was by far the largest, at 13 hectares (Hodder 1996). Architecture was often agglutinative, with entry through the ceiling, no specialized areas of public or religious space. Rather, buildings were family oriented private spaces that incorporated the religious sphere into the domestic. Open spaces between buildings were used as walkways or middens, rather than public work space. In this era the inhabitants' diet began to increasingly rely on domesticated foodstuffs, such as sheep, goats and cattle, as well as domesticated plants such as wheat, barley, peas and lentils, though wild animals and plants were still of great importance.

By around 5000 BCE, pottery first appeared in central Anatolia, though this did little to change the subsistence methods already in place. By the end of the Neolithic, the inhabitants of central Anatolia were largely settled, though likely some nomadic populations still remained, invisible to the archaeological record.

While in southeastern Anatolia, the earliest Neolithic sites were awash in ritualistic iconography, very little is found in central Anatolia. The few clay figurines recovered from the earliest levels at Aşıklı Höyük (, and simple red ochre decorations on wall at Çatal Höyük East are a far cry from the large stone temples of the southeast.

Early to Middle Chalcolithic Central Anatolia

This brief overview of the central Anatolian Neolithic demonstrates the relatively large volume of knowledge obtained from a relatively large number of Neolithic settlements. The same is not true for the Chalcolithic central Anatolia. In fact, the Chalcolithic is second only to the Mesolithic in the dearth of information yet known about human life in central Anatolia. The "classic" concept of what constitutes the change to the Chalcolithic is the emergence of painted pottery, and of copper metallurgy, thus the name "Chalcolithic" (Copper Period) (Schoop 2001: 152). Reality is not quite so simple, as both technologies first emerge in the Late Neolithic, and indeed, while there are cultural changes in the Chalcolithic, pinpointing them is less clear.

Little is known of the Chalcolithic in central Anatolia due to the small number of excavated settlements. This is likely due to a number of factors. First, larger, later settlements were often built over earlier Chalcolithic settlements. In the Neolithic period, archaeologists are fortunate that many of the best-known sites are either single period sites, such as Aşıklı, or have minimal later reuse, such as the Byzantine levels that overlay Çatal Höyük. Far fewer Chalcolithic sites are single period settlements. The collected evidence suggests (See Figure 2.2) that Chalcolithic settlements were more likely to continue into the next period than Neolithic sites. Though a small number of sites inhabited in the Chalcolithic are abandoned during the Chalcolithic, such as Çatal Höyük West, Güvercinkayası, Koşk Höyuk, and Can Hasan, this is

relatively rare. Excavations at sites such as Alaca Höyuk, Çadır Höyük, Beycesultan, Demircihöyük, Kuruçay Höyük or Mersin have only limited Chalcolithic exposures due to the larger, later settlements located on top of the Chalcolithic levels. As a result, Chalcolithic levels are rarely excavated in large horizontal exposures and so little is known about the Chalcolithic at many sites beyond their existence, some ceramics, and a few fragments of structures.

Another possible reason is that the Chalcolithic straddled the agricultural and the urban revolutions. Civilizations were still working on how to live as settled agricultural societies, but had not yet coalesced into the small but independent city-states that develop by the Early Bronze Age. Unlike the Chalcolithic civilizations that flourished contemporaneously in the Levant, such as Shiqmim (Levy 1987), Ein Gedi (Ussuskin 1980), or Teleilat Ghassul (Bourke 2007), far less has yet been found in central Anatolia Chalcolithic. The lack of knowledge about the Chalcolithic has made it quite difficult to differentiate between the Late Neolithic and the Early Chalcolithic, or the Late Chalcolithic and the start of the Early Bronze Age, as there is often no "perceptible break in cultural continuity" between these so-called phases (Schoop 2011: 152; Steadman 2011: 231).

Much of what is known from "Chalcolithic" central Anatolia is often compared to the better understood Chalcolithic cultures of other regions, be it the Anatolian southeast, the western Aegean region, Mesopotamia to the south or the Pontic/Balkan region to the north (Düring 2011b). From what little is known of Chalcolithic central Anatolia, the cultures and settlements in this region are distinct from all these other cultural spheres, and so comparisons are ill advised.

A good example of this is Alişar Höyük. This site, with its continuous sequence from the Early Chalcolithic to the Iron Age, became the standard by which nearly all other site

chronologies in central Anatolia are compared. Portions of this sequence are problematic, in particular the Chalcolithic levels. The Middle and Late Bronze Age sequences were reappraised by the dissertation of Ron Gorny in 1990, though something similar has yet to be accomplished for the Chalcolithic levels. As a result, Chalcolithic benchmarks in central Anatolia remain largely beholden to work published in the 1930s. Though reports are in the works to rectify this (e.g. Schoop 2005; Cutting 2005; Düring 2011b), far more effort remains before the Chalcolithic will be better understood.

A final reason is a bias against the study of the Chalcolithic by some Anatolian archaeologists. The excavation of the Chalcolithic Levantine sites mentioned above, Shiqmim (Levy 1987), Gilat (Levy 2006), Ein Gedi (Ussuskin 1980), and Teleilat Ghassul (Bourke 2007), resulted in interesting and unique objects and architecture, while nothing of the sort has been discovered anywhere in Anatolia. The Anatolian Chalcolithic appears to be a transitional period with few exotic finds. Perhaps, for this reason, fewer scholars are incentivized to study the Chalcolithic.

To conclude, however, that nothing of importance happened during the Chalcolithic period would be a mistake. This is a rather long period, temporally, lasting from around 5500 to 3000 BCE. The issue is not that nothing of importance occurred during these millennia, but rather, we do not have enough information from the archaeological record, nor do we know the right questions to ask of the data collected. With new excavation in Chalcolithic levels at Çadır Höyük, Gıvercinkatası or Orman Findalığı, hopefully this will change. According to the numbers kept by Türk Akeoloji Yeşmerleri, only twenty-seven Chalcolithic sites in all of Anatolia have yet been excavated, with none in the central Plateau (Düring 2011c; www.tayproject.org), while excavations at 42 Neolithic and 163 Early Bronze Age settlements are recorded. In particular, the

Middle Chalcolithic is largely ignored in any synthesis of prehistoric Anatolia.

It is beyond the scope of this dissertation to rework the entire Chalcolithic sequence, as that would indeed be a whole dissertation in itself. As a result, I am largely following the sequence put forth by Ulf-Dietrich Schoop (Schoop 2005), as well as the more broad Early/Middle Chalcolithic, Late Chalcolithic/Early Bronze I categories mentioned previously (See Figure 2.2).

A total of 19 sites dating from the Early to Middle Chalcolithic were studied in this dissertation, including Acemhöyük, Alaca Höyük, Bademağacı Höyük, Boğazköy-Büyükkaya, Çadır Höyük, Camlıbel Tarlası, Can Hasan, Çatal Höyük West, Demircihöyük, Gelveri-Güzelyurt, Tarsus, Güvercinkayası, Hacılar, Harmanören, Kalınkaya-Toptaştepe, Köşk Höyük, Kuruçay Höyük, Orman Fidanlığı, Suberde and Yumuktepe/Mersin. In many ways, there was no significant cultural change between the end of the Neolithic and the start of the Chalcolithic. Largely, the Early to Middle Chalcolithic was an extension of the Neolithic. Pottery forms changed slightly, with an increase in painted pottery visible, though as mentioned previously, this was first attested in the Late Neolithic. The typical Early Chalcolithic pottery styles include Red-Slipped and Red-on-Cream pottery from Hacılar, and polychrome painting styles from Can Hasan 2A and Mersin XIX-XVII (Schoop 2011).

Figure 2.3: Map of Central Anatolia with sites dating to the Early to Middle Chalcolithic

Metal objects became more common in this time period, with cold-worked copper, small amounts of hot-worked copper, and some early arsenical bronzes. Simple copper objects appear in the archaeological record, such as axes, pins and awls. Evidence of metal production was found in the form of small clay crucibles or copper slag (Schoop 2011: 160). The civilizations of the Early to Middle Chalcolithic, however, remained largely reliant on stone tools over copper. The naturalistic clay figurines more prevalent in the Neolithic disappear by the end of the Middle Chalcolithic.

Very few burials date to this time period, either from intra- or extramural contexts, suggesting that burials are no longer buried under the floors of houses or courtyards, as was common throughout the central Anatolian Neolithic. Otherwise, burial information is rather sparse from this time period, as will be further discussed in Chapter Four.

In general, Early to Middle Chalcolithic architecture was simple, mainly single story free -standing mudbrick buildings. Few specific use buildings have been identified. Fortification systems are nearly unknown, with examples only known from Mersin, Hacılar and Güvercinkaysı, as will be further outlined in Chapter Five.

Based on the scant available evidence, many of the Early and Middle Chalcolithic settlements, and even into the Late Chalcolithic and start of the Early Bronze Age, were possibly ephemeral, only inhabited seasonally or for short periods of time. Far less conjecture exists in the Chalcolithic central Anatolian literature on the transient nature of populations than in the southeastern Anatolian literature (See Chapter Three), likely to the far smaller number of known sites, transient or permanent, as well as fewer connections to similar comparative sites, such as in northern Syria. Central Anatolian examples include Can Hasan 1 and Badebaşı, where the small number and style of mud-built buildings from the Late Chalcolithic may indicate a possible transient population (Düring 2011b: 800; French 1998;Eslick 1992). The buildings were poorly constructed, often modified, and contained high numbers of storage vessels and built in storage bins, which may indicate only occasional usage as opposed to permanent habitation. These patterns are common from nomadic settlements (Cribb 1991: 95-96). Of course, evidence of nomadic lifestyles is notoriously hard to determine from the archaeological record, though the likelihood of nomadic populations in central Anatolia during this period must be considered.

There are few signs of external influence or presence in Early to Middle Chalcolithic central Anatolia, mostly through trade in obsidian, as well as some pottery forms from the Northwest/Black Sea region, and the Fikirtepe tradition, which is mostly found to the North, and affected central Anatolia very little (Gülçür 2012).

Little is known about the political structure of this period. Evidence suggests settlements

were likely egalitarian, with no known large "chiefly" or religious structures standing out from excavated domestic structures. Settlements likely were centered on tribal affiliations, with power held through family ties but with little hierarchy.

Many new sites were founded in this period. In the Early Chalcolithic, this includes Boğazköy, Demiricihöyük, Güvercinkaysı and Orman Höyük. In the Middle Chalcolithic, this includes Alaca Höyük and Cadır Höyük. By the end of the Middle Chalcolithic, many sites are abandoned, including Bademağacı Höyük, Çatal Höyük West, Demirchhöyük, Güvercinkayası, Kösk Höyük and Kuruçay Höyük, and less is known about central Anatolia until the beginning of the Late Chalcolithic (See Figure 2.1).

Late Chalcolithic / Early Bronze I Central Anatolia

The Late Chalcolithic/Early Bronze Age I transitional period encompasses cultural changes in the archaeological record, though the differences between the two periods "are essentially arbitrary in nature" (Schoop 2011: 166). After a "dark" period at the end of the Middle Chalcolithic, a cultural resurgence begins with the Late Chalcolithic. Many new sites are founded, including Alişar Höyük, Beycesultan, Büyük Güllücek, İkiztepe, Kalınkaya-Toptaştepe and Küllüoba. Others continued uninterrupted from the Middle Chalcolithic, such as Alaca Höyük, Çadır Höyük, Tarsus, Orman Fidanlığı and Mersin.

A total of 22 sites were studied in this report with levels dating to this time period, including Acemhöyük, Alaca Höyük, Alişar Höyük, Bağbası, Beycesultan, Boğazköy-Büyükkaya, Büyük Güllücek, Çadır Höyük, Camlıbel Tarlası, Can Hasan, Demircihöyük, Elmalı-Karataş, Gelveri-Güzelyurt, Gözlü Kule/Tarsus, Harmanören, İkiztepe, Kalınkaya-

Toptaştepe, Küllüoba, Kuruçay Höyük, Orman Fidanlığı, Suberde and Yumuktepe/Mersin.

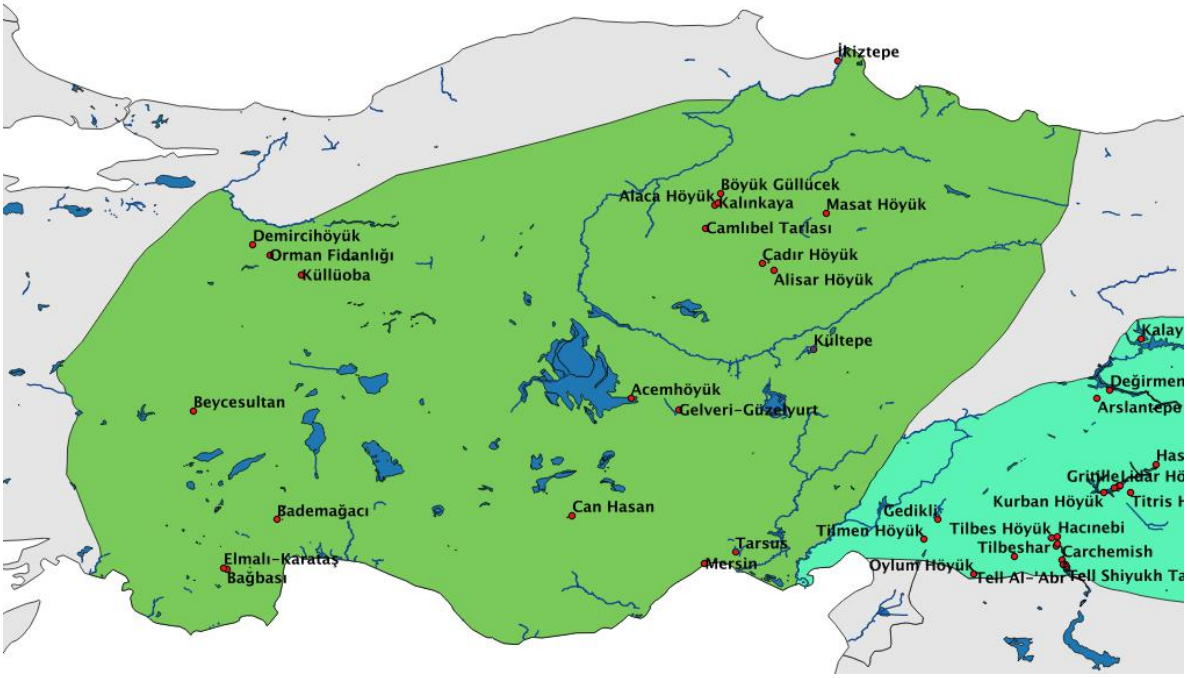


Figure 2.4: Map of Central Anatolia with site dating to the Late Chalcolithic to the Early Bronze I

More sites are known archaeologically from this time period than from the previous, with far more open, horizontal exposure. At the site of Demirichöyük, seventeen levels dated to the Early Bronze I period. Extensive excavations revealed the entirety of the village plan, a rarity in archaeology (Bittel and Otto 1939). At Kuruçay Level 6, twenty-three buildings were excavated, making it one of the largest exposures dated to the Chalcolithic in central Anatolia. The architecture was a series of domestic spaces with surrounding public open spaces, likely small areas of associated households (Düring 2011b: 803; Schoop 2005: 165-166).

A number of small to midsized settlements are known by the Late Chalcolithic, such as Alaca Höyük, Alişar Höyük, Beycesultan, Çamlıbel Tarlası, and Yarıkkaya, on average only a

few hectares in size. These sites were continuously occupied, year round settlements, made up of mudbrick buildings with stone foundations built into clusters of associated houses, possibly indicating family connections (Düring 2011a). A smaller number of large settlements are known, including Mersin and Cadır Höyük, up to 10 hectares, and evidence of public architecture, public spaces, and even defensive architecture (Caneva 2000b; Steadman et. al. 2007).

Bronze metallurgy, both arsenical and some tin bronze, began in earnest, with the appearance of copper and bronze jewelry, tools and weapons, especially in graves (Schoop 2011). Major examples are the so-called "Royal Tombs" of Alaca Höyük and the many beautiful objects discovered there (See Chapter Four).

More burials are known from this period, though the numbers remain relatively small. A few cemeteries are identified, including Yarıkkaya (Hauptman 1969) and Kalınkaya (Zimmermann 2006), though more are known from the remainder of the Early Bronze Age. By this time, no adults were found from burials under houses, though infant and child burials are still fairly common. The known burials are largely simple inhumations, sometimes with a small amount of grave goods included (See Chapter Four).

Architecture styles transform through this period. Buildings were still primarily one-story freestanding mudbrick buildings with stone foundations. Specialization increases, with evidence of storage or administrative buildings as at Mersin (Caneva 2000b) or Beycesultan (Lloyd and Mellaart 1962). A significant number of sites also began to have walled fortification systems, with evidence of fortification at more than 60% of sites with secure evidence, and the first appearance of the Anatolian Settlement Pan at Demircihöyük, Küllüoba and Kuruçay Höyük, and the earliest casemate wall, from Mersin, and monumental gate systems, from Tarsus (See Chapter Six) (Düring 2011b).

The political structure in this period also evolved, though not as strongly as in contemporary southeastern Anatolia. Archaeological evidence of specialized architecture, differentiated burials, small numbers of clay seals, and traditional symbols of power such as maceheads, indicate the earliest stages of class hierarchy, at the incipient complex level (Schoop 2011).

A sizable cultural collapse throughout Mesopotamia, due to the downfall of the Uruk world, is well attested in Near Eastern scholarship (Algaze 2012; Rothman 2011; Frangipane 2009). By the end of the Late Chalcolithic in central Anatolia however, only a small number of sites, including Bağbası, Büyük Güllücek, Can Hasan, İkiztepe, Kuruçay Höyük and Orman Fidanlığı showed signs of either abandonment or destruction. At the end of the Early Bronze I, the number is smaller, with only Tarsus showing any signs of destruction, followed by rebuilding into the Early Bronze II period.

Early Bronze Age II and III in Central Anatolia

The final era under consideration in this dissertation is the Early Bronze II and III, the best known archaeologically of all the periods studied. More sites have been excavated from this time period, most of which continued from the earlier era, but expanded greatly, such as Alaca Höyük, Alişar Höyük, Bademağacı Höyük, Beycesultan, Çadır Höyük, Elmalı-Karataş, Hacılar Büyük Höyük, İkiztepe Küllüoba, Kültepe-Kaneş, and Mersin. A small number of new sites were also founded, including Ahlatlıbel, the Alişar Höyük terrace, Gâvur Evi Tepesi, Horoztepe, Resuloğlu and Salur North. By the end of the period, a large cultural collapse marked the end of the Early Bronze Age cultures.

A total of 28 sites are covered in this dissertation with levels dating to this time period, including Acemhöyük, Ahlatlıbel, Alaca Höyük, Alişar Höyük, Bademağacı Höyük, Beycesultan, Boğazkoy-Büyükkaya, Büyük Güllücek, Çadır Höyük, Camlıbel Tarlası, Demircihöyük, Elmali-Karataş, Gâvur Evi Tepesi, Gelveri-Güzelyurt, Gözlü Kule/Tarsus, Hacılar Büyük Höyük, Harmanören, Horoztepe, İkiztepe, Kalınkaya-Toptaştepe, Küllüoba, Kültepe-Kaneş, Kuruçay Höyük, Maşat Höyük, Oymaağaç, Resuloğlu, Salur North, Suberde, and Yumuktepe/Mesin.

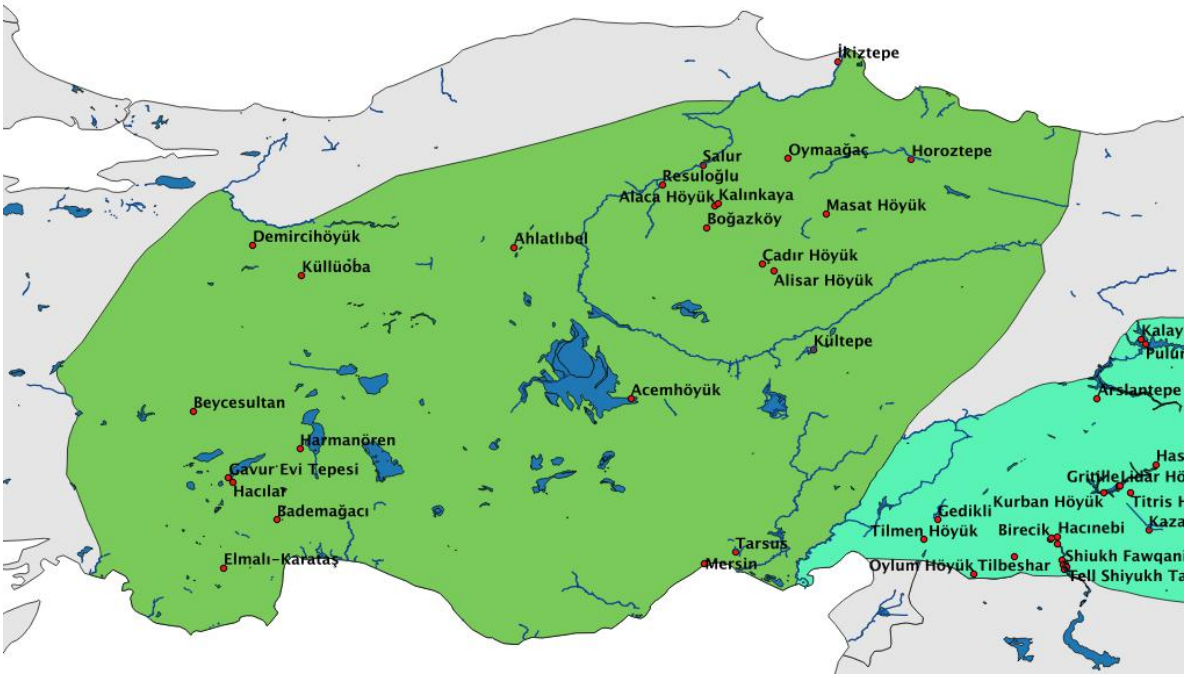


Figure 2.5: Map of Central Anatolia with site dating to the Early Bronze II to III

An urbanized system of settlements becomes evident in central Anatolia in the Early Bronze II and III, which had already occurred by the Late Chalcolithic/Early Bronze I in southeastern Anatolia, Mesopotamia and northern Syria. Prehistoric central Anatolia had a different trajectory than much of the rest of the ancient Near East. Many moderately sized, eight

to ten hectare sites were either established or expanded from earlier, smaller sites by the Early Bronze II. Larger settlements collected smaller satellite settlements around them, creating a center/periphery dichotomy of site sizes, known previously from the Uruk period elsewhere. An elite hierarchy emerges, though scholars contest the levels of power these ruling elites truly had over both their own settlement and over the surrounding satellite settlements (Çevik 2007: 137). While such changes began earlier in the southeast and in the west, as in Levels 2-3 at Troy (Efe 2007b), the signals of social complexity are only readily apparent in central Anatolia from the Early Bronze II onwards, at sites such as Çadır Höyük, Alışar Höyük, Tarsus and Mersin. If such centralization did occur earlier at other central Anatolian settlements, the evidence is not readily available. By the Early Bronze III, new political structures were in place throughout central Anatolia (Şahoğlu 2005).

Metallurgical technologies dramatically increased, with arsenical and tin bronzes relatively abundant from graves and in domestic sites. Metal, primarily bronze, was used for tools, weapons and jewelry. By this period, evidence of a considerable increase in trade is apparent in the archaeological record; in particular, in the trade of metal goods throughout the region. Tin bronze objects were found at numerous sites, including Demircihöyük, Tarsus and Alişar Hoyük.

Other trade items were found in far higher quantities by the Early Bronze II, such as the Trojan-style *depas* vessels, and wheel-made ceramics, traveling from western Anatolia to as far away as the northeastern edges of Anatolia, and even beyond, as seen in the Mesopotamian Nahariya stele, as further explored in Chapter Eight. This indirect violence reveals well used trade routes by the Early Bronze III, called variously the "Anatolian Trade Network" by Şahoğlu (2005, 2008), or the "Great Caravan Route" by Efe (2007), stretching from the Aegean to the

Black Sea and down south to southeastern Anatolia (Ökse 2007; Özdoğan 2007) (See Chapter Nine).

Graves and cemeteries are more numerously excavated from this period, with extramural cemeteries now common. Settlements with extramural cemeteries include Demircihöyük-Sarıket (Seeher 2000), Karataş -Semayük (Wheeler 1974), and Yortan (Kâmil 1982), Alaca Höyük (Arık 1937), Harmanören (Özsait 2005), İkiztepe (Alkım et. al. 2003), Kalınkaya-Toptaştepe (Zimmermann 2007b), Oymaağaç (Özgüç 1978), Resuloğlu (Yıldırım 2006), Salur North (Matthews 2004) and Horoztepe (Özgüç and Akok 1958). Few adult burials are known from intramural burials, though some child and infant intramural burials are known. Extramural cemeteries were also sometimes located further away from their associated settlements. For example, the associated settlement for the cemetery site of Horoztepe is not known, as no domestic site was found nearby. This may indicate the possibility of a nomadic people, or it may indicate a burial practice where the dead are interred far from the settlement (Walker 1974). Burials are most often simple inhumations, with some *pithos* burials, a particularly Anatolian style of burial, rarely seen outside of the central Anatolian region (*Ibid*).

Of great importance in this period are the so-called Royal Tombs found at Alaca Höyük, likely, though not conclusively, dated to the Early Bronze III (Arık 1937; Koşay and Akok 1944; Gürsan-Salzmann 1992). The burials will be discussed in greater detail in Chapter Four.

Architecture continued much the same as it did in the previous era; mudbrick buildings with stone foundations. A new style of architecture of great importance is the first *megaron* style buildings, seen first at Troy Level Ia, are found by Early Bronze II at Küllüoba and Karataş, and Early Bronze III at Beycesultan Levels XII-VIII (Schoop 2011).

All of the larger sites were protected by walled fortification systems by the end of the

Early Bronze Age. A higher amount of building specialization is found within sites, as well as a more specific site plan within settlements. Sites with walls include Cadır Höyük, Alışar Höyük III, Tarsus, Bademağacı, Demircihöyük, Beycesultan, and Kültepe Kaneş (Düring 2011b).

Foreign influence in this period was greater than in previous periods, though still not abundant. In contemporaneous Mesopotamia, Akkadian textual accounts give information on Akkadian culture, while archaeologically, evidence of Akkadian presence is absent. The only physical evidence of their presence was found not in Anatolia, but from Mesopotamia, and the Nahariya stele (McKeon 1970; Mellink 1963) which shows an Akkadian soldier in possession of what appear to be a *depas* pot, a style of pottery only known from Western Anatolia. While examples of *depas* have been found in central Anatolia, this is still a very diagnostic style of pottery. This evidence indicates that at some point, the Akkadians came into contact with Anatolian materials, and little else.

As a final note on possible external influences, a major and ongoing debate centering on central Anatolia concerns the so-called Indo-European issue. This conflict focuses on whether the Indo-European language, and its associated peoples, found in abundance in literature and culture of Middle and Late Bronze Age central Anatolia, in the form of the Hittite, Luwian, and Palaic languages, first entered into Anatolia, or indeed, if they ever 'entered' at all. This debate focuses on such aspects of linguistic origins (e.g. Burney and Lang 1971; Gamkrelidze and Ivanov 1985; Mallory 1989; Renfrew 1987); the origins of agriculture (e.g. Anthony 2007; Bellwood 2005; Zvelebil and Zvelebil 1988) or archaeological evidence (Anthony 2001; Thomas 1992). Despite great efforts, this migration still has not been effectively proven through archaeological means. Therefore, for the purposes of this dissertation, the Indo-European question will be largely silent in the consideration of the effects of warfare on central Anatolia. If

indeed an Indo-European population did enter central Anatolia during the Chalcolithic to Early Bronze Age period, they may have had a very large impact on interpersonal violence in the region. As not enough information is known at this time to say more about the subject, it will not be addressed.

More than any period before, the political structure of Early Bronze II and III central Anatolia was hierarchical, through evidence of specialized administrative buildings, clay seals, rich grave goods, and the rare iconographic depiction of a king figure. Evidence suggests powerful rulers, and some degree of centralization of government. The priest-chiefs known from contemporaneous southern Mesopotamia and southeastern Anatolia are absent however.

By the end of the Early Bronze Age III, many settlements were suddenly abandoned or significantly reduced in size and population, including Ahlatıbel, Alaca Höyük, Tarsus, Kalınkaya-Toptaştepe, Kültepe Kaneş, Küllüoba, and Maşat Höyük. Not all sites show signs of this, with settlements continuing on in the Middle Bronze Age at Alişar Höyük, Beycesultan, Çadır Höyük, İkiztepe and Mersin. The reason for this downfall is often debated and is outside of the context of this dissertation, but often warfare, weather changes and drought are thought to be to blame. With this change, a new era, of empires and of texts begins in the Middle Bronze Age.

Chapter Three : Social Transformations in Southeastern Anatolia from 5500-2000 BCE

Introduction

Southeastern Anatolia differs from central Anatolia in a variety of ways. Archaeological excavations have unveiled a higher number of prehistoric settlements. The material culture, geography, political trajectory, as well as the presence of outside influence on local cultures is drastically different from central Anatolia. This chapter covers the current state of knowledge on the populations and cultures of southeastern Anatolia from the start of the early Chalcolithic to the end of the Early Bronze Age. This region is briefly referred to in Akkadian written accounts in their quest to conquer or, at the least, loot the settlements found there. These accounts of southeastern Anatolia are quite sparse, as well as highly biased and likely altered over time as the accounts were written and rewritten. As a result, the vast majority of the information for prehistoric southeastern Anatolia comes exclusively from the archaeological context.

For the purposes of this dissertation, the southeast of Anatolia refers to a region south of the Murat River, north of the confluence of the Sajur and Euphrates Rivers in Northern Syria, east of the Ceyhan River, and west of the Dicle (Tigris) River (See Figure 3.1). The decision about which areas should be considered as "southeastern" Anatolia in this dissertation was not a simple one. Unlike central Anatolia, where the region under consideration was at least somewhat bounded by mountain ranges to the north and south and rivers to the east and west, creating a somewhat isolated region, the same is not true of southeastern Anatolia. Hence, I have chosen a number of rivers as the end points (the Murat, Sajur, Ceyhan and Dicle), which create a series of natural boundaries, with perceivable cultural difference between those areas inside and outside these regions.

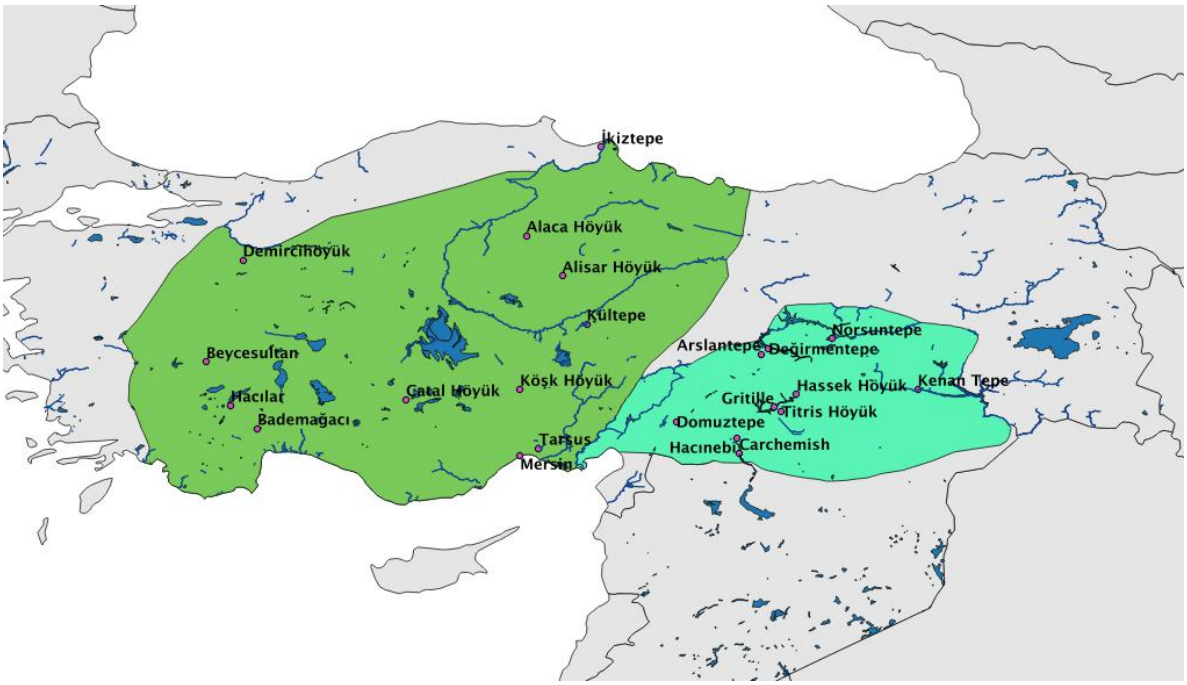


Figure 3.1: Map of Southeastern Anatolia with key sites

From the time of the Akkadians (ca. 2350-2150 BCE) and into the Iron Age (ca. 1000-500 BCE), the border created by the Tigris and Euphrates Rivers has always been important both geographically and symbolically. Sargon of Akkad himself famously boasted of crossing the Euphrates into the lands beyond, a feat that many later kings of different lands, including the Hittites, the Babylonians, and the far later Persians (Bryce 2003: 26) sought to emulate as a great feat of a great king. Rivers are often used as a demarcation of borders, due to the hardships involved in crossing them and their impact on the landscape. The southern boundary was more difficult boundary to establish, as modern political boarders have had much influence on the locations and borders of archaeological studies, surveys or salvage operations.

A noted example is the excavations at the site of Carchemish, which first began in 1911, under Sir Leonard Woolley (Woolley 1921). Carchemish was an important site in the region

from the Chalcolithic period through to the Iron Age, as the largest settlement in the region, and an important capitol city. At the end of World War II, the political border between Syria and Turkey was drawn directly across the Carchemish ruins, with much of the mound on the Turkish side, and much of the lower city on the Syrian side The result was an end to excavations at the mound until the 21st century (Peltenburg 2007; Tuna and Özturk 1999; Tuna, Özturk and Velibeyoğlu 2001; Tuna and Velibeyoğlu 2002). A number of settlements centered around the Tishrin dam in northern Syria, are part of the Carchemish valley, but were published separately (del Olmo and Fenollós 1999), despite being a part of the same cultural sphere in ancient times.

To the south, Ebla and Mari were important cultural and political centers by the end of the Early Bronze Age. These southern cultures were very different than the "fringes" of southeastern Anatolia. I have therefore chosen as a compromise the bend in the Euphrates River formed by the confluence of the Euphrates and the Sajur River, directly south of the side of Tel Amarna, avoiding modern political boundaries, while in-keeping with an ancient and important cultural boundary, the edge of the Carchemish valley sector (Peltenburg 2007: 6-7).

The south-west border was also problematic. Southeastern Anatolia, in complete opposition to central Anatolia, was in constant contact with foreign peoples and civilizations. Indeed, southeastern Anatolia is most often portrayed as the northern-most extension of the greater Mesopotamian culture, along with northern Syria (Laneri et. al. 2012). Indeed, no clear cultural or geographical demarcation existed in the ancient world between northern Syria and southeastern Anatolia, except at the extremes. In the modern day, such an issue continues over the region known as the Hatay, a strip of land located along the eastern edge of the Mediterranean, that both Turkey and Syria claim as their own, and has cultural aspects of both countries (Jörum 2014).

While cultural differences between the central regions of northern Syria and southeastern Anatolia do exist, the demarkation between the two regions is less than clear. As Özbal notes:

> "The easily distinguishable painted wares of the Halaf and Ubaid periods and the distinctive shapes of the Uruk phase are such hallmarks that they tend of override local ceramic assemblages. Moreover, local ware groups seem to show variability within southeast Anatolia, and identifying dominant supraregional styles has proved difficult... Although the cultural similarity between these supraregional areas during the Chalcolithic is undeniable, one could argue... that some of the stylistic overlap may be a result of Mesopotamia-centric research traditions and related biases in publications" (Özbal 2011: 174).

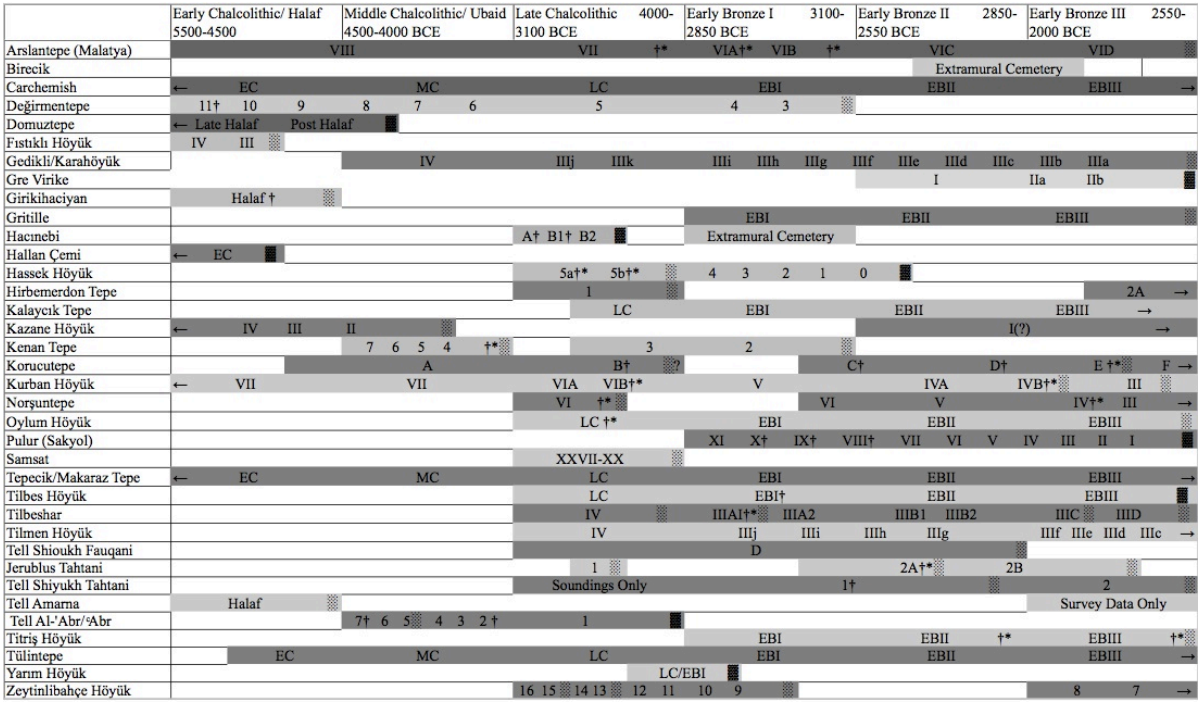
For the purposes of this dissertation and in order to keep the sample size of sites and their data manageable, the southern limit of the southeastern Anatolian region is the above mentioned Sajur River in the south and the modern border between the countries of Syria and Turkey, to the southwest, excluding the southern Hatay region (See Figure 3.1)

The cultures of southeastern Anatolia were necessarily a product of native culture combined with external influences, in the same way that the cultures of central Anatolia were necessarily the product of their insularity. From the Neolithic period on, ample evidence of connections between the southwest and the cultures of northern Syria an Mesopotamia is widespread. While definite aspects southeastern Anatolian cultures were unique, such as architecture, cultic materials, food preparation, and landscape use, many shared or borrowed aspects from more distant cultures affected the local civilizations.

Southeastern Anatolia is relatively flat, with the Amanus and Taurus Mountains to the north and west. The climate of southeast Anatolian generally receives enough rainfall to practice dry farming, unlike Syria and Mesopotamia to the south, one of the more significant differences between this region and that of northern Mesopotamia. The region was primarily woodland steppe, before deforestation cleared the area of trees (Deckers and Pessin 2010:216-217). The

southeastern Anatolian region was fertile, with rich soils from the rich Euphrates and Tigris rivers. The winters are cool, and the summers hot, with more extremes than from central Anatolia, and though dry irrigation is possible, the region is far more prone to variation in rain fall, meaning that long term droughts would have had great impact upon the area (Türkeş 1998: 659).

The time period covered in this chapter, 5500-3000 BCE, will be split into three sections, as explained in more detail in Chapter Two: Early and Middle Chalcolithic (5500-4000 BCE), Late Chalcolithic to Early Bronze Age I (4000-2850 BCE), and Early Bronze II and III (2850-2000 BCE).



Key to Chronology:

†- Partial Destruction Level	†* - Entire site destroyed
⁘ - Abandoned, later reestablished	▓ - Abandoned forever

Figure 3.2: Southeast Anatolia Comparative Chronology

The Halaf/Ubaid/Uruk Cultures in Southeastern Anatolia

The cultural trajectory of southeastern Anatolia cannot be documented discussing the prehistoric Mesopotamian cultural horizons: the Halaf, Ubaid and Uruk cultures. These terms represent cultural packages that appear in various facets and degrees throughout much of the ancient Near East, from the Late Neolithic through the Late Chalcolithic. While little of the cultural influence from these horizons is visible archaeologically in central Anatolia, evidence is abundant at various settlements in the southeast. As mentioned in Chapter One, the spread of these cultures remains a hotly debated topic in the archaeological community. What can the evidence of Mesopotamian cultural products in the archaeological record reveal about ancient societies and their political structures? Does the expansion of Ubaid customs reflect the advent of state societies in Mesopotamia and northern Syria? Did the Uruk king have direct control over regions of southeastern Anatolia? These questions will be further explored later in this chapter.

Emulation of style, rather than necessarily physical movement of goods or people may explain part of the spread of the Halaf-Ubaid-Uruk packages. Movement of goods alone could not account for Mesopotamian-style architecture in southeastern Anatolia. The triparite buildings commonly found in northern Syria and parts of southeastern Anatolia are an example, as found in Late Chalcolithic levels at Değirmentepe (Duru 1979), Arslantepe (Frangipane 2010: 25-26) or Tepecik (Esin 2010: 102-107). These local buildings clearly imitated the Uruk style of temples. None of these sites were categorized as Uruk colonies, nor were the buildings used for the same functions at Uruk. Uruk tripartite buildings functioned primarily as temples or monumental structures of public importance, while southeastern Anatolian tripartite buildings were often for storage, domestic buildings, or as administrative centers (Frangipane 2003). This is a clear case of emulation of style over long distances.

There are many reasons for cultural emulation. The classic example is the emulation of elite styles of ceramics, personal adornments, administrative styles, or architectural styles by the upper class of a society another highly regarded society, in order to better stabilize local hold of power. By adopting the trappings of a foreign society, the local elite hope to be associated with that society or with new and innovative styles not attainable to the masses and thus attain prestige in the eyes of the local population (Stein 2001).

Further, lower classes will often emulate the accouterments of the local elites. As an example, the upper classes first adopt the style of double spirals made of gold in their clothing styles, emulating a foreign decoration. The next highest rung of the hierarchy soon follows in creating similar double-spiraled pins made of silver with a high concentration of arsenic, to attain a golden color, thus emulating the styles of the upper class in order to appear more prestigious, and so on down the line until even the most humble of classes have a form of double spiral decorations. The double spiral, thus spread to the entirety of a society, and so the upper classes must come up with a new status symbol, causing the process to repeat (Nieuwenhuse 2007:219-220).

Emulation is a straightforward method to create power, rather than through the use of force. In early societies in particular, the creation of an army was a difficult business. A standing army requires a society able to support the upkeep of its members, who are removed from the population as producers of any sort. Soldiers and full time warriors do not produce food or other necessary objects, but are still required to be fed and housed. Providing for such a population is a large expenditure for a society, and likely impossible in smaller populations (Keeley 1996). In earlier societies, warriors were drawn from the general population, maintaining jobs as farmers or other producers, then going to war, battle or raids when time permitted, such as during

farming's fallow season.

In order to keep control over large areas, armies need to move over long distances to conquer new lands. Using force to maintain power requires constant pressure or it ceases to be meaningful (*Ibid*). Such constant force is exceedingly difficult to maintain, and therefore likely not possible until the Akkadian empire, and was limited even then, as will be discussed further below.

Creating power through other means, such as through the creation of an ideology, or the creation of legitimized social institutions, is far more effective than the projection of force. Elite goods and ideologies, such as were produced through the introduction of limited and thus valuable goods as Mesopotamian material culture, was one method of creating power and prestige (Miller and Tilley 1984; Akkermans 1989b). Control over this ideology must be limited and thus made valuable. The creation of ideology also establishes a sense of identity, of shared cultural understandings that only members of a community, from the lowest class to the highest elites, can all partake in. The creation of a sense of membership aids in the creation of an Us versus Them mentality and thus unifies a community.

In the archaeological record, ceramics are the easiest line of evidence to follow to reconstruct ideological developments, due to its high quantities at any given site, the ability to copy foreign ceramic styles locally with relative ease, and the high preservation of the material in the archaeological record. As one of the primary ways that the Mesopotamian styles moved into southeast Anatolia, the Halaf-Ubaid-Uruk sequence is easiest to follow through the movement of ceramics as well as the emulation of ceramic styles in both shape and decoration. While pottery did move through trade from the south to the north, local peoples also created their own locally made versions of Mesopotamian pottery (Helwing 2000). How much of Mesopotamian culture

beyond bowl styles accompanied this exchange remains a hotly debated topic.

Since the later half of the 20th century, other aspects of the Halaf-Ubaid-Uruk cultural packages, such as architecture, agriculture or elite goods, have risen in importance in the archaeological literature. Obviously, the optimal chronological system would seek to use any and all available data in tandem. This dissertation primarily studies non-ceramic archaeological remains. While the ceramic record is of great importance, many works have been devoted to the topic, and it is not my intention to repeat those attempts here.

The northern Mesopotamian cultures of the Chalcolithic, the Halaf, Ubaid and Uruk, often overshadow the local cultures of Chalcolithic southeastern Anatolia in the archaeological literature. This tripartite system of Halaf-Ubaid-Uruk is ingrained in studies of prehistoric Mesopotamia and its 'hinterlands.' The evidence is based first and foremost on pottery styles and sequences, especially painted pottery styles, which are often only a small portion of the ceramic assemblage of any particular site. As noted by Campbell, the structure of the Halaf-Ubaid-Uruk ceramic chronology was largely in place by 1945, with few alterations since that time. Recent work focuses on better understanding the transitions between these periods, rather than local variations (Campbell 2007:105).

It is important to note that while these Mesopotamian cultures do greatly affect southeastern Anatolia, this region is not northern Mesopotamia and various distinct local cultural aspects are known. As a result of this bias, even settlements in southeastern Anatolia are often dated by Mesopotamian ceramics sequences. As Özbal states “the lack of a well-defined local southeast Anatolian ceramic sequence (excluding perhaps the Amuq region), has resulted in a threefold division of the cultural chronology based on the better defined northern Mesopotamian Halaf, Ubaid and Uruk or Late Chalcolithic phases” (Özbal 2011: 174).

Paleolithic to the End of the Neolithic in Southeastern Anatolia

Excavated Paleolithic and Epipaleolithic sites are more numerous from southeastern Anatolia than from central Anatolia. The earliest settlements in the region date to the Upper Paleolithic (ca. 45,000-40,000 BCE). The best known are Uçağılı and Kanal caves (Kuhn et. al. 1999), located along the Mediterranean coast in the Hatay region. Lithic technology in southeastern Paleolithic is made up of Acheulian style lithics, most especially bi-face handaxes (Sagona 2006: 33). No human remains dating to this period have yet been found in the region. Another important site is the Paleolithic obsidian workshop found at Dervish Çağılı (Akkermans 1993).

Many Epipaleolithic (20,000-10,000 BCE) sites are also known from along the Mediterranean coast to the south. This region saw the earliest permanent settlements, with reliance on domesticated foods, before other regions in Anatolia, and even much of the Levant (Sagona 2009: 24). Local Epipaleolithic settlements include Demirköy (Rosenberg 2007), Körtik Tepe (Özkaya and San 2007), Hallan Çemi (Rosenberg 1999), and earliest levels of Çayönü (Özdoğan 1999).

A larger number of excavated settlements date to the start of the Neolithic (10,000-6000 BCE) from southeastern Anatolia. In fact, the earliest known Anatolian Neolithic sites are from this area, and have much in common with other known Neolithic sites from the northern and southern Levant (Nieuwenhuyse et. al. 2013). The distribution across the landscape is limited almost entirely to the Urfa region and the Diyabakır region, with few sites known from outside of these areas. The Neolithic settlements in southeastern Anatolia shared much with the contemporaneous settlements of the Levant and parts of Mesopotamia, especially along the Taurus Mountains, along the Upper Euphrates River and the Levantine corridor (Sagona 2009:

43).

Major southeastern Anatolian Neolithic settlements include Çayönü (Özdoğan 1999), Nevalı Çori (Hauptmann 1993), Göbekli Tepe (Schmidt 1999), Gürcütepe (Schmidt 2007), Akarçay (Özbaşaran and Molist 2005), Mezraa-Teilhat (Özdoğan 2007), Hayaz (Roodenberg 1989), Gritille (Ellis and Voigt 1982), Hellan Çemi (Rosenberg 1999), and Cafer Höyük (Cauvin et. al. 1999).

Similar to central Anatolia and the Levant, the earliest architecture at these settlements were round, often semi-subterranean wattle and daub or stone buildings. A major difference between the southeast and central Anatolia was that, while domestic architecture was abundant, many of the earliest known structures were non-domestic in purpose and were likely used as public space for ritual purposes (Rosenberg and Erim-Özdoğan 2011: 128). The earliest example is known from Hallan Çemi, with two different, relatively large semi-subterranean round stone foundation buildings, with clear signs of use and reuse over time (Rosenberg 1999)

Permanent, year around habitation was possible early on in the southeast due to the abundance of wild edibles such as einkorn and emmer wheat, spelt, millet, barley, lentils, barley, peas, vetch, nuts sea club rush seeds and pulses, and wild animals such as sheep, goats and pigs (Sagona 2006: 35). Nearly all of the earliest sites, with the exception of Çayönü, were located in landscapes not conducive to farming, and often near mountains rather than plains (Sagona 2009: 45). Interestingly, a complete absence of cereals is noted in the early Neolithic in the Southeast, a marked contrast to the central settlements (Rosenberg and Erim-Özdoğan 2011: 131).

The earliest trade from the southeast to areas beyond occurred as early as the Pre-Pottery Neolithic, with evidence of obsidian and copper trade from the earliest levels of Hallan Çemi, originating as far away as 150 km (Sagona 2009: 73). These raw materials are found as far away

as 1000 km south into Mesopotamia, likely part of a site-to-site exchange system rather than trade routes. Such exchanges were not the start of trade, as evidence of obsidian is known from as early as the late Pleistocene, around 14,000 BCE. Very early on, southeastern Anatolia was a major source for trade of raw materials into Mesopotamia.

Various specialized objects were discovered from Hallan Çemi and Kortik Tepe (Ozkaya and San 2007), including carved stone pestles, with elaborate incised decorations of natural and geometric designs, chloritic stone "platters", and the so-called carved stone "fetish" plaques found at Körtik Tepe (Rosenberg and Erim-Özdoğan 2011: 129). Evidence of public feasting includes open central activity areas, nearby public architecture, and large deposits of burnt animal bones and fire-cracked stones (Rosenberg and Erim-Özdoğan 2011: 128).

Unlike the agglutinative style of architecture found in central Anatolia, southeastern Neolithic architecture was free standing mudbrick or stone buildings, with clearly differentiated use areas, domestic from communal, ritual from mundane. For example, the semi-subterranean round communal buildings of Nevalı Çori or the "skull building" and "flagstone" building of Çayönü (Özdoğan 1999). The so-called outdoor temples of Gobekli Tepi are another well-known example of public architecture (Schmidt 2000), dating to 8400-8100 BCE.

Many Neolithic sites, in their earliest phases, subsisted on a hunting and gathering lifestyle. By the end of the Neolithic, evidence of domestication is known, from the earliest known pigs at Hallan Çemi (Rosenberg 1999), to cattle, sheep, and goats, as well as einkorn and emmer wheat, lentils, peas, and broad beans (Akkermans 1993). More excavations from southeastern Anatolia covered the change from hunter and gatherer nomadic to semi-nomadic cultures, to fully settled farmers.

By ca. 5000 BCE, ceramic vessels first appeared in the archaeological record in southeastern Anatolian sites, most notably from Çayönü, Sumaki, Salat Cami Yanı, Akarçay and Mezraa-Teleilat (Rosenberg and Erim-Özdoğan 2011: 141), allowing for new ways to cook, store and carry food stuffs. The site of Mezraa Teleilat (Sagona 2006: 41) is one of the few sites in the region to show a clear change from an aceramic to a ceramic settlement. Mezrraa Teleilat Level IIB containing the first baked clay vessels known from the region.

Interestingly, along with the invention of pottery, a marked change settlement size is observed. Settlements were smaller in size than before, with a corresponding decrease in public space and architecture, which had been so prevalent in the Prepottery Neolithic levels. Such change indicates, "communities have ceased to be socially integrated villages and have instead become kin-based and more self-contained homesteads" (Rosenberg and Erim-Özdoğan 2011: 144).

More unique to the southeastern Anatolian Neolithic is the invention of metallurgy. The oldest yet known evidence for metallurgy has been found within southeastern Anatolia, at the site of Çayönü. Evidence of first cold-worked then hot-worked copper has been discovered, primarily in the creation of jewelry. Metallurgy became more common by the Chalcolithic, though it remains better known in the southern Levant, with such famous sites as Nahal Mishmar (Bar-Adon 1980) and Ein Gedi (Ussishkin 1980).

Trade flourished throughout the Neolithic period, as evidenced by the presence of obsidian from the northern Van region and central Anatolia, through southeastern Anatolia and into northern Syria. It remains unknown, and unlikely, that these were formal trade routes; rather distance movement of various precious raw materials from region to region as time passed (Healy 2007).

By the end of the Neolithic, little in the way of defensive architecture has yet been found, with sites being relatively open, characterized by large communal areas in the center of sites, surrounded by pockets of personal domestic spaces (Nieuwenhuyse et. al. 2013).

Late Neolithic to Early Chalcolithic Southeastern Anatolia

Fewer excavated southeastern Anatolian settlements date to the earlier Chalcolithic than to the Neolithic. More is known from this time period in the southeast than from contemporaneous central Anatolia. No major cultural break is distinguished between the Late Neolithic and Early Chalcolithic southeastern Anatolia. Many Late Neolithic sites continue uninterrupted into the Early Chalcolithic. Sites that continued between the Neolithic to the Chalcolithic include Carchemish, Domuztepe, Hallan Çemi, Kazane Höyük, Kurban Höyük, and Tepecik (See Figure 3.1). By the end of the Early Chalcolithic, cultural differences abound.

A total of eighteen sites from this time period are covered in this dissertation: Arslantepe (Malatya), Carchemish, Değirmentepe, Domuztepe, Fıstıklı Höyük, Gedikli (Karahöyük), Girikihaciyan, Hallan Çemi, Kalaycık Tepe, Kazane Höyük, Kenan Tepe, Korucutepe, Kurban Höyük, Lidar Höyük, Tepecik, Tell Amarna, Tell Al-'Abr and Tülintepe.

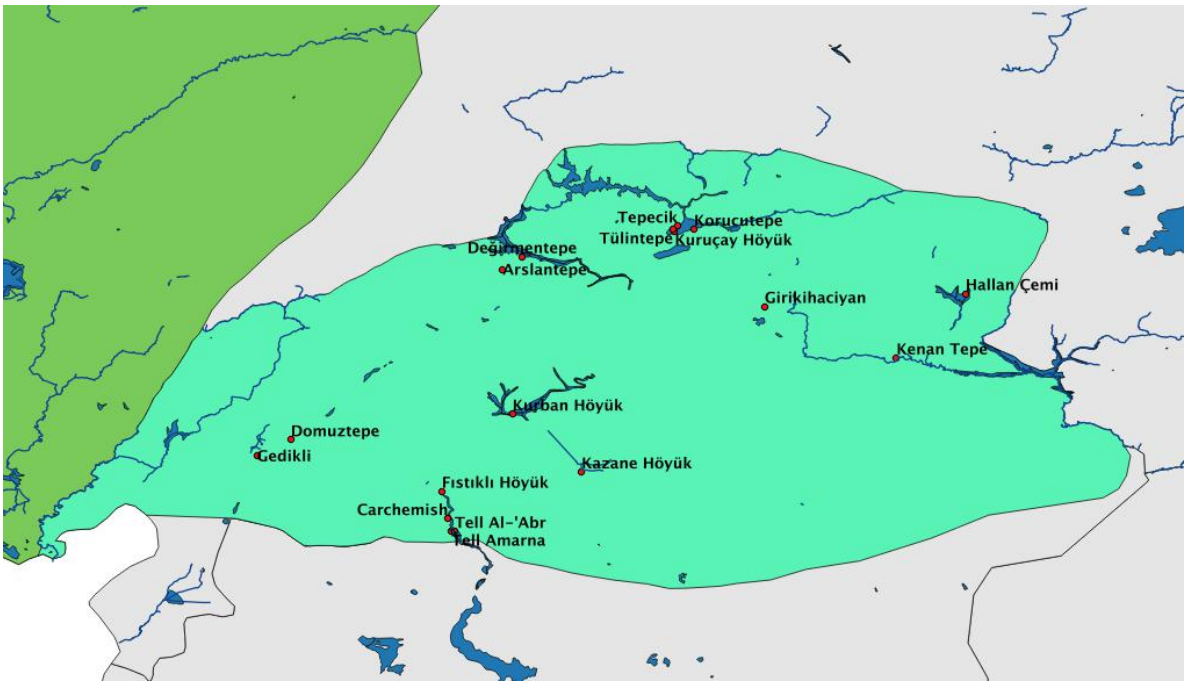


Figure 3.3: Map of Southeastern Anatolia with site dating to the Early to Middle Chalcolithic

In southeastern Anatolia, many aspects of Mesopotamian culture appear from the Chalcolithic onwards. While in the Neolithic, some shared aspects exist between southeastern Anatolia and the Levant, in the Chalcolithic, Mesopotamian culture spreads, starting in the Halaf period. The Halaf lasted from about 5300 to 4500 BCE. This cultural style was first located in the Upper Euphrates region of Mesopotamia, originally recognized from the site of Tell Halaf in Syria, excavated between 1911 and 1929 (von Oppenheim and Schmidt 1943). The primary hallmark of Halaf culture, especially in earlier studies on the subject, was based on painted ceramic styles (Campbell 2007: 106).

The first excavations of Halaf culture was from at Tell Halaf in Syria, but the true type site is Arapachiya in Iraq, near Ninevah, excavated first by James Mellaart in the 1933 and again by Ismail Hijara in 1976 (Hijara et. al. 1980).

Halaf ceramics have been located as far north as the Lake Van in Eastern Anatolia, and as far South as the Karamanmaras and Tigris basin in the area of modern Baghdad in modern Iraq. The Halaf culture emerges from northern Iraq and in the Syro-Iraqi Jezira region. The Southern Mesopotamian Samarra and Hassuna cultures were roughly contemporary with the Halaf, until the Ubaid culture continued to flourish, eventually supplanting all three. At its height, the Halaf influence area was quite large, though it was always far smaller than the areas later influenced by the Ubaid and the Uruk (Frangipane 2007:154).

The Halaf package involves painted pottery characterized by red or black polychrome and ornamented geometric and naturalistic motifs. The patterns were dense, with little open space. Some naturalistic designs of animals, birds and bucranium were sometimes depicted. Bichrome patterns are known from this period as well. Ceramics were hand made, with thin, well-fired walls and more complex vessel shapes than previously known. Halaf ceramics and styles are not uniform, with high amounts of regional variation, yet recognizable similarities. Some scholars suggest that perhaps the earliest painted pottery and its spread outwards from northern Mesopotamia was associated with the development of complex societies and increasing social interaction between regions, through the trade of new technologies and elite goods (Campbell 2007:106).

In particular, the Halaf is important culturally as the first example of technological concepts spreading over a large area in the ancient Near East. The reasons behind this phenomenon remain one of the most interesting mysteries of the study of the Halaf. As Campbell asks, “Was it associated with rituals of consumption or even with new cuisines? Did the style carry common meanings or reference common beliefs? Did it develop in one region and then spread through a process of emulation or is it the outcome of multiple parallel developments

within an existing network of interaction?" (Campbell 2007:128).

The key-shaped tholos buildings typify Halaf architecture, made up of a circular main room, with a rectangular entranceway or antechamber. Tholos buildings are known as far north as the Lake Van area. The sizes of the tholos buildings range, from structures large enough for domestic use, to smaller storage-sized structures (Frangipane 2007:155).

Stone tools were made of obsidian or chert. Few weapons are known from this period, mainly consisting of clay sling balls, with no known stone projectile points. A possible organizational or administrative system at some settlements is suggested by the appearance of stamp seals (Watson 1983: 239; Healey 2007:173).

Elaborate craft production of elite goods, especially made from obsidian, has been established with long distance trade networks in place to acquire the raw or finished materials, such as obsidian, shells and ceramics. Obsidian studies from the sites of Domuztepe and Tell Kurdu in southeast Anatolia, and Tell Arapachiya in Syria, indicated long-distance obsidian trade. Obsidian was used to create a variety of elite goods, including ground and polished beads, pendants, mirrors and vessels, as well as the more common flakes, as recovered from Domuztepe (Healy 2007:173, 181).

Pottery was made for export as well as local use. Larger settlements were likely central locations for pottery production. Evidence at Carchemish suggests the possibility, with hundreds of kilns in a small workshop zone of the site (Woolley 1952: 210).

Other aspects of the Halaf package include naked female clay ophidian figurines, clay boat models bent clay nails, and incised pendants. No Halaf era sites had artificial irrigation systems; Halaf sites were restricted to dry farming zones, with the production of emmer, einkorn, hexaploid wheat, lentils, flax, chickpeas and bitter, and with domesticated sheep, goats, pigs and

cattle (Watson 1983: 238-239).

In general, Halaf sites were small, usually between one to eight hectares in size, with more sites on the smaller end of that spectrum than the larger (*Ibid*). Burials from the Halaf period ranged from simple inhumations, usually in contracted position, to mass graves, as found at Tepe Gawra or Domuztepe, to jar burials, usually of infants, to cremation burials, as found at Mersin and Yarim Tepe. Graves were both intra- and extramural, though few sites had an abundant number of graves (Akkermans 1989a: 75-84).

Major sites with Halaf influence within Anatolia include Mersin (Cilicia), Tulintepe, Koructepe and Cayobuy (Keban region), Carchemish, Arslantepe (Middle Euphrates Valley), Gerikihaciyan (Diyabakır), Tilkitepe and Yilantas (Van), and Tepecik, Kortepe, and Norşuntepe. Perhaps the best known of the Anatolian Half sites was Domuztepe (Watson 1983: 236-237).

Before the appearance of the Halaf, painted pottery was known from southeastern sites, but the amount increased into the Early Chalcolithic (Özbal 2011: 177). Local variation included a dominance of Dark-Faced Burnished Wares in the area of Cilicia, and Amuq, and lighter, unburnished chaff tempered wares in the east (Özball 2011: 177). Far lower ratios of Halaf style painted pottery to non-painted pottery are known in the southeast than found in contemporary Mesopotamia and Syria, with a dominance of plain wares throughout southeastern Anatolia (*Ibid*).

The expansion of the Halaf into southeastern Anatolia was not a full-scale cultural exportation, but rather, the adoption across a large area of certain cultural modes. Halaf influence was visible in southeastern Anatolia through pottery styles, tholoi shaped buildings, female figurines, etc. Not all aspects of Halaf culture were adopted at every site, but rather, local cultures picked the aspects that best suited them. The Halaf cultural spread was not the result of

an organized campaign of conquest or even cultural absorption, but rather local imitation of cultural styles, for reasons not well understood by modern archaeologists. Evidence suggests that pottery was not traded, but rather, local potters created pottery in the style of Halaf pottery. Not all aspects of Halaf culture were equally adopted. As an example, the naked female ophidian figurines were often found in Chalcolithic sites from northern Syria, but these figurines were never found in Anatolia (Gessner 2011).

The Halaf reflects a higher amount of cultural connections in the Early Chalcolithic. It is obvious that in southeastern Anatolia, foreign contact occurs, be it directly from Mesopotamian peoples moving around the countryside, which is less likely, or from the movement of foreign elite items that are then copied on a local scale (Carter et. al. 2003).

Within southeastern Anatolia, aspects of Halaf culture were found in some, but not all, settlements, and not in uniform ways. For example, evidence of the Halaf from the Early Chalcolithic levels at Domuztepe includes Halaf-style locally made pottery, though local style black burnished pottery was also abundant. Numerous tholoi buildings were excavated at Domuztepe, which lasted until the Ubaid phases. Other buildings were round, but not built in a tholoi shape. Large numbers of stone tools, and carved stone stamp seals were recovered, but no boat or ophidian figurines. There were many Halaf aspects at Domuztepe, but the site itself was not a true Halaf site (Carter et. al. 2003).

Overall, the Halafian cultural aspects in southeastern Anatolia largely manifested in ceramic styles, with fewer of the more typical material culture aspects found more commonly in northern Mesopotamia and even in northern Syria, such as ceramic bent nails, ophidian goddesses, and boat models. The tholoi architecture that was such a large and integral part of Halaf culture in other areas was present in Anatolia, particularly at Domuztepe, but is not as

widespread as in other areas of the Halaf sphere. While there were most definitely signs of Halaf culture in southeastern Anatolia, the degree of change due to the Halaf were much less than in other areas to the south.

Otherwise in Early Chalcolithic southeastern Anatolia, metallurgical practices greatly increased, with the presence of hot-worked copper objects. In terms of architecture, both round and rectangular buildings were erected, with no known signs of defensive architecture. Burials were intramural, placed under floors and courtyards, though few are known from this time period. By the end of the time period, full domestication of some plants and animals was present in most settlements. By and large, subsistence in this period centered on domesticated wheat, barley, flax, peas, lentils, chickpeas, vetch, fruits pistachios, grapes, and olives, as well as domesticated sheet, goats, pigs and cattle, and non-domesticates such as wild deer, equids, fish and birds (Gessner 2011: 779)

Regional variation of subsistence patterns was quite high in this time period. It was once believed that all Halaf period sites were sedentary farming villages (Watson 1983: 238). As is often the case in archaeology, reality was not quite so simple. Recent evidence of pastoral herding and a semi-nomadic lifestyle, or even a completely nomadic lifestyle as come to light. New evidence suggests some settlements, such as Fıstıklı Höyük (Bernbeck and Pollock 2003) and Çavi Tarlası (Pollock 2012), were temporary or annual campsites, based on the types of architecture and foodstuffs recovered from those sites. Other research indicates periods of use and abandonment larger sites, such. Domuzetepe or Sabi Abyad (Campbell 2007). Evidence suggests these sites were in use for perhaps a few years at a time, until local resources were depleted. At this point, the inhabitants picked up and moved elsewhere. This allowed for the resources to replenish themselves naturally, before the inhabitants could return again, perhaps

years later, to once again inhabit the region (Campbell 2007; Bernbeck 2013). Evidence for similar subsistence methods is attested ethnographically and historically (Eder 1984; Nelson and LeBlanc 1986).

Other settlements were likely more permanent habitations. These settlements were often larger, ten to twenty hectares in size, making them larger even than contemporary sites in northern Mesopotamia and Syria. These large sites include as Takyan Höyük at ten hectares (Wattenmaker and Mısır 1994), Kazane Höyük at twenty hectares (Campbell et. al. 1999), Domuztepe at twenty hectares (Algaze et. al. 1991), and Tell Kurdu at fifteen hectares, though it remains unclear if all parts of these settlements were in use simultaneously (Özbal 2011: 179).

The evidence does fit the multi-tiered settlement concept argued for in the later Ubaid tradition in both southeastern Anatolia and Mesopotamia, with large central sites, smaller villages around them, and transhumance herders supplying food on the hoof, as well as trade goods and metals. The problem remains that while a number of these large sites are known, they have not yet been extensively excavated, with the exception of Domuztepe. Southeastern Anatolia, thus far, seems to be the exception to the general picture of small Halaf villages (Frangipane 2007:155).

Middle Chalcolithic Southeastern Anatolia

A greater number of cultural differences are apparent in southeastern Anatolia than in contemporaneous central Anatolia between the Early to the Middle Chalcolithic, largely due to the presence of Mesopotamian influences. The Middle Chalcolithic in southeastern Anatolia was not a sudden departure in culture, but was a more distinct period in the southeast than in central Anatolia. Many of the Early Chalcolithic settlements continued into the Middle Chalcolithic,

including Arslantepe, Carchemish, Domuztepe, Kazane Höyük, Kurban Höyük, Tepecik, and Tülintepe (See Figure 3.1). In Middle Chalcolithic southeastern Anatolia, settlements became larger, and the earliest fortification systems appeared in the area.

Perhaps one of the largest influences on southeastern Anatolia in this period was the emergence of the Ubaid culture. The Ubaid culture was similar to the Halaf in that it was a cultural package, spreading outwards from northern Mesopotamia. The Ubaid lasted from 5500 to 3500 BCE, though aspects of the Ubaid did not enter Anatolia until around 4500 BCE. Ubaid materials were recovered in roughly the same spatial area as Halaf materials from the Early Chalcolithic, which it largely replaced. The Ubaid period is split into five phases, 0 to 4, though only Phases 3 and 4 are found in areas outside of Iraq. The type-site for the Ubaid is Eridu, located on the Euphrates River in northern Mesopotamia. Ubaid culture spread surprisingly uniformly into Syria, Iran, Arabia and Turkey (Nissen 1989: 245-248).

Like the Halaf before it, the Ubaid culture did not replace local cultures, and was unlikely spread through vast migrations of Mesopotamian populations. The Ubaid was characterized by a series of cultural tropes that originated from northern Mesopotamia and spread outward, likely through trade and assimilation rather than any form of coercion, with various settlements adopting aspects of the Ubaid package at will (Campbell and Fletcher 2010; Caneva et. al. 2012). Unlike the Halaf, the spread of the Ubaid was far more uniform which aspects were adopted by the periphery, with less local variation of forms.

The Ubaid package, as recovered in the archaeological record, included painted pottery, specific vessel shapes, ophidian figurines, and clay sickles. Ubaid painted pottery was not as elaborately decorated as in the Halaf, characterized by a buff slip with geometric designs and only rarely pictorial scenes. The pottery of this period was not burnished nor as well made as

Halaf pottery. Geometric patterns were looser and less exact. Popular designs were festoons, zigzags, and linear designs. The earliest attested slow-moving wheel-made pottery are Ubaid in date, though not all vessels were wheel made. Wheel-made pottery made a far later appearance in central Anatolia, in the Early Bronze Age. (Oates 1983: 260-262).

Unlike the Halaf, the Ubaid package included various social as well as material aspects. This included a new style of architecture, with tripartite temples, niches and buttresses on buildings and wall (though this became far more abundant in Anatolia in the Late Chalcolithic), granaries, and a differentiation between the public and private spheres, as well early signs of social hierarchy through differentiation in domestic architecture and burial practices. Houses were large, multi-roomed rectangular structures. Within, the rooms were specialized, such as for food preparation, craft making, sleeping, storage, etc. The central room in the home was the largest, and usually contained a hearth. As this was also the most public room in the house, it was possibly used for entertaining as well. Additionally, more internal private storage was common. The granaries were a sign of agricultural surplus as well as a possible sign of job specialization (Özbal 2010).

Major sites with Ubaid material in southeastern Anatolia include Değirmentepe, Norsuntepe, Korcutepe, Tepecik, Mersin, Gedikli, Tilkitepe, Agri and Maraş (See Figure 3.2). The southeastern Anatolian style of the Ubaid did differ in some ways from that found in Mesopotamia or northern Syria. For example, in northern Mesopotamia, tripartite style architecture was primarily reserved for use in public architecture, most likely temples. In many sites in Anatolia, such as Değirmentepe, the tripartite style building with typical niches and buttresses was used almost uniformly for domestic architecture (Esin 1985).

The earliest attestation of Ubaid material cultural aspects in the archaeological record

most often at sites that already had a substantial Halaf presence to begin with, such as at Domuztepe. Aspects of the Ubaid that are more common in Mesopotamia or northern Syria were not always present in Anatolia, most notably the clay sickles, bent clay nails, and ophidian figurines. Less is known archaeologically of the Ubaid period (Middle Chalcolithic) than of the Halaf period (Late Neolithic/Early Chalcolithic) in southeastern Anatolia. Most information from this period is derived from pottery styles, rather than architecture, use of space or burials. Excavations from Middle Chalcolithic settlements at Coba Höyük, Gedikli, Tilmen Höyük, Norşuntepe, Tülintepe, and Korucutepe, revealed high numbers of ceramics, but with virtually no associated architecture (Özbal 2011: 183).

The little architectural data dated to this period does not give conclusive information on broad patterns from the region, from grill-like architecture of Tell Kurdu (Özbal 2010: 298), to more Ubaid-style tripartite architecture from Değirmentepe (Esin 1989).

Değirmentepe remains the best known southeastern Anatolian Middle Chalcolithic site, often referred to as the 'type-site' for the period (Özbal 2011: 185). More architecture been excavated here than any other site in Middle Chalcolithic southeastern Anatolia, revealing Ubaid-style tripartite buildings combined with the Neolithic agglutinative style architecture, seemingly built for ritual purposes (Duru 1979).

The earliest irrigation systems date to the Middle Chalcolithic. Likely, this technology originated in northern Mesopotamia, where the hot and dry climate necessitated such practices for farming. Southeastern Anatolia was not nearly as hot and dry as Mesopotamia, and while irrigation did improve crop yields and allow for agricultural surplus, it was not as vital as it was in Mesopotamia or northern Syria. Before this period, only dry farming was present in southeastern Anatolia (Özbal 2011:186-188).

Long distance trade increased in this period. Archaeological evidence suggests true trade routes were first established by the Middle Chalcolithic, as the number of both raw and finished goods drastically increased (Kelly-Buccellati 1990: 118-121).

Signs of settlement hierarchy increased in the Middle Chalcolithic. Settlements size was mode varied, ranging from small sites, usually around 1-2 hectare in size, to large sites, often more than 10 hectare in size, such as Domuztepe (Özbal 2011: 186). The number of stamp seals and clay bullae collected from various sites, in particular Değirmentepe, were indirect evidence of administrative practices. These objects were recovered from storage rooms, indicating controlled access to the materials once kept there (Esin 1994).

In Mesopotamian and Syrian Ubaid settlements, burials were often found in extramural cemeteries, a major change of the Ubaid period. In southeastern Anatolia, however, few burials are known from the archaeological record. Those that are known are found almost entirely within settlements, under the floors of buildings and courtyards, in continuity with the burials of the Neolithic and Early Chalcolithic (Özbal 2011).

The Middle Chalcolithic in southeastern Anatolia, while heavily influenced by the Ubaid cultural sphere from northern Mesopotamia, did still have many local cultural aspects. Furthermore, some settlements dating to the Middle Chalcolithic had little to no Ubaid materials. Generally, sites that had Halaf aspects in the Early Chalcolithic, such as Can Hasan or Değirmentepe, tended to have Ubaid material as well. Sites with little to no Halaf material, such as Arslantepe, Gedikli or Tülintepe, often did not have much or even any Ubaid materials. Indeed, in these sites, as was common also in contemporaneous central Anatolia, there was less of a visible difference between Early and Middle Chalcolithic; life remained relatively similar throughout this era..

Evidence of social differentiation in the Middle Chalcolithic is attested through the differences in site size, domestic architecture, emergence of private and public architecture and elite trade goods at a small number of sites, with Değirmentepe as the type site. Scholars still debate whether these signs are enough to indicate the emergence of chiefdom level societies (Stein 1994).

Late Chalcolithic/ Early Bronze I in Southeastern Anatolia

Cultural changes in the Late Chalcolithic to Early Bronze I in southeastern Anatolia were far more apparent than in contemporaneous central Anatolia. Settlement sizes began to swell, with fewer isolated, independent sites in the hinterlands; large fortification systems were built, weapons increased and social stratification became an entrenched aspect of society. A number of sites span the Chalcolithic to the Early Bronze Age, such as Arslantepe, Carchemish, Değirmentepe, Gedikli/Karahöyük, Hassek Höyük, Kalaycık Höyük, Kenan Tepe, Kurban Höyük, Lidar Höyük, Oylum Höyük, Tepecik, Tilbes Höyük, Tilbeshar Höyük, Titriş Höyük and Tülin Tepe (See Figure 3.1).

A total of twentynine sites from this time period are studied in this dissertation: Arslantepe, Carchemish, Değirmentepe, Gedikli, Gritille, Hacınebi, Hassek Höyük, Hirbemerdon Tepe, Kalaycık Tepe, Kenan Tepe, Korucutepe, Kurban Höyük, Lidar Höyük, Norşuntepe, Oylum Höyük, Pulur (Sakyol), Samsat, Tepecik (Makaraz Tepe), Tilbes Höyük, Tilbeshar, Tilmen Höyük, Shiukh Fawqani, Jerablus Tahtani, Tell Shiyukh Tahtani, Tell Al-'Abr, Titriş Höyük, Tülintepe, Yarım Höyük and Zeytinlibahçe Hoyük.

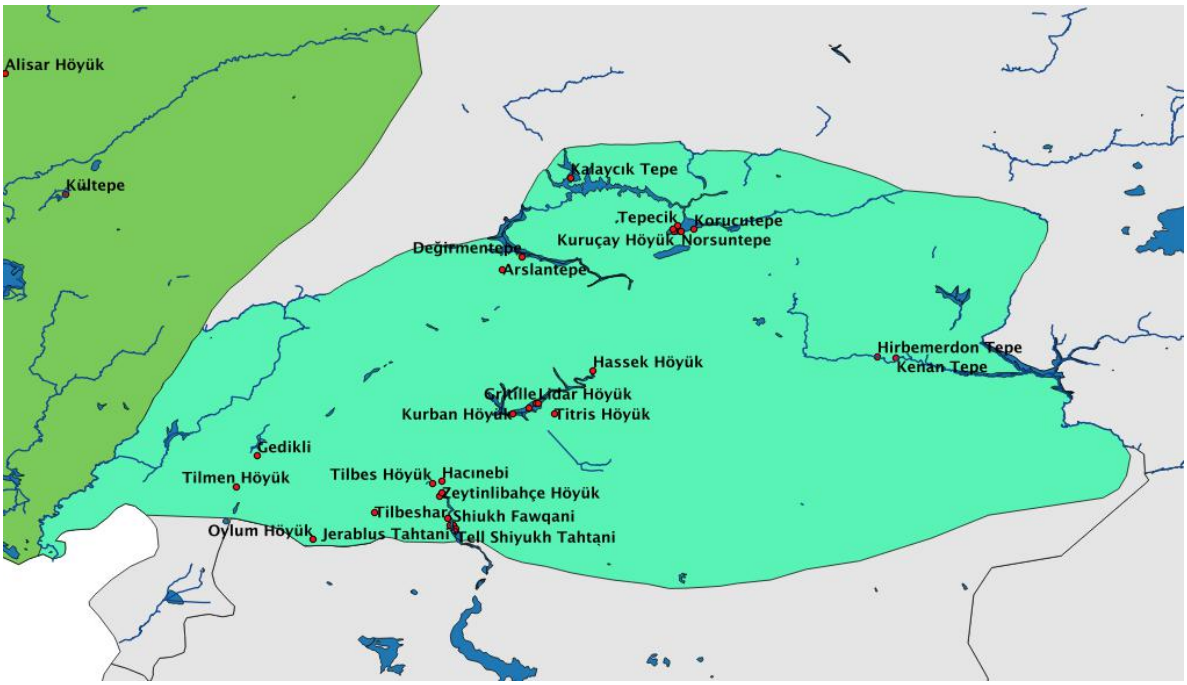


Figure 3.4: Map of Southeastern Anatolia with sites dating to the Late Chalcolithic to Early Bronze I

Cultural influence from Mesopotamia increased, with the emergence of the Uruk cultural and political sphere. Like the previous Halaf and Ubaid periods, the Uruk is known archaeologically as a series of material adaptations. Unlike these previous two periods, evidence of direct influence on local cultures by Mesopotamian migration is now unquestionably apparent.

The Uruk culture first appeared in southern Mesopotamia around 3800 BCE, and lasted until 3100 BCE. Uruk materials first appear in the southeastern Anatolian archaeological record at around 3600 BCE, during what is commonly referred to as the Middle Uruk period. The Uruk culture originated directly from a single site, Uruk, located in northern Mesopotamia. Uruk is often called the First City of the World, and for good reason. In an era where a 10-hectare settlement was considered quite large, Uruk was 100 hectares in size by the middle of the period it gives its name to (Collins 1990).

Like in the previous two periods, a number of well-known hallmarks indicate the presence of the Uruk culture. The ceramic evidence includes new shapes and decorations and more iconographic motifs of animals than in the previous periods, as well as the first appearance of mass produced pottery. The well known beveled rim bowls, an Uruk touchstone, were constructed in standardized sizes and made of subpar materials, often not even well fired, and were likely used for ration control (Collins 2000).

Stamp seals and clay bullae greatly increased in numbers in the Late Chalcolithic, indicating an increase in administrative procedures. In Mesopotamia, and in Uruk in particular, the first known evidence of proto-writing, emerges in the form of early cuneiform tablets, though this technology did not spread into Anatolia (Frangipane 2007).

Uruk architecture was known for niched façade temples, walls embedded with ceramic cones forming colorful geometric patterns, and tripartite houses. The study of Uruk architecture reveals a marked increase in public versus private architecture, large versus small domestic architecture, and for the first time, religious versus administrative versus domestic spheres within a single settlement (Collins 2000).

The first true emergence of social inequality is a major aspect of the Uruk period. Evidence includes an increase in elite goods, elite architecture and domestic architecture, elite graves and grave goods, and iconographic representations of a king figure on vases, seals and statues. By the Uruk period, chief-level societies were born, if not early state societies, though the power of the Uruk ruler remains contested by Uruk scholars (Algaze 1993; Stein 1999; Collins 2000; Rothman 2000).

In this period, site settlements became more differentiated than in the previous period, with large central sites, such as Uruk itself, and small, outlier agricultural villages in place to

support the central site and to grow food. These sites relied on each other, with the central sites ruling over the smaller outside periphery sites. This allowed the creation of new classes of attached specialists, as well as farmers who work for a central power, often called a chief, in an incipient state society (Frangipane 2001).

The elites of Uruk period utilized trade to create the wealth to build large public structures and to obtain elite goods that showcased their power, using already existing trade networks but more intensively and with greater control. Trade included raw materials such as timber, metal and bitumen, used in Uruk baskets and boats for water-proofing as well as for decorating figurines (Rothman, 2011). Trade routes were better established in the Urk period, with many large sites located on these routes, in order to better facilitate the trade of raw materials to Uruk (See Chapter Nine).

Movement of Uurk material was not a passive exchange of objects and culture through peaceful and equal trade. There were three forms that Uruk interaction took in southeastern Anatolia: primarily exchange and trade, as exemplified by Tepecik (Esin 2001), emulation of style, as exemplified at Hacınebi (Stein 1999), and establishment of actual Uruk settlements within the territories of local polities, as exemplified at Hassek Höyük (Behm-Blancke et. al. 1981).

In the Middle and Upper Euphrates Valley, settlements showed high amounts of Uruk influence, as found at places such as Sheikh Hassan (Boese 1986), later levels of Hacınebi (Stein 1999), Habuba Kabira (Strommenger 1980), Jebel Aruda (van Driel 2006) or Hassek Höyük (Behm-Blancke et. al. 1981), while west of the Euphrates and north of the Taurus mountains, Uruk influence is far less present, to completely absent (Frangipane 2002: 126; Steadman 1996).

In terms of direct control in the region of southeastern Anatolia, there is evidence of Uruk

colonies in the region, though not as much as was originally suspected (Algaze 1989b). Much has been made in the literature about the nature of the Uruk colonies (e.g. Stein 2001; Frangipane 2001; Postgate 2002). A colony is a settlement that is either newly founded or taken over by a foreign population in a different territory, with the purpose of forming a long-term settlement rather than a temporary outpost, and with a distinct population from the local community, at least from the start (adopted from Stein 2001: 280). As a result, a colony must be made up of the full range of sexes and age groups, as opposed to an outpost for military or trading purposes, which may be made up of only young men.

A colony can be founded primarily with men, then later take in local women to complete the population. As women tend to prepare meals and attend the household, a colony may over time become indistinguishable from the local communities, and become eventually assimilated, or may remain an outside and distinct culture. Archaeologically, colonies are visible in the archaeological record through distinct differences in the mundane details of everyday life, such as butchery patterns, food choices or domestic pottery styles, as opposed to foreign style ceramics that may emulate fashionable trends. Additionally, modern bioarchaeological evidence of foreigners is possible through the study of ethnic differences through bone morphology, or isotopic studies of the bones to discern if an individual was born in a different region than where he was buried (Verano and DeNiro 1993). More than just similar pottery styles and architecture are needed in order to prove a settlement is a colony or foreign enclave rather than local emulation of foreign styles (Stein 2001: 283-284).

Survey data may also give evidence of the arrival of Uruk immigrants. The survey of the Carchemish region by Algaze in the early 1990s revealed a number of newly founded settlements dating to the Late Chalcolithic, with Uruk materials such as beveled rim bowls, and without

visible indigenous ceramic styles that are typical otherwise in the region previously. The sites, never excavated and many later inundated by the Atatürk dam, were mainly located in low terraces along the Euphrates river floodplain, and were interpreted as intrusive Uruk settlements. The settlements ranged in size from quite small, only a hectare in size, to large, up to twelve hectares. Beyond the lack of local materials found during surveys, another indication of Uruk colonization was the increase of sites in the Late Chalcolithic, as well as the amount of occupied area in the Carchemish region, as much as a seven-fold increase in population observed from the previous time period. (Algaze 1999:539-540).

More recent evidence suggests the Uruk sphere of influence did not create social complexity within Anatolia, though it did have an impact. The sites of Arslantepe and Hacınebi were large, administratively complex, fortified settlements predating the Uruk. In the pre-Uruk levels at Arslantepe and Hacınebi, local evidence of complex administrative systems were present, including locally made cylinder seals, large public monumental architecture, elite goods, long distance trade and, in the case of Arslantepe, signs of redistribution of food goods (Stein 1999: Frangipane 2001). Thus, the concept of the Uruk bringing social complexity to the "periphery" is shown to be a far too simplistic model for southeastern Anatolia.

When Mesopotamian groups are visible in the archeological record as distinct from local peoples, there is no evidence of the local peoples supporting them. For example, at the Uruk enclave found at Hacınebi, both locals and Uruk immigrants produced their own food, as seen through their divergent butchery and cooking practices, farmed their own grain, created their own pottery and textiles, and kept their own distinct material culture, indicating Uruk immigrants were self-sufficient, receiving little, if anything, from their native neighbors. These two groups, as visible in the archaeological record, did not seem to have a contentious relationship with the

locals, with no signs of violence during the periods of coexistence (Frangipane 2001: 2-3; Stein 2002: 149-152).

Local aspects of indigenous culture continued to evolve in this period, despite influences from the Uruk cultural sphere. While numerous traits were visible across most sites in the period, including the emergence of stamp seals, wheel-made mass-produced pottery, and differentiation in domestic architecture, the implementation of these traits differs from site to site (Özbal 2011: 188). For example, though the production methods of pottery was very similar across large areas in the Late Chalcolithic, the actual forms produced are still quite particular to each site.

There were sites in southeastern Anatolia without aspects of the Uruk cultural package (Parker 2007), such as Kenan Tepe. Another interesting situation is the absence of Uruk influence throughout Cilicia. As presented by Steadman (1996), settlements in Cilicia, mainly typified by Malatya and Tarsus, traded regularly and primarily with northern Syria and Mesopotamia from the Neolithic onwards, but with the rise of the Late Uruk, practically all trade and interaction with that region abruptly ended and new connections made with central Anatolia instead. The Cilicia region was rich in natural resources, including semi-precious stones, metal ores, obsidian and, likely, agricultural and textile goods, so trade with the region was well worth the effort and had existed before the Uruk period. Steadman concludes that the region must have chosen to end ties with Mesopotamia in order to remain outside of the Uruk sphere of influence, preferring central Anatolia as a trading partner (Steadman 1996).

Beyond the social changes discussed above, other changes in this era included the rise of fortification systems, with Hacınebi Level A (Stein 1999), Arslantepe Level VII (Frangipane 2009), and Samsat Level XXIV (Özgüç 2002) surrounded by large fortification systems. Evidence shows that much of this increase in fortification systems existed before the Uruk made

its impact on southeastern Anatolia, especially at Arslantepe, where the Level VII walls predate the Uruk levels.

Burials also changed in this era, with the first known extramural cemeteries emerging. Extramural cemeteries include Hassek Höyük (Behm-Blancke et. al. 1984), Lidar Höyük (Wittwer-Backofen 1987), Titriş Höyük (Honça and Algaze 1998), Birecik (Sertok and Egeç 1999), Tilbeshar (Kepinski 2010), and Zeytinlibahçe Höyük (Frangipane 2007). By the Late Chalcolithic, metals became more important in the trade of Anatolia. In Arslantepe Level VIB for example, the excavators recovered substantial evidence of metalworking. They concluded that while there was ample metalworking at Arslantepe, it was primarily found within public areas, not within private domestic spaces (Caneva and Palmieri 1983).

At the end of the Late Bronze Age, the Uruk culture collapsed, ending the Mesopotamian presence in southeastern Anatolia, at least for a time (Algaze 2013). Numerous sites in southeastern Anatolia experienced destruction, abandonment, or desertion, including Arslantepe, Hacınebi, Hassek Höyük, Hirberdon Tepe, Kurucutepe, Samsat, Tilbeshar, Jerablus Tahtani, Tell Al-'Abr and Zeeytlinlibahçe Höyük (See Figure 3.1). Other settlements, including Carchemish, Domuztepe, Kaylaycık Tepe, Kenan Tepe, Oylum Höyük, Tilmen Höyük, Shioukh Fauqani, and Tülintepe continued between the Late Chalcolithic into the Early Bronze I without interruption, so while the fall of the Uruk and its repercussions reverberated throughout northern Syria and parts of southeastern Anatolia, the disruption was not universal.

Other sites had a period of abandonment, and then were reestablished later in the Early Bronze, such as Arslantepe and Hirbemerdon Tepe. According to surveys of the regions, (e.g. Wilkinson 1990), sites at the start of the Early Bronze Age were generally small, often only a hectare or two in size, before growing again with the start of the Early Bronze II period. None of

the identified Uruk enclaves mentioned in the previous section continued into the Early Bronze I period, and only one third of all the known Late Chalcolithic site sin the Carchemish region continued into the Early Bronze I period (Algaze 1999: 454).

Post Uruk-collapse, interregional exchange still existed in southeastern Anatolia, though it was organized differently. At the start of Early Bronze I, many sites were smaller than in the Chalcolithic, such Kurban Höyük, which was 4 hectares in size during the Late Chalcolithic, and was only one hectare by the start of the Early Bronze II (Wilkinson 1990). Hassek Höyük also shrinks substantially, the city wall disappears, then is remade in a new style, and the architecture changes, with only small domestic spaces excavated, before growing later again later in the Early Bronze I period (Behm-Blancke 1984).

Evidence suggests the population in the southeast was between the Late Chalcolithic to the Early Bronze I, but instead of the very hierarchical nature of the sites from before with larger houses and communal architecture, there was instead a scattering of small houses by the end of the Early Bronze I. There are more identified sites dating to the start of the Early Bronze, though site size is smaller overall, suggesting a shift to the countryside. It is often postulated that nomadic populations were more numerous during this period. Most new villages were founded upon virgin areas, instead of reusing the Chalcolithic landscape (Ökse 2011). Around Carchemish, less than one third of all Uruk sites continued into the Early Bronze I period. The sites in the area were still trading copper objects from the Tigris basin, as found in cemeteries such as Hassek Höyük (Behm-Blancke 1984). The sites of Samsat and Carchemish still dominated the Turkish lower Euphrates, indicating some site hierarchy remained (Bunnens 2007).

At the start of the Early Bronze period, beyond the abandonment or severe decrease in

sites, there were other signs of a large change in the more centralized systems found in the fourth millennium settlements. This included the loss of large public architecture in sites, a lack of fortifications being built or being kept up from previous periods, the disappearance of cylinder seals and clay sealings in Anatolia, and a seeming breakdown in trade routes, as the smaller sized settlements scattered throughout southeastern Anatolia and became self-sufficient. It appears the connections forged between southeastern Anatolia and northern Mesopotamia were broken with the fall of Uruk influence in the area, to be largely replaced with autonomous rule and a greater collaboration with the peoples of central Anatolia (Yakar 1999:506). It was from this period forward that southeastern Anatolia, until now largely a far northern extension of Mesopotamian culture, became more enmeshed with the cultures of central and southern Anatolia, with less and less direct exchanges with Mesopotamia.

Early Bronze Age II and III

The Early Bronze II and III period saw a reemergence of local culture over Mesopotamian influences after the fall of the Uruk and the first incursions of outside armies. A total of twenty-seven sites from this time period were studied in this dissertation: Arslantepe, Barecik, Carchemish, Gedikli, Gritille, Gre Virike, Hassek Höyük, Hirbemerdon Tepe, Kalaycık Tepe, Kenan Tepe, Korucutepe, Kurban Höyük, Lidar Höyük, Norşuntepe, Oylum Höyük, Pulur (Sakyol), Tepecik (Makaraz Tepe), Tilbes Höyük, Tilbeshar, Tilmen Höyük, Shiukh Fawqani, Jerablus Tahtani, Tell Shiyukh Tahtani, Tell Amarna, Titriş Höyük, Tülintepe, and Zeytinlibahçe Hoyük.

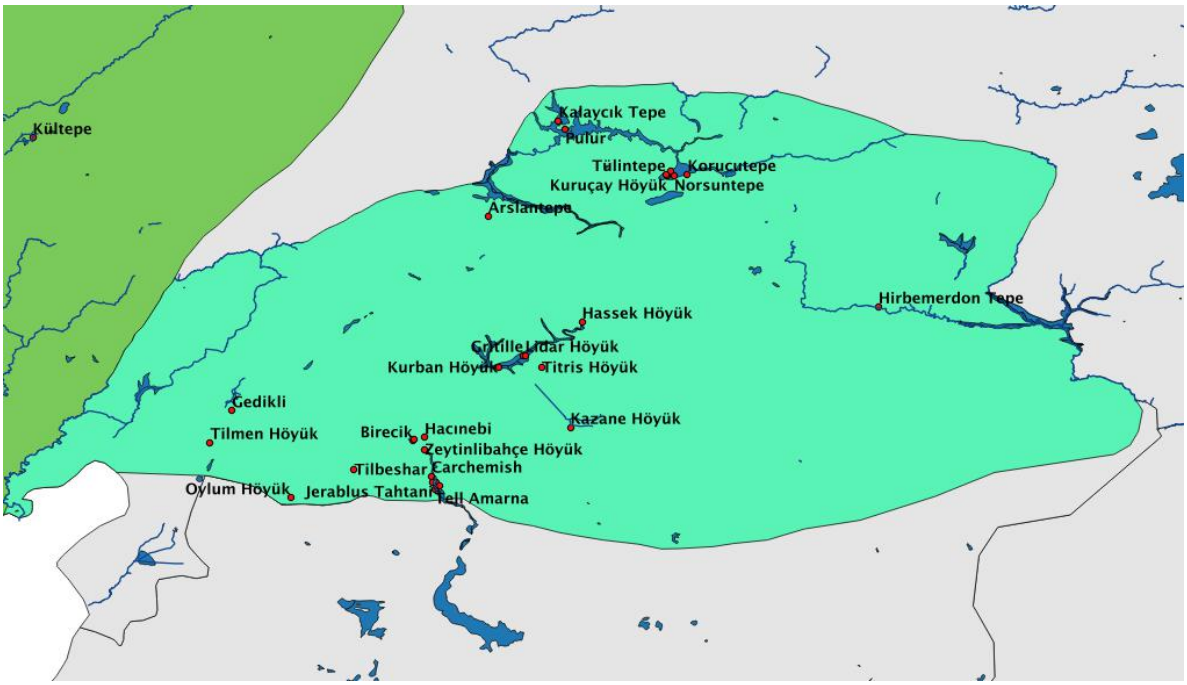


Figure 3.5: Map of Southeastern Anatolia with sites dating to the Early Bronze II to III

By the Early Bronze II period, the decrease in complexity in southeastern Anatolia halted, with the start of what Yakar calls the "Early Urban Phase" and the "Emerging City States and Local Dynasties Phase" in the Early Bronze III (Yakar 1999:505). The central and periphery model of settlements first seen in the Late Chalcolithic continued in the Early Bronze II and III. The larger central sites continued to grow in size and became the first true "cities," with well formed external fortification walls, distinct use neighborhoods with different areas of domestic, administrative and religious architecture and quarters. The rulers of these settlements in this period may be the first true kings, as opposed to incipient kingship of the previous era. As stated by Cooper:

> "In the Early Bronze Age, the region [Euphrates Valley] comprised autonomous cities characterized by densely populated centers that were surrounded by tracts of agricultural fields and grazing lands and sometimes features smaller satellite communities. That each of these urban polities

> was politically and economically independent of one another is suggested by the fairly even nature of their size and complexity and the redundancy of key administrative and ideological features within each settlement (storage facilities, craft workshops, temples and public buildings that may have served in some capacity related to the city's administration)" (Cooper 2006:28).

By the end of the Early Bronze III period, settlements grew large and centralized enough to be called city-state: large urban centers with farming-based hinterlands. These cities had a greater proportion of the population engaged in activities beyond food production. Trade and commerce were conducted between various networks, based on more than familial ties. Communal projects increased, with the creation of temples, administrative centers, irrigation canals, cisterns, soils, and granaries. The City had a central economic, political and usually religious role in the region (Ökse 2011).

The internal set-up still differed site-by-site. As an example, Titriş Höyük was a small independent city-state, with a central acropolis, fortifications, and public and private architecture. The city centered around a Mesopotamian style of government, with strict class structures and a single ruling class that controlled most aspects of life (Algaze and Matney 2011). This was in stark contrast to Early Bronze II and III Arslantepe, which now had a style of government more typical of the Trans-Caucasian region to the north: smaller cities and a more chiefdom-like style of rule, characterized by less stratification and less centralized organization (Frangipane 2012). Southeastern Anatolia was as the cross-roads of these two regions and elements of both were visible.

The southeast of Anatolia was far more metropolitan region than the more rural cities found in the same period in central Anatolia, with large cities controlling hinterlands through organized administrative systems. Unlike Mesopotamia and northern Syria, no writing system has ever been discovered in Anatolia in this era, suggesting that it remained a preliterate society,

though it is unclear why this technology did not spread this far north. In this era, long distance trade expanded and became entrenched, with the Amuq region in particular being a central hub of trade between Anatolia and the Levant and Mesopotamia (Ökse 2011).

Burial styles evolved in this period. Pithos graves became far more common, though cists and simple inhumations were also known. Large, extramural cemeteries located directly outside of the city walls became frequent. There remained a fair amount of regional variance. At Titriş Höyük, shaft tombs, unique (to Anatolia) were created in styles similar to the contemporary Levant (Ökse 2011), while the rare monumental tomb, from Elmalı Karataş and Jerablus Tahtani (Angel 1976; Peltenburg 1999).

By the Early Bronze III, true arsenical and tne bronzes were common, as well as more advanced forms of casting. Silver, gold and electrum were also being worked. Metallurgy skills were very advanced, full-time metallurgical specialists were likely. New techniques included inlay, lost wax/closed molds, hammering, repousse, soldering, granulation and filigree (Kelly-Buccellati 1990).

Near the end of the Early Bronze III period, the Akkadian empire made some small inroads into the region. The Akkadians were famous for being the first empire in the world, conquering much of Mesopotamia and northern Syria, and creating the first rule that unified multiple areas politically, economically and ideologically (Sagona 2006: 53), from a single city under dynastic rule with notable rulers, including Sargon (2310-2273 BCE) and his grandson Naram-Sin (2246-2190 BCE) (Westenholz 1996: 3). As the Akkadians had a fully developed writing system, much of what is known originates from literary sources, and more is understood about the Akkadians than about previous Mesopotamian cultures.

By and large, the Early Bronze Mesopotamian cultures had little visible impact on

Anatolian cultures after the collapse of the Uruk system. In the aftermath of the fall of the Uruk, the civilizations of southeastern Anatolia largely turned inwards, with a flourishing of both locally created cultural materials, as well as increased trade with to the north and west, as materials and styles from central Anatolia, western Anatolia, and the Caucasus became far more prevalent within southeastern Anatolian sites from Mesopotamia.

In the wake of the end of the Early Dynastic period in Mesopotamia, the city of Akkad began to rise in importance. Trading or raiding with nearby settlements, as was typical of the Early Dynastic period, intensified, as the first powerful kings began to flex their muscles. The first known empire was born, in which a single powerful settlement implemented direct control over other settlements, to greater and lesser extents. The Akkadian period is often called the first empire, and while this title is accurate in many ways, the term empire itself is often loaded with meanings that cannot be precisely applied to the Akkadians. The Akkadian empire was well remembered in later Mesopotamian history, as seen by the statue of Naram-Sim found in the remains of Susa in modern day Iran (Liverani 1993), or the invoking of the name of Sargon in the Neo-Assyrian period as a great king conqueror, by Sargon II at the end of the 8th century, over a millennia and a half later (Larsen 1979:90).

The Akkadian period was a large part of the mythos of Mesopotamian kingship and power, with Sargon, the first king, an archetype of power and leadership, and Naram-Sin a paradigm of hubris and overreaching (Larsen 1979:78). Later kings, including the Anatolian Hittites, used the example of crossing the Euphrates, the way that Sargon once did, as an example of a great feat and often emulated Sargon as the ideal king (Westenholz 1993: 2).

The Akkadian period in Mesopotamia lasted from around ca. 2330 to 2150 (Matthews 1997). The capital city of the Akkadians was Akkad, the location of which has not yet been

identified, so less is known archaeologically about the Akkadians and their culture. At its height, from around 2300 until 2200 BCE, Akkadian control spanned over 800 miles, from the Persian Gulf to the northern edge of the Euphrates River in Anatolia (Gibbons 1993: 983).

The Akkadians and their empire remain very difficult to locate in the archaeological record, and much of the scholarship on the Akkadian period relies heavily on textual evidence. When the first Akkadian tablets were translated and the empire rediscovered in the early 20th century, archaeologists believed the "Akkadian Period" to be visible through the use of flat bricks in construction of monumental architecture. It was soon found that such easy criteria were not accurate (Matthews 1997:2).

Perhaps the most visible aspect of Akkadian material culture are cylinder seal styles (e.g. Matthews 1997; Gibson and McMahon 1997), and to a lesser extent, through the few known inscriptions, sculpture, and ceramic styles. While these material clues may be useful for roughly dating a site to the "Akkadian Period," they impart little indication of how a settlement interacted with the Akkadians. Only a small number of sites outside of Mesopotamia proper have direct evidence of Akkadian presence: Mari (Margueron 1993), Ebla (Milano 1993), and Tell Brak (Oates and Oates 1989), and even at those settlements, the information is largely through textual evidence rather than through direct archaeological evidence. Within Anatolia itself, no known direct evidence of Akkadian incursions is known, either in the published literature of the Early Bronze period or in the data collected for this dissertation. The most direct line of evidence is the Nahariya stele (McKeon 1970), mentioned previously.

The textual evidence itself is also problematic, as many Akkadian texts are later copies rather than contemporaneous tablets. As mentioned, the Akkadians had great symbolic meaning in Mesopotamian thought, and so their writings were copied and kept for millennia. The

Akkadian royal inscriptions, detailing the deeds of Sargon and Naram-Sin, were made with certain propagandistic intentions, and later copies would only intensify these distortions (Liverani 1993:41-42), though debate remains how much these accounts, preserved only in later copies, from the Old Babylonian and Hittite accounts, can be trusted as 'historical' documents (e.g. Potts 2001).

The Akkadian empire was short lived, with the final king, Naram-Sin, ruling only approximately 100 years from the start of the empire. Much has been written regarding the reasons for the quick collapse of the empire, including climate change (e.g. Weiss et. al. 1993; Cullen et. al. 2000) or various political problems (e.g. Yoffee and Cowgill 1988).

The Akkadians ventured out beyond their borders in order to obtain more resources for their capital city. They controlled, traded and plundered to obtain raw materials as well as labor, including slave labor exacted from prisoners of war. There were a variety of ways that the Akkadians exerted control over various other settlements. First was direct political control over nearby settlements, in which the king of Akkad was imposed as ruler. This area included the Upper Tigris region, including Nineveh, Assur, and the Susiana plain in Khuzesta. Second, the Akkadians established a number of enclaves and garrisons at strategic locations in order to keep control of various lands and to give the army and king a place from which to be stationed while on the move. Examples of these come mainly from the northern Mesopotamian plain, including Brak, Mari and Nuzi, and represent incidentally, the best-known direct archaeological evidence of the Akkadian presence. Finally, in more distant lands, the Akkadians continued the pattern of trade and raids previously used in the Early Dynastic periods. Akkadians peacefully traded at times, with only a small Akkadian presence in the region. Areas included the Persian Gulf, the Taurus and Anti-Taurus highlands of Anatolia, and down to the coastal regions of modern day

Lebanon and southern Syria. When peaceful methods did not achieve the desired results, the Akkadian army would raid, with small military expeditions against various settlements, such as Ebla, Subartu and Simurrum. Likely, southeastern Anatolia fell into this category of contact (Algaze 1993: 2-3).

The Akkadians document places that were likely in Anatolia. During the reign of Naram-Sin, the conquest of a city called Šenaminda is mentioned: "in the year Naram-Sin reached the source of the Tigris and of the Euphrates and was victorious in battle with Šenaminda" (Westenholz 1998:11). The location named, at the source of the Tigris and Euphrates Rivers, would have placed Šenaminda within Anatolia. Other passages claim Naram-Sin marched through a town called Talḫat, thought to be a station on the trade rout to Kaniş and another relief from Diyabakır claims he once passed through the eastern Taurus Mountains. Sargon or Naram-Sin era royal inscriptions list numerous conquered city-states that appear, from the names, to be Anatolian in origin, such as Haḫḫun and ÍR-an-da (Westenholz 1998:12), indicating that Naram-Sin laid claim to having marched through portion of Anatolia.

The Akkadian instrusion in southeastern Anatolia was quite different to the contact between the Ubaid and Uruk cultures and southeastern Anatolia. In particular, the Akkadians assumed an asymmetrical exchange system for the first time. When both the Ubaid and Uruk cultural contact were first noted in Syria and Anatolia, it was assumed that the relationship must be that of a central polity exerting influence over a less organized and less advanced polity in the hinterlands (Algaze 1993). Archaeological evidence now indicates that while trade occurred between Uruk, Syria and southeastern Anatolia, the trade was not asymmetrical. By and large, this is the model now accepted by archaeologists studying the Uruk, with the term 'Uruk Empire' now largely out of vogue (Marro 2012).

The various cultures of southeastern Anatolia adopted various cultural attributes and technologies of the Uruk, such as wheel made pottery, cylinder seals and architectural styles, but they appeared to have done so at their own volition, rather than by force. Most scholars now agree, trade with Mesopotamia in this period was do so willingly and assumedly with a fair price for both sides (Frangipane 2009). The Akkadians did not offer such an arrangement. In their own writings, the Akkadians claim to have acquired resources, including materials and people, by force. Materials were taken back to their capital, leaving nothing in exchange, except perhaps an enclave of peoples loyal to the Akkadian king (Bachhuber 2013). This change is largely known through textual sources, though the increase in evidence of warfare, the topic of this dissertation, was likely a result of these practices. From the textual evidence from Ebla suggests the Akkadians primarily wanted silver and textiles from the Anatolian and northern Syrian areas (Yener 1980:49-50).

The Akkadians and their empire remain largely archaeologically invisible. They are known from a small number of burnt levels in northern Syria, most notably Mari Levels I and II (Michalowski 1993:82)**,** at Ebla (Milano 1995) and at Tell Brak, where bricks and stone vases, stamped with the name Naram-Sin and Rimush were recovered in the excavations of Max Mallowan (Oates 1989: 206, 210). Beyond destruction levels, little is known about the material culture of the Akkadians. The site of Akkad itself has not yet been discovered, so there is no type-site for Akkadian pottery, architecture or site layout. What is assumed to be Akkadian is based on how the Akkadians may have changed the areas they conquered. For example, within Mari, buildings such as the Masion Rouge are considered to be Akkadian in style, due to their date and their somewhat unique appearance (Margueron 1995).

Within Anatolia, evidence of Akkadian influence is sparse. Without a native writing

system, we have no local records of the effects of the Akkadians within Anatolia. For the same reason, we do not even know the names of the local cities and villages to compare to the Akkadian records, though the Akkadians themselves do claim to have entered and "conquered" Anatolia.

Two ancient accounts, the "King of Battle" and the "Great Revolt" tell of possible Akkadian incursions into Anatolia. The first, the "King of Battle" recounts the journey of Sargon into Anatolia, to do battle with the king of Purušanda, Nūr-daggal, who has cruelly trapped Akkadian merchants in his kingdom. The city of Purušanda has been variously associated with Acemhöyük, or an as of yet unidentified site somewhere southwest of modern Kayseri (Bachhuber 2013: 503; Barjamovic 2011: 357-378). In the end, mighty Sargon prevails, and the evil king Nur-Daggal surrenders immediately once Sargon breaches the walls of Purušanda, and Sargon rules the city for the next three years (Westenholz 1997, 103-104). No contemporaneous copies of this story date to the Akkdian period, with copies dating to the Old Babylonian period (1830-1530 BCE) from Assur and Nineveh and written in Akkadian, and the Late Bronze Age, written in Hittite, found at Amarna, Egypt (1353-1335 BCE) (Bachhuber 2013: 502-503).

The second account, the "Great Revolt," tells of a number of conquered cities that dared to revolt against Naram-Sin, and the king's mighty victories over the rebels. These rebellious kingdoms include Kaniš (presumably Kültepe-Kaneş), ruled by King Zipani. Later versions of the story found in the Hittite archives also include further Anatolian cities such as Purušanda once more, as mention Pamba, the king of Hatti (Van De Mieroop 2000: 140). Some fragments of this account date to the Akkadian, though the fragments are only from the beginning of the account and do not name any locations within Anatolia. A second highly fragmentary copy dates to the Old Babylonian period, and claims to be a direct copy of an inscription by Naram-Sin.

Once more, this copy does not mention of Anatolian sites in the fragments in existence. More complete copies of the account also date to the Old Babylonian period, and Late Bronze Age copies also exist in Hittite, which mention the further Anatolian locations listed above (Bachhuber 2013: 503).

Both accounts would seem to give credence to direct control of polities in Anatolia, as far as central Anatolia, in the case of Kültepe-Kaneş.With the exception of fragments from the beginning of the "Great Revolt" text, all date to many centuries after the events mentioned, and may be later concepts of territoriality rather than a true account of Akkadian military might, so the historicity of these texts remains to be verified.

Liverani exposits that these sources were likely inaccurate, later inventions ascribed to the great Sargon and Naram-Sin. His main line of evidence is that if the Akkadians had successfully invaded Anatolia, then monuments would have been erected depicting the events, and copies made during the Old Babylonain period. As no such monuments have been found, there must not have been any (Liverani 1993: 47-50; Bachhuber 2013: 504). This 'evidence' however is in itself purely speculative.

A more contemporary source is from the end of an Akkadian royal inscription found in the archives from Palce G at Ebla, that reads,

> "He (the god Dagān)
> gave to him (Sargon) the Upper
> Land: Mari, Irmuti, and Ebla
> as far as the Cedar Forest
> and the Silver Mountains
> (Frayne 1993:28-29; Bachhuber 2013: 502)

The Silver Mountains mentioned above are though to be either the eastern Taurus or Anti-Taurus mountain ranges, both being locations for silver mines. The Cedar Forest is perhaps

the Amanus Mountains (Bachhuber 2013: 502). This contemporary account does seem to better indicate that Sargon was at least aware of the geography of southeastern Anatolia. Though the relation between Sargon and this region remains unclear from this short inscription, only that Sargon felt that Dagān had given him the region. Whether or not he had any direct control over the region is uncertain.

Evidence of Akkadian presence in Anatolia comes from a single, contemporaneous iconographic record, the Nasiriyah stele. The Akkadian Nasiriyah stele, likely dating to the reign of Naram-Sin of Akkad (2254-2218 BCE) based on stylistic attributes, features an Akkadian soldier holding in his hand what appears to be a metal *depas* tankard, a vessel type unique to Western Anatolia (McKeon 1970), indicating possible intrusion into Anatolia from outside forces by the Early Bronze Age III. This type of cup was only made in Western Anatolia, and traded throughout Anatolia but rarely found outside the region, so the presence on the stele does seem to indicate the presence of Akkadian soldiers.

More recently, and not yet well published, is the discovery of a small cache of goods found from the site of Seyitömer, excavated by N. Bilgen, in the Eskişehir region. In the cache were reportedly ten cylinder seals in the Akkadian style as well as some gold jewelry and pins. The excavators suggested that this gives evidence of Akkadian merchants in the region (Bachhuber 2013: 505-506). More information will need to be published on this exciting find in order come to any further conclusions. Cylinder seals themselves do not necessarily indicate the presence of an Akkadian administrative presence, as the seals could have been used for other purposes, such as heirlooms decorative purposes, or for personal use.

Beyond this, little to no evidence of the Akkadians is known from within Anatolia. If not for the evidence from Mesopotamia itself, the Akkadians would have not been visible at all

within the archaeological record in Anatolia. As Michalowski eloquently states, "So much has been written on the Sargonic dynasty- in antiquity as well as in our time- that it is difficult to throw off the mantle of tradition, step aside, and analyze the surviving data without the pressure of received views" (Michalowski 1993:69). The best that can be done is to try and give the Akkadians credit for an increase in weapons, fortification systems, and destruction level in the periods when they would have entered. The upcoming chapters of this dissertation will assess what visibility, if any, the Akkadians had on the Anatolian sphere. As Yakar remarked, numerous sites in modern day Syria show signs of changes in their central administration, possibly due to the arrival of the Akkadians. Sites include Tell Leilan, Tell Mozan, Tell al-Hawa, Ninevah and Tell Taya, where the settlements became far more centralized as the site size was drastically increased. In southeastern Anatolia, site size did indeed increase throughout the Early Bronze II and III periods, but the settlements did not show the same complex administrative systems, remaining more in spirit to the settlements of central Anatolia rather than to those of northern Mesopotamia. Yakar uses this as proof that the Akkadian kingdom was changing the northern Syrian settlements, while making far less of an impact on those of southeastern Anatolia, along the northern reaches of the Euphrates (Yakar 1999:508-509).

It is clear, however, that the Akkadians were known later in Anatolian history. In the Hittite corpus found at the capital city of Hattuša, numerous references to the great kings of Akkad, Sargon and Naram-Sin, are found, indicating the Hittite were aware of the deeds and actions of the Akkadians, many centuries after the end of the Akkadian empire period. The Hittite king Hattušili compares himself in the "Annals of Hattušili I" to Sargon, when boasting of having crossed the Euphrates to conquer the city of Haḫḫa, boasting, "[Only] Sargon had crossed it [before]" (van de Mieroop 2000: 135). As mentioned above, a copy of the "King of Battle"

text was also found written in Hittite, as a story about the Akkadians in the Anatolian region as well as a copy of the "Great Revolt" text, in Kbo3.13, in which the names of the kings listed who took part in the revolt differ slightly from the Babylonian version. In the Hittite version, the kings all hail from northern Mesopotamia and Anatolia, while the Babylonian version are more dispersed, with kings from the eastern edges of the Mesopotamian sphere, as well as from the west listed (van de Mierroop 2000: 138-139).

Finally, a second text on Naram-Sin, called the "Cuthean Legend" with one copy in Akkadian and four in Hittite, in the Hattuša archives. In the text, the city of Purušanda is once again mentioned, sacked by Naram-Sin's enemies, even if Naram-Sin himself is not mentioned further in context within Anatolia (van de Mieroop 2000: 140). These examples reveal the Hittites were aware of the Akkadians and kept copies of the tales of the Akkadians within their records in their capital city.

At end of the Early Bronze III, at about 2000 BCE, much of Anatolian civilization crumpled, for reasons that are still largely debated. In the southeast, the regionally integrated settlement hierarchy achieved in the Early Bronze III collapsed. Titriş Höyük was abandoned, except for a small area at the acropolis. Kurban contracted to 1/6 of its original size. Urbanized villages became small independent farming villages again, some of which had been newly founded. Perhaps there was a decline in population, with fewer areas lived in, as people migrated away? Did the population once again become pastoralist nomads? The great Early Bronze Age civilizations fell, with increases in violence and warfare our only clue as to why.

Chapter Four : Bioarchaeology

Introduction

Burial information is amongst the strongest data in the archaeology of warfare, as burials and human remains are perhaps the most unambiguous of evidence of violence. Bioarchaeology is the term given to the study of human remains in the archaeological record, consisting of the remains themselves, including studies of health, pathology, and demographics, as well as the context of the excavated burial contexts.

In this chapter, the bioarchaeological data from archaeological sites in central and southeastern Anatolia will be considered and analyzed. The chapter will start with a brief history of the study of bioarchaeology in Anatolian archaeology, as well as explanations of the terms adopted in this dissertation and the methodology utilized. Next, an analysis of all the data collected is presented. The chapter concludes with the raw bioarchaeological data, site by site, for both of the regions. A table of the burial and bioarchaeological data from each time period (Early Chalcolithic/Middle Chalcolithic, Late Chalcolithic/Early Bronze I, Early Bronze II/ III) is available in Appendix Three at the end of this dissertation.

Background and Methodology

Bioarchaeological evidence is well established as a component for the study of warfare from the ancient past to 20th century mass burials (e.g. Baker 1992; Krohn-Hansen 1994; Kimmerle 2008; Lovell 1997; Martin and Frayer 2007; Walker 2001). The majority of work to date is from the ancient Andes (Andrushko and Torres 2011; Campillo et. al. 1993; Neves et. al. 1999; Standen and Arriaza 2000; Torres-Rouff and Junqueira 2006; Tung 2007) and North

America (Bridges 1996; Hogue 2006; Jurmain et. al. 2009; Jurmain and Bellifemine 1997; Kuemin Drews 2001; Knüsel 2007; Kuckelman et. al. 2002; Owsley et. al. 1977; Steadman 2008; Walker and Lambert 1991; Willey 1990). Relatively less research regarding warfare in the ancient Near East, in particular ancient Anatolia, is published, with the exception of work by bioarchaeologists and physical anthropologists such as Şenyürek (1950), Angel (1974; 1976), Wittwer-Backfen (1987), Carter (1995), Ö. Erdal (2010), and Y. Erdal (2006), as well as some contemporary work in Late Chalcolithic Syrian sites such as at Tell Majnuna (Soltysiak 2010) and Hamoukar (Reichel 2009).

A large body of comparative osteological indications of interpersonal violence and trauma exists, from both ancient and modern eras. A number of well-documented diagnostic signs of injury found on the human skeleton indicate warfare-related violence. The clearest indication of warfare is the presence of a weapon still inside a body, such as the presence of a projectile point (e.g. Campillo et. al. 1993) or an injury shape that directly fits a known weapon type (Bietak and Strouhal 1974, Erdal 2010). Beyond such obvious signs, further evidence of interpersonal violence includes massacre sites, as found at the Crow Creek Massacre Site in South Dakota (Willey 1990), the Mayan site of Cancuén (Moran and Koumenalis 2005), Tell Majnuna in Chalcolithic Syria (Soltysiak 2010), or the sites of Titriş Höyük in southeastern Anatolia (Erdal 2010) or İkiztepe in central Anatolia (Bilgo 2005).

Battlegrounds are also a source of information on the bioarchaeology of violence. The site of Lachish in Israel makes an excellent example, where evidence of a well-documented historical battle was excavated, and the crushed and battered remains of human victims recovered (Ussishkin 1990). Such remains are rather rare in the archaeological record, and no prehistoric battle grounds are known from anywhere in Anatolia, beyond destruction levels from

settlements (See Chapter Seven).

The majority of bioarchaeological remains are found either in cemeteries or, as is often the case within the prehistory of the ancient Near East, under the floors of houses. Of course, the archaeological record is never complete and large portions of the population will always be missing. Without direct context, violence in the remains of ancient populations is only recognizable by the physical evidence of skeletal trauma. This raises the problem that humans can become injured in a variety of fashions, such as during an accident, through repetitive work that over the long term can cause injury and deformation of the body, through personal attack and fighting, from an animal attack, or through warfare (Baker 1992).

In general, cranial (skull) injuries tend to have a higher correlation with interpersonal violence than postcranial (below the skull) injuries. Cranial injuries sustained from interpersonal violence tend to appear on the anterior (front) and posterior (back) of the skull, with anterior trauma a result of head to head fighting, and posterior damage a result of attack while fleeing. Interpersonal trauma of the cranium tends to result in bulbous injury to the skull, both complete (breaking through the bone) and incomplete (incomplete breakage) (See Figure 4.1). Postcranial trauma tends to be less useful in the interpretation of interpersonal violence, though some types of injuries are typical, such as parry fractures of the ulna resulting from a defensive posture to protect oneself (See Figure 4.2). Fractures to the ribs and hands are a common sign of interpersonal violence as well, though these can also be the result of accidental violence or tumbles (Tung 2007: 945). More generally, the presence of postcranial fractures on the arms and ribs has higher correlations of causation by interpersonal violence when paired with cranial trauma (Kimmerle and Baraybar 2008).

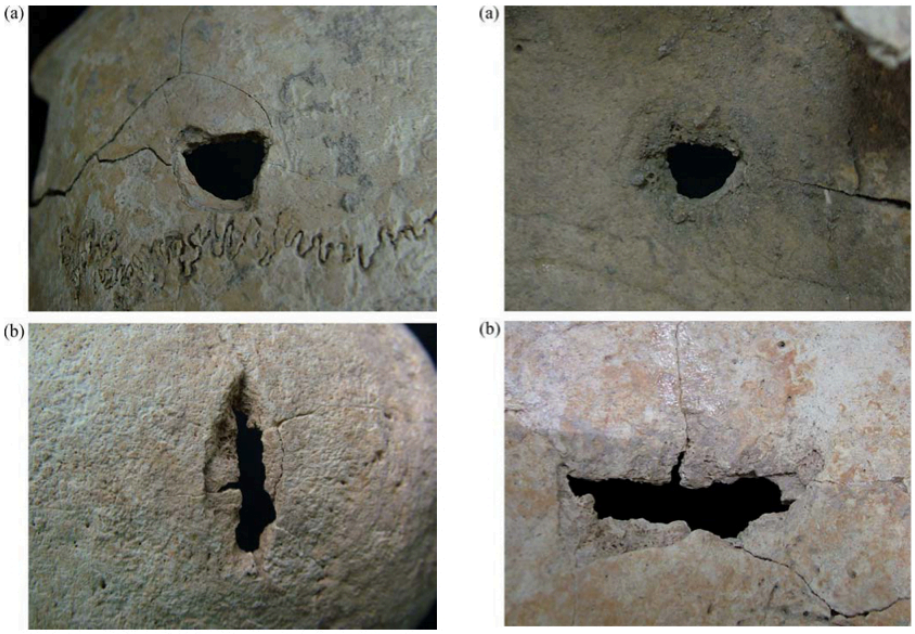


Figure 4.1: Examples of complete cranial injuries by blunt and sharp weapons from Titriş Höyük (Erdal 2010: Figures 6,7)

Figure 4.2: Example of post-cranial "parry" fracture on the ulna, from a modern collection: (Jackes 2004: Figure 1c)

Burials are a good proxy for understanding a variety of issues. Burials are usually very conservative, so changes to burials are meaningful and very personal. How does a culture view death? How are various groups within a population, such as males versus females, young versus old, elites versus the common classes, treated differently? Evidence of interpersonal violence, once recognized and recorded, can help answer many questions about warfare in a culture. Studying the types of wounds present in a population and then studying demography allows questions to be asked of the data. What was the gender and age group of the population most involved in fighting? Who was killed in battle? Were non-combatants, such as women, children or the elderly, among the casualties? Was warfare violence lethal or did it tend to only injure? At what age did one become a warrior? Were warriors a distinct class within society, and if so, were they treated differently?

The study of human remains also requires understanding the burial contexts. A small number of standard burial types were common within central and southeastern Anatolia. In the broader sense, there were intramural burials, found within the domestic context, versus extramural burials, found outside of towns.

Generally, intramural burials were situated beneath of the floors of houses, though they could also be found below public spaces such as courtyards and alleyways. Intramural burials were the oldest types of burials found within Anatolia, dating back at least to the Neolithic, where they were the primary method of burial within the archaeological record. Neolithic intramural graves were attested at such sites as Çatalhöyük (Mellaart 1967), Cayönü (Özdoğan 1995), and Aşıklı Höyük (Esin 1999: 117). Intramural burials continued into the Chalcolithic and throughout the Bronze Age, though it was no longer the primary method of burial as time went on (Wheeler 1974). Intramural burials of adults were only rarely found in Early Bronze Age

sites, such as Babaköy (*Ibid*: 416). By the Early Bronze Age, intramural burials were more likely contain children and neonates then adults, though this was by no means a constant (Emre 1978: 124).

Extramural burials and cemeteries were first attested in the Early Bronze Age within Anatolia. Extramural burial sites were removed from the domestic context and exiled beyond the walls of a city. Early Bronze Age cemeteries include Karataş-Semayük (Mellink and Angel 1968), Demircihöyük-Sarıket (Gürkan and Seeher 1991), Gre Virike (Ökse 2006), Yarıkkaya (Hauptmann 1969), Gâvur Evi Tepesi (Vandam et. al. 2013), Yortan (Kâmil 1982), Resuloğlu (Yıldırım 2006), Salur North (Matthews 2004), Horoztepe (Özgüç and Akok 1958), Alaca Höyük (Koşay and Akok 1973), Hacınebi (Stein et. al. 1998) and Titriş Höyük (Algaze and Mısır 1995).

Aside from the locations of burials, there were three main types of known burial practices, both from intra- and extramural contexts: cist graves, inhumation burials, and pithos burials. All three grave types often contained a variety of grave goods accompanying the deceased, such as pottery, weapons, tools, jewelry, and the remains of foodstuffs and liquids. Adult burials in general contained a larger amount and greater variety of grave goods (Wheeler 1974).

Cist graves were usually constructed with a stone foundation and stone walls, creating a rectangular-shaped stone-lined pit in the earth. Some cist tombs were built with a stone-lined dromos, or shaft, that led down to the chamber from the surface, as was common in Early Bronze III Titriş Höyük (Laneri 2007). The body was lowered into the cist and placed either in a flexed or supine position. After the body was arranged inside, the cist was then often closed with another stone slab, and the entire tomb covered with earth. A mound of earth may or may not

have been left to mark the location of the tomb. A cist grave may contain a single or multiple individuals. Multiple individuals could have been placed together all at the same time, or the cist tomb may have been reopened at a later date and other individuals added to the grave, often with a layer of stone or plaster between the temporally spaced burials. Cist tombs were found in both intramural and extramural contexts, with the majority extramural (Wheeler 1974: 416-418).

Figure 4.3: Cist tomb from Demircihöyük (Massa 2014: Fiture 6e)

An inhumation burial was a hollowed out hole in the ground without lining or walls. The deceased was simply placed into the earthen grave, again in either a flexed or a supine position. The body was sometimes wrapped in cloth, most often linen. The pit was filled with earth, commonly without a marker to indicate the site of the burial. Most often, simple inhumations tended to be single graves, though multiple inhumations were also known from both intra- and extramural contexts (Wheeler 1974: 419).

Figure 4.4: Simple inhumation from Cadır Höyük (Personal Photograph of the Author)

In a pithos burial, the deceased was placed in a flexed position into a large jar called a pithos in the archaeological literature. In non-burial functions, pithoi were used primarily for storage of foodstuffs and liquids. Pithos tombs were almost never found in an intramural context, although exceptions did occur later, as in the Middle Bronze Age levels of Kültepe (Özgüç 1959), Konya-Karahöyük (Joukowsky 1996: 214) and Alişar Höyük (van der Osten 1937). The pithos was usually closed with a broken pottery fragment or small stone slab and buried under the ground. Often, a stone marker was placed on the top to show the location, though these markers may only have been visible for a generation (Emre 1978: 87).

A pithos burial could contain single or multiple internments, and like cist tombs, could be reopened and reused by later generations. This was likely the reason why pithos graves were marked above ground (Wheeler 1974: 417). Some scholars believe that pithos burials were primarily for the poorer levels of society, while cist graves were the resting place for the wealthier higher classes (Bryce 2005: 179). Of the three primary types of graves, pithos tombs were by far the most common within Anatolia. Outside of Anatolia and within the greater ancient Near East, pithos graves were far more rare, making them a distinctly Anatolian style of burial.

Pithos graves were first attested in the Chalcolithic and continued in some instances into the Classical Era (Mellink 1986). Other styles of burial found in the Near East, such as sarcophagi or large multi-roomed tomb complexes, were unknown within Anatolia during the entirety of the Bronze Age (Wheeler 1974: 417-418).

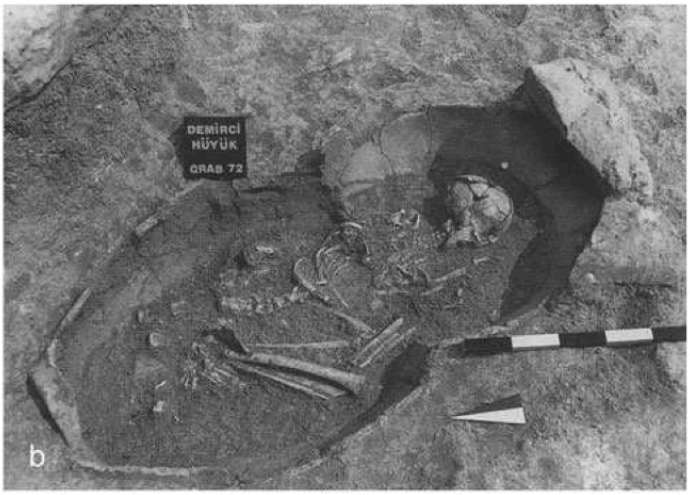


Figure 4.5: Pithos tomb from Demircihöyük (Massa 2014: Fiture 6b)

A variation on the pithos burials was jar burials. Jar burials were similar to pithos burials, but the remains were placed in smaller vessels, often medium to large sized jars. Jar burials could be single jars, with a fragment of pottery over the opening to close the jar, or two open-mouthed jars placed together to form a larger area. Jar burials were nearly universally used in the burials of infants or small children, though cremation burials in jars were also known. While jar burials were known from extramural sites, they were most often found within settlements, under the floors of domestic or public spaces. These types of burials were first used in the Neolithic period and continued into the Early Bronze Age, when adult burials became primarily extramural. Infant and child burials remained largely intramural throughout the Early Bronze Age.

Figure 4.6: Infant jar burial from Çadır Höyük (Photo Courtesy of the Çadır Höyük Archaeological Project)

In addition to the three main grave types, a small number of cremation burials are known from prehistoric Anatolia. Cremation burials were rare in Anatolia until the Late Bronze Age. Cremation burials were often associated with the emergence of the Indo-Europeans within Anatolia, and signal to some scholars (e.g. Makkay 1993) the supremacy of the Hittite Indo-European culture over native Anatolian cultures. Cremations began within Anatolia as early as the Early Bronze Age along the western coast of Turkey. For example, cremation burials were found extramurally at Troy beginning in the Early Bronze Age (Blegen 1963), and from the Early Bronze III at the site of Gedikli (Alkim 1966). It is possible that the use of cremation was also a Hurrian tradition. This may be seen from a Hittite use of the Hurrian word for fire, *tarri,* in a ritual text dealing with the incineration of a corpse (Haas 1995, 2023). Cremation burials were rare in both central and southeastern Anatolia, however, and will only be briefly discussed.

The remainder of this chapter will presents all known published burial from both central and southeastern Anatolia, from the early Chalcolithic to the end of the Early Bronze Age, including the locations, the types of burials found at each site, and the types of grave goods

associated with the burials. Demographic information was also collected, split into male, female and unknown, as well as Old Adult (50+ years), Adult (20-50 years), Adolescent (12-20 years), Child (3-12 years), and Infant (0-3 years), based on the standards put forth by Buikstra et. al. (1996) Pathological and demographic information on the human remains will be included when possible.

Physical anthropological and bioarchaeological evidence from various excavations were not always as complete as one would wish. Much of the human skeletal data fron Anatolia presented here was collected only in the last thirty years. Many early excavations did not give an accurate report on the numbers of human remains excavated, nor did the archaeologists collect or curate the remains once the excavations were completed. As a result, much of the bioarchaeological data has been irreversibly lost. Where this is the case, it will be noted. Finally, when the data allows, all evidence of violence found on the human remains will be noted, including the location of the injury and any possible information on how the injury occurred.

Accumulated Bioarchaeology Data from Central and Southeastern Anatolia:

Central Anatolia

Early to Middle Chalcolithic

In central Anatolia from the Early to Middle Chalcolithic period, virtually no bioarchaeological information is available. Of the 19 sites with levels that date to this time period, only four have published burial or bioarchaeological information: Can Hasan, Hacılar, Kalınkaya and Kuruçay Höyük. Of these, all known burials, except from Hacılar, were simple inhumation burials found within and around domestic contexts, with male and female adults, as well as subadults. From Hacılar, human remains were found within the burnt remnants of the

Level IB destruction layer, which would indicate these individuals died in the conflagration. No information visible trauma to the skeletons was published. The excavator at Hacılar believed this fire was the result of external violence, and this remains perhaps the only strong evidence of violence from this time period in central Anatolia. Weapons as burial goods were recovered only from a single adult burial from Can Hasan; in this case, a copper macehead, the earliest yet known metal weapon, dating to the 6th millennium BCE. No trauma was reported on any of the remains from this time period, although no anthropological work was completed on most of the remains due to poor preservation.

Late Chalcolithic to Early Bronze I

From the Late Chalcolithic to the Early Bronze I, more burials and human remains are published than from the previous time period, though the numbers are still modest. Not all sites with published graves reported exact numbers of either the graves themselves or the total number of humans remains recovered from within the graves. Of the 23 sites with levels that date to this time period, ten of these sites had published burial information. Of these, six were sporadic child burials from domestic contexts (Beycesultan, Boğazköy, Çadır Höyük, Tarsus, İkiztepe, Kuruçay Höyük). At Kuruçay Höyük, child and adult burials were found in the intramural contexts, all simple inhumations for the adults and a small number of infant jar burials. At Büyük Güllücek, a single burial of an adult male was excavated from under the floor of a domestic context, dating to the Late Chalcolithic. Two were extramural cemeteries from the Early Bronze I period (Yarıkkaya, Kalınkaya). Due to the lack of adult burials in the majority of the sites with levels in this time period, the excavators assume that extramural cemeteries were the norm, especially by the Early Bronze I period, even if only two are known from this time period.

In terms of types of burials, children were interred in jar burials under domestic floors. The extramural Early Bronze I cemetery graves were primarily pithos burials. All the burials from Yarıkkaya, though highly looted, were adult and child pithos burials. The Kalınkaya cemetery consisted primarily of simple inhumations, with a smaller number of pithos graves and a small number of cist tombs, including male and female adults and children. Grave goods were largely ceramic vessels and jewelry, with a small number of weapons recovered from graves, including a shafthole axe, a bronze macehead, and three bronze daggers. The age and sex of the individuals associated with these weapons was not recorded.

Adult burials in this time period move from inside to outside the settlements, while infants and young children were often buried under the floors of domestic spaces. While simple inhumations were still quite common, pithos burials were becoming far more prevalent. Cist tombs appear for the first time in this time period.

The majority of remains found from this era were either of children, or from highly looted cemeteries with very bad preservation and thus no anthropological study of the remains was possible. An adult domestic simple inhumation from Büyük Güllücek was buried along with a copper spearhead, and had a severe, likely fatal, perimortem trauma on the right side of the skull on the frontal and parietal, most likely made by a macehead. This presents evidence of a man given a special burial within the city limits, with evidence of violent death and burial with a well-made and expensive weapon. Beyond the so-called 'warrior' burial of Büyük Güllücek, there is little evidence of trauma to the human remains known from this period. There is an increase in the numbers of weapons found in graves, though it is by no means universal in adult burials of either sex. The Büyük Güllücek 'warrior' was possibly killed by a macehead, which could indicate death in battle or a ceremonial killing, though unlikely an accidental death. The

macehead was not a weapon people tended to carry around for hunting or other mundane purposes.

Early Bronze II and III

Far more is known about the Early Bronze II and III periods. Of the 28 known sites with levels from this period, 17 contained published information from burials. Of these, six sites had intramural burials, from both domestic contexts and beneath the floors of common spaces, including Ahlatlıbel, Beycesultan, Çadır Höyük, Hacılar Büyük Höyük, Kuruçay Höyük, and Maşat Höyük. At Ahlatıbel, Kuruçay Höyük, Hacılar Büyük Höyük, and Maşat Höyük, adult and child burials, both male and female, were excavated. Excavations at Beyceultan and Cadır Höyük revealed only child burials inside the settlements.

Extramural burials were very common in this time period, with extramural cemeteries or burial areas of adults and children, males and females, at 11 sites. These included Alaca Höyük, with both its Royal Tombs and ten more less extravagant tombs, Alişar Höyük, Demircihöyük, Elmalı-Karataş, Gâvur Evi Tepesi, Harmanören, Horoztepe, İkiztepe, Oymaağaç, Resuğolu and Salur North.

By this time, extramural cemeteries were the most common location for burial. Numerous sites did still have some intramural burials, but these were mainly for infants and children. Rarely, adults were still buried intramurally. Even those sites which had intramural burials were found to have only a small number of burials; these settlements probably also had extramural cemeteries that simply were not located. Indeed, for some of the excavated cemetery sites, such as Oymaağaç, Gre Virike and Resuğolu, the location of the associated settlement is not yet known.

The types of tombs from this period were far more diverse between sites than from earlier levels. Ahlatıbel had both pithos burials and simple inhumations. Alaca Höyük had simple inhumations and pithos tombs, along with well-made stone-lined cist tombs. Alişar Höyük had jar burials, as well as simple inhumations and cist tombs. Çadır Höyük had jar burials and simple inhumations. At Demircihöyük, Elmalı-Karataş, Maşat Höyük, and Resuğolu, the burials were primarily pithos tombs, with smaller numbers of simple inhumations and cist tombs. Gâvur Evi Tepesi and Harmanören were found to contain only pithos burials. İkiztepe and Kuruçay Höyük contained only simple inhumations.

Pithos burials were perhaps the most common type of burial found during this period, especially from extramural cemeteries, though they were not the universal burial method; some sites with excavated burials, such as İkiztepe and Kuruçay Höyük, contained no pithos burials at all. Burial style still differed greatly from settlement to settlement in this time period.

Also for the first time, quasi-monumental built tombs were found in Anatolia, though they remained quite rare. A single built tomb, Tomb 1, was excavated at Elamlı-Karataş, as well as the extravagant Royal Tombs from Alaca Höyük, further discussed in Chapter Five. More built tombs were known from southeastern Anatolia than central Anatolia, such as at Tilbeshar and Jerablus Tahtani. A second new occurrence was the earliest known cremation burials in central Anatolia. While all recorded burials from the previous two time periods were primary burials, the burials from Elmalı-Karataş included a small number of secondary burials found within pithos. Both individual and group burials were common in both the previous periods, but larger burial groups are found in some of the sites from this period. Pithos burials at Elmalı-Karataş contained as many as eight individuals, possibly indicating family burials reused over time to include new members as they died.

Weapons were far more common burial goods by this time period. At Ahlatıbel, all the male burials were found with daggers on the hip; and some were found with axes. Two of the adult female graves were also found with daggers placed on the hip. From Alaca Höyük, all males and half of the females recovered were buried with weapons, such as maceheads, daggers and spears. While not all adults from Demircihöyük were found with weapons, many were, including maceheads, a crescent-shaped axe, an axe, a spearhead, and many daggers. At Elmalı-Karataş, while few females were buried with weapons, males were commonly found with razors, knives, daggers and maceheads.

Weapons from İkiztepe such as spearheads and daggers were recovered from both male and female adult graves, though far fewer in female graves. Axe-heads were found only in male burials. No weapons were found in the burials of children or infants. A number, though not all, of the adult burials from Resuğolu were found with axes, daggers and spearheads. Many of the daggers were intentionally bent before being left in the graves.

Only a small number of sites with recovered human remains had any anthropological studies completed on the remains, including Demircihöyük, Elmalı-Karataş, Harmanören and İkiztepe. Evidence of violence, even from this small sample, was far higher than it was in the previous periods. At Demircihöyük, injuries included a child with a healed cut mark on the left zygomatic; two adult males with parry fractures on the lower arms, one of whom also had a healed cranial wound; and one adult made with a fatal cranial wound, on the right frontal bone from a rounded weapon. At Elmalı-Karataş, there were a relatively large number of healed injuries on the adult remains, both male and female; mainly ulnar parry fractures and healed and unhealed cranial trauma. Two adult males had fatal cranial trauma on the occipital from an axe. At Harmanören, studies of an adolescent revealed a healed fracture on the clavicle, one male

adult with a healed fracture on the right radius, and one adult female with cut perimortem cut marks on the frontal bone.

Far more trauma was found at İkiztepe. Skeletal trauma was noted in a total of 84 remains, 18.9% of the total studied population. A total of 43% of the studied male population showed signs of violent trauma, with 17 males showing signs of lethal trauma. One adolescent (10-12 years) was found with perimortem cranial trauma. No infants or women showed evidence of severe to fatal trauma. Four children however, were found with non-fatal cranial fractures. Of the total 105 young adults studied, 26.7%, showed signs of injury, while 29.3% of middle-aged adults and 35% of older individuals showed some trauma.

A total of 55 individuals had a single wound on the body, while 29 had two or more. Three adult females showed two injuries each, while two adult males had six wounds each. In total, there were 53 penetrating injuries, of which 27 were made by sharp edged weapons, with 12 fatal injuries. 26 injuries were made by ovoid or circular weapons, of which 20 were fatal. Finally, 53 penetrating wounds from swords or knives were recorded, of which, 16 were fatal.

Figure 4.7: Skull with fatal injury, with inserted spearhead (Erdal and Erdal 2012: Figure 8)

From this time period, the number of weapons associated with adults increased dramatically. No infants or children were found with weapons, a clear indication that weapons were associated with those who were able to wield them, and not just those who perhaps were born into certain social classes. Additionally, in sites where widespread anthropological study of the human remains was possible, the amount of severe cranial and post-cranial trauma was very prevalent in the adult population, in particular the young adult male population, though injury was also found on adult females and a smaller number of children and elderly. The patterns of injury detected on human remains from this period reflect the types of weapons found in the graves, with maceheads, daggers and spears best fitting the shapes of the injuries found. As compared to the earlier period, the bioarchaeological evidence shows a great increase both in the presence of weapons, and in the evidence of those weapons being used on the populations themselves.

Southeastern Anatolia:

Early to Middle Chalcolithic

In the Early to Middle Chalcolithic periods, of the 19 sites with habitation levels dating to this time period, seven had published burial and bioarchaeological data, a significantly larger amount of than from contemporaneous central Anatolia, from a similar number of sites. All burials recovered were from domestic, intramural contexts: Değirmentepe, Domuztepe, Girikihaciyan, Kenan Tepe, Kurban Höyük, Tepecik and Tell Al-'Abr

The burials found at Değirmentepe and Tell Al-'Abr were only of infants and children. The sites of Girikihaciyan, Kenan Tepe, Tepecik contained both adults and children. At Kurban Höyük, a single adult burial was recovered. The burials at Değirmentepe were all jar and pithos

burials, as well as burials found inside clay cylinders. The burials from Girikihaciyan, Kurban Höyük and Tepecik were all simple inhumations. Kenan Tepe and Tell Al-'Abr burials were both pithos burials and simple inhumations.

Very few burials from this time period were found with any associated grave goods; if found, they were often only a single ceramic vessel or simple beads. With the exception of Domuztepe, discussed below, nearly no signs of violence were noted from the human remains from this time period. No burials were found to contain any weapons as grave goods. No burials were found with any cranial trauma, while only three burials, from Tepecik, showed any postcranial trauma, though it was almost certainly not related to interpersonal violence. One adult was found with multiple bone fractures, a second with healed fractures on the right upper arm, and a third with a possible parry fracture on the left ulna along with two healed rib fractures.

An outlier from this time period was the "Death Pit" from Domuztepe. No other site from this time period had a similar group burial context; the only other similar feature discussed in this dissertation is the "Plaster Burial" from Titriş Höyük dating to the Early Bronze III period, discussed further below. The Domuztepe "Death Pit," like all the known burials from this period, was found inside the settlement itself, though in an area without any other nearby buildings. Domuztepe had the highest number of individuals known from any Early to Middle Chalcolithic site studied in this dissertation, with a MNI of 40 individuals, all with varying signs of processing on the remains, as well as evidence of consumption of the human remains, and peri- and post-mortem trauma. Whether the Death Pit was an indication of the victims of a raid or warfare from outside populations, the consumption of outside populations by the local people of Domuztepe for ritual reasons, or the sacrifice of members of the Domuztepe population by their

own kin, remains hotly contested. While the Death Pit did show signs of great violence upon the individuals recovered, it remains otherwise unclear what this pit means for warfare and violence at Domuztepe.

Overall, from this time period, while a few dozen burials are known, there were no signs of violence outside of the enigmatic Death Pit of Domuztepe. All burials were known only from intramural contexts, usually under domestic floors, but also from public contexts. All age groups and both sexes were recovered, from both simple inhumations as well as some pithos and jar burials. No cist tombs were recovered from the time period.

Late Chalcolithic to Early Bronze I

In the Late Chalcolithic to Early Bronze I period, of the 30 sites that are recorded in this dissertation with levels dating to this time era, eleven sites had published burial or bioarchaeological data. While this was more than in the previous period, it remains a small percentage of the known sites.

A total of ten sites contained intramural burials, including Arslantepe, Hacınebi, Hassek Höyük Kenan Tepe, Korucutepe, Kurban Höuük, Oylum Höyük, Samsat, Yarim Tepe and Zeytinlibahçe Höyük. Both adults and children were recovered from the intramural burials of Arslantepe, Hacınebi, Hassek Höyük, Kenan Tepe, and only adults at Korucutepe and Kurban Höyük. Only infants were recovered from Oylum Höyük, Samsat, Yarim Tepe and Zeytlinlibahçe Höyük.

As opposed to central Anatolia, only a small number of sites were found to have extramural cemeteries in southeastern Anatolia. At Arslantepe, a Late Chalcolithic cemetery was noted, though it remains unexcavated due to previous looting. Graves were also recovered from

within domestic contexts at Arslantepe. Similarly, an Early Bronze I cemetery was noted at Titriş Höyük, but due to poor preservation and high amounts of looting, the cemetery was never extensively excavated. Other extramural cemeteries included Hacınebi and Oylum Höyük. Like in central Anatolia, the associated settlements with some of the cemeteries, such as the Early Bronze I Hacınebi cemetery, remain unknown.

Adults were buried in simple inhumations, while children were found both in jars as well as in simple inhumations at Arslantepe. Only cist tombs, with adult inhabitants, were recovered from the Hacınebi extramural cemetery and the Titriş Höyük extramural cemetery. Cist tombs, simple inhumations, and pithos graves were found from intramural burials at Hacınebi, Kenan Tepe and Korucutepe and Oylum Höyük. The Hacınebi, Samsat, Yarim Tepe and Zeytinlibahçe Höyük pithos burials were all of subadults, while adults and subadults were recovered in pithos burials at Kenan Tepe and Oylum Höyük. Only a single simple inhumation was excavated at Kurban Höyük.

Large stone built tombs were first encountered in this era. The Royal Tomb of Arslantepe, dating to the Early Bronze I, was a stone built cist chamber tomb with a stone roof. Though this tomb was still relatively simple in terms of architectural elements, it was far more complex than the simple inhumations and pithos burials otherwise known previously in this area. At Korucutepe, three burials were constructed from yellow mudbricks, possibly having wooden roofs. At Oylum Höyük, a unique burial configuration was also discovered. These burials were placed in cist tombs with one side lined with mud bricks. The bodies were in a crouched position and placed sometimes in a large pithos vessel, or wrapped in textiles and perhaps laying on wooden boards. At Titriş Höyük, two stone built chamber tombs, constructed of rectangular limestone boulders with a limestone slab roof, were excavated from the Early Bronze I period,

similar to those found at Carchemish and Hassek Höyük from the later Early Bronze II periods.

Grave goods were generally sparse in this time period, often only a single ceramic vessel, copper or bronze pins, or no grave goods at all, with the major exception of the many grave goods recovered from the Royal Tomb at Arslantepe.

Trauma was only rarely noted from this time period on any of the recovered human remains. Postcranial healed trauma included an elderly adult female with signs of a parry fracture at Arslantepe. At Hacınebi, a single skull showed a depressed cranial fracture, and five individuals showed postcranial trauma in the form of finger, clavicle and long bone injuries.

At Arslantepe, the Royal Tomb was found to contain the remains of four female adolescents, all with signs of being struck on the skull prior to death, indicating the possibility of human sacrifice of the youths as part of the burial ritual for the adult male found in the tomb itself.

Early Bronze II and III

Finally, in the Early Bronze II and III periods, of the 29 sites studied in this dissertation with levels dating to this period, 15 sites had published information on human remains or burials. Intramural burials, of both adults and children, were still common in this time period, unlike in contemporary central Anatolia. Intramural burials were found within domestic contexts at 11 sites, including Arslantepe, Titriş Höyük, Carchemish, Kurban Höyük, Lidar Höyük, Oylum Höyük, Pulur, Tilbeshar, Jerablus Tahtani, Tell Shiyukh Tahtani, and Titriş Höyük in the Early Bronze III levels. Extramural cemeteries, however, were also common in this time period. A total of seven extramural cemeteries were known, including from Birecek, Gedikli, Gre Virike, Hassek Höyük, Lidar Höyük, Jerablus Tahtani and Titriş Höyük.

Simple inhumations of all age groups and sexes were recovered from Arslantepe. Stone-lined cist tombs were by far the most common at Birecek and Lidar Höyük, with a small number of jar burials primarily of infants and children. Both cist tombs and pithos burials were unearthed from Carchemish and Gedikli. At Hassek Höyük, Jerablus Tahtani and Titriş Höyük, stone-lined cist tombs, simple inhumations and pithos burials were located, of all age groups and sexes. At Kurban Höyük and Tilbeşar, cist tombs were recovered. At Shiyukh Tahtani, simple inhumations of adults and jar burials of subadults were uncovered. Gre Virike was an interesting cemetery site, with ten different graves in total excavated, with three simple inhumations, one pithos grave, three jar graves, one mudbrick lined cist tomb, one stone lined cist tomb, one shaft tomb and one oval chamber tomb. This small, ritual settlement is the only site known from Anatolia with such a unique, and varied number of graves from a single site.

As in the previous period, well-made stone cist tombs were identified from this time period, as well as the even larger and more complex stone chamber tombs. These tombs generally were constructed underground, often under the floors of houses rather than from extramural contexts, with a stone lined chamber and a dromos leading to the tomb itself. The tomb was accessed through an opening at ground level that led down to the chamber. Most tombs contained the remains of numerous individuals. Such tombs were discovered at Carchemish, Gedikli, Gre Virike, Lidar Höyük, Oylum Höyük, Tilbeshar, Tilmen Höyük, Titriş Höyük, and Jerablus Tahtani.

Large, monumental tombs were also unearthed from Jerablus Tahtani (Tomb 302), Tilbeshar (the Tell Hadidi Tomb), and Gre Virike (Tomb K9). Such tombs were far more common in Northern Syria, such as the White Monument of Tell Banat. These tombs were almost definitely the result of Mesopotamian influence in these settlements, as large built tombs

were otherwise unknown this early in Anatolia.

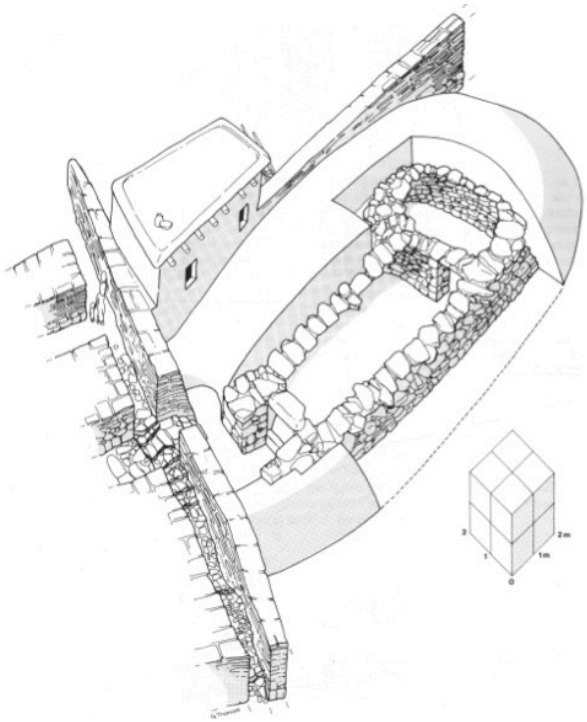


Figure 4.8: Jerablus Tahtani Tomb 302 (Peltenburg 1999: Figure 1)

At Gedikli, the burials were unique in that a number of cremation burials were recovered, within jar burials. No other sites in this dissertation, from central or southeastern Anatolia, were known to contain cremations, though contemporaneous sites on the western coast of Anatolia did have cremation burials.

From Titriş Höyük, an anomaly was excavated, the so-called Plaster Burial. In this burial, a total of 17 skulls were recovered from the basin with an MNI of 19, which were carefully placed in a circle around scattered bones in the center of the basin, without any grave goods included. Analysis of the remains revealed a large number of injuries on most of the individuals. All but one of the adult males, one adult female, and one unspecified adult, revealed signs of cranial trauma, and all the remains showed signs of being de-fleshed and dismembered. Like the

Death Pit of Domuztepe, the circumstances behind this feature remain unclear. Were these individuals the consequence of a massacre? Human sacrifice? A punishment? The reasons behind the Plaster Burial remain unclear, so the relevance to the presence of warfare and violence remains unclear as well.

Grave goods were far more abundant than in previous periods, with ceramic vessels, jewelry, figurines, clothing pins, and weapons found within burials. At Birecek, while the age and gender of the associated burials was not noted in publications, bronze spearheads, flat axes, and daggers were found in a large number of tombs, arranged along the north and south edges of the tomb. From Gre Virike, the K9 chamber tomb contained a single bronze spearhead and a bronze tanged triangular projectile point, though no human remains were recovered from that tomb. At Hassek Höyük, a single adult male in a well-made stone cist tomb was found buried along with two copper spearheads, a dagger, a flat axe, and a macehead. From Tilbeşar, a bronze knife was found within an adult male grave. At Jerablus Tahtani, a single polished stone hammer axe and a small copper pendant in the shape of a crescent axe were recovered from graves, as well as daggers, shaft-hole axes, and poker-butted spearheads. At Titriş Höyük, a small number of male graves were found to contain daggers and spearheads. At Carchemish, though not well published, some of the intramural cist tombs contained weapons as grave goods, including bronze spearheads, bronze axes, bronze maceheads and bronze daggers. One of the tombs, KCG1, contained the remains a child with associated weapons, which was unusual. The remaining graves with weapons were from adult burials.

Evidence of trauma was more widespread in this period than in earlier periods. At Arslantepe, the remains of three adults revealed signs of healed trauma from rib fractures and a parry fracture. Eight adults, both male and female, also were found with signs of cranial trauma:

four with single trauma and four with multiple traumas. Perimortem cranial fractures were recorded from the frontal, parietal and occipital bones, made with an ovoid weapon such as a mace. Post-cranial trauma included two ulna fractures, five rib fractures, three metacarpal fractures and one metatarsal fracture.

From Birecek, analysis revealed three individuals with some signs of trauma, mainly in the form of cut marks on the long bones, from both sexes and across all age groups. These marks were apparently postmortem, and probably a result of the burial process rather than interpersonal violence At Titriş Höyük, from the Early Bronze II period, three individuals were found to have healed cranial trauma, one with perimortem trauma. In the Early Bronze III levels here, most adults analyzed, of both sexes, had some amount of cranial trauma, likely made by battle axe blows to the skull, as well as from spears and daggers, on the parietal, occipital and frontal.

Summary of Chapter Four Burial Data

The burial data from central Anatolia revealed little evidence of violence, from weapons as grave goods or trauma on the human remains, until the Early Bronze II/III period, while such evidence begins earlier in southeastern Anatolia, with weapons as burial goods and severe skeletal trauma noted from the Late Chalcolithic onwards, though there is a sharp increase in both in the Early Bronze II/III period. In both regions, elite tomb styles were constructed in the Early Bronze II/III period, indicating a rise in social hierarchy. The evidence reveals a broad pattern towards increases in violence on populations from the Early Bronze II/III in central Anatolia, and from the Late Chalcolithic/Early Bronze I in southeastern Anatolia, and the entrenchment of weapons as personal objects in the adult population in both regions by the Early Bronze II/III period. In the next chapter, weapons data will be further analyzed.

Bioarchaeological Data from Central Anatolia

Acemhöyük:

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Ahlatlıbel

A total of 18 pithos and cist burials were excavated, dating to the Early Bronze III period. Seven of the pithos burials were found under the floors of houses. Axes and daggers were found in some of the graves, along with ceramics, simple jewelry and bronze clothing pins. All but two of the burials were single inhumations; two contained two individuals, a male and a female. Daggers were found at the hips of the individuals. All but one of the axes and one of the daggers were found in adult male graves, the final two were found in adult female graves (Barcan 2012:21-23).

Bioarchaeological studies of the remains are still in process as of the time of publication.

Alaca Höyük:

No burial information was published regarding the Late Chalcolithic and Early Bronze I levels, Levels 12-9.

Excavations of the Early Bronze Age II and III levels, Levels 8 to 5, were largely focused on the cemetery region of the site, with far less information on the remainder of the site in this period (Gürsan-Salzmann 1992: 55-58).

The best known aspect of the Early Bronze Age settlement at Alaca Höyük are the 14 so-called “Royal Burials” located in the southeastern portion of the mound, in an area around 25 square meters in size. The burials were one of the earlier discoveries at the site, excavated from 1935 until 1939. This section of the site was located outside of the habitation zone, making this

an extramural cemetery. The cemetery was located along one of the main roads leading into the center of the site, which later became in the Late Bronze Age the path that led to the Sphinx Gate, one of the largest and most monumental Hittite gates known in Anatolia. As the cemetery was built upon a slight slope, it was likely visible to people walking along the road. The burials are known for their vast and astounding array of burial goods, including over 700 metal objects made of gold, silver and bronze, as well as the oldest known forged iron dagger, with stylistic similarities to the grave goods found at Horoztepe (Özyar 1999: 80).

The tombs were all shallow rectangular pits, measuring three to eight meters in length and two to five meters in width, and 50 to 70 centimeters deep. They were built of stones placed together, rather than from stone slabs, and originally had flat roofs made of wooden beams, which were then buried below the ground. The building style of the tombs was similar to that seen in Early Bronze Age architecture elsewhere on the site. The inhabitants of the 14 tombs were four adult females, five adult males, and the remainder were too badly preserved to identify, but all were adults. All the burials were primary burials. The bodies were placed in a flexed position, with the head facing south. All the burials contained rich burial goods, though the exact types varied by tomb. All had some items "indicative of rank," such as diadems or maceheads, ceremonial objects such as sun-disks for statuettes, metal vessels, and ceramic vessels. Some were even buried with with remains of dogs, likely pets rather than food, due to their complete state (Gürsan-Salzmann 1992: 67-69).

After the burials were sealed, a funeral feast was enjoyed above the grave, as seen by the large number of faunal remains found above the graves, mainly of cattle. All the royal graves contained multiple individuals. All bodies were found in a flexed position and were adults; both male and females were present. The tombs were isolated from any other tombs or architecture,

likely indicating these were a select group of people, though if they were actually royalty, elites, or another group remains purely speculative (Akurgal 1962: 2).

There was some amount of sexual differentiation between the grave goods found in the Royal Tombs, though not all the remains were able to be sexed accurately. All of the female burials contained diadems, standards and hooks, but only half of the males had these items. All of the males were buried with tools and weapons, but only half the females were found with such objects. The female burials contained as a whole more ceramic vessels than the males. Both contained similar numbers of metal vessels and personal ornaments. Only female burials contained castanets, and with a single exception, only male burials contained earplugs (Gürsan-Salzmann 1992: 115).

Beyond the fourteen royal tombs, a total of ten more burials were found in the same region as the Royal Tombs, showing this was not an area solely reserved for these elite burials. The ten additional burials were six simple inhumations, two pithos and two cist tombs. These tombs had only 'modest' burial goods, such as ceramic vessels, or small personal ornaments such as bracelets, earrings or a pin, and had far fewer than their more famous counterparts. The individuals in these burials were adults, both male and female, and children, unlike the Royal Tombs. It seems most of these tombs predate the Royal Tombs, and may even date as early as the Early Bronze I. Other burials were found within the domestic and public portions of the Early Bronze settlement, showing that not all burials were extramural (Gürsan-Salzmann 1992: 101-112).

The exact date of the Royal Tombs as a group and the time frame represented in the creation of the tombs, remains debated, with numerous studies (e.g. Schaeffer 1948; Akurgal 1962; Gürsan-Salzmann 1992; Özyar 1999) dedicated to this issue. The burials date to the Early

Bronze Age, but their exact timing within that period still remains uncertain; they probably date towards the end of the Early Bronze Age period (Özyar 1999:81). There is also some indication that perhaps the first of the Royal Tombs were built soon after the Level 7 destruction layer (Bachhuber 2011:161).

Alişar Höyük:

A total of 49 burials were excavated at Alişar Höyük, dating to the third millennium BCE. Of those, 31 were jar burials, while the remaining were cist and simple inhumation burials (von der Osten 1939). No anthropological work was ever completed on the burials, so no demographic information is available. Apparently the remains were not collected or curated.

Bademağacı Höyük/Kızılkaya Höyük:

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Bağbası:

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Beycesultan:

Two infant burials were found in the Chalcolithic phase, in Level XXIX and Level XXVIII (Lloyd and Mellaart 1962: 20).

From Level XVIII onwards, the sounding revealed a religious shrine, probably located right next to the city wall. Numerous infant burials were found under the floors of these shrines (Lloyd and Mellaart 1962: 29).

No further burials are mentioned in the site reports. No demographic data on the infant burials was published, and the final location of the burials remains unclear.

Boğazköy-Büyükkaya/Yarıkkaya

Dating to the Early Bronze I period, a single burial of a small child was found in a simple inhumation grave, in a flexed position, and without any grave goods, underneath the floor of a domestic space (Schoop 2005:16-17).

The cemetery at Yarıkkaya, located in a small plateau to the north of the site of Boğazköy, was excavated in 1966 and 1967 under the direction of Harald Hauptmann. This small Early Bronze Age I cemetery was only briefly excavated, as the remains found were highly looted before excavations could begin. The burials were apparently a number of pithos burials, mainly of adults, although the human remains were highly scattered and so no further anthropological work was completed on the remains (Hauptmann 1969: 66-69). The weapons recovered from this site will be further detailed in Chapter Five, though the exact association of the weapons to particular graves was not recorded.

Büyük Güllücek / Kaletepe

A single adult male was recovered from the Late Chalcolithic levels at Büyük Güllücek in excavations undertaken in 1947. The burial was found in the corner of a domestic room, and was located directly above bedrock. The figure was found on its right side in a flexed position, with the head to the southeast and the feet to the northwest. A single copper spearhead was found beneath the head of the individual. The remains were not well preserved, with portions of the skull and long bones intact (Şenyürek 1950: 290-291).

Analysis of the remains were recorded by Muzaffer Süleyman Şenyürek, but focused primarily on racial measurements of the remains. The remains were identified as a "warrior," based primarily on the presence of a spear buried with the individual. Two depressions were noted on the skull, one 11mm. in diameter near the right frontal eminence, and a second, 17 mm.

in diameter, on the back of the right parietal eminence. It was conjectured these could have been caused by being struck by a round weapon. As no signs of healing were present on the wounds, the wounds were recorded as perimortem (Şenyürek 1950: 302-303).

Çadır Höyük:

A total of ten burials have been excavated so far from the Late Chalcolithic at this site. All but one of the were of infants under the age of three, buried without grave goods. Eight were jar burials, and one was a simple inhumation in the corner of a room. One simple inhumation of a teenage to young adult female was also recovered, with no signs of trauma on the body. All were found under the floor of what was either a ritual room or a workshop (Personal Communication, Laurel Darcey Hackley).

A total of four infant burials have been excavated from the Early Bronze I level at Çadır Höyük. Two were found in jar burials from underneath the floor of a workshop located outside of the city wall, one in a small clay box located on the floor of a disused workshop, and one in a simple inhumation located under the floor of the same context. None of the burials contained any burial goods, and all were under the age of three (Personal excavations of the author).

No adult burials dating to the time period under consideration have yet been recovered from this site.

Camlıbel Tarlası

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Can Hasan

A single burial found from Level II contained the remains of an adult male, along with a bracelet and a copper mace head, one of the few weapons found at Can Hasan (French 1998: 65-

66). No study has been published concerning the remains.

Çatal Höyük West

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Demircihöyük/Sarıket:

The Chalcolithic levels were investigated only through two small soundings and no burials were recovered.

An Early Bronze Age II cemetery was excavated at Demircihöyük, known as Demircihöyük-Sarıket, with the remains of 498 individuals recovered in excavations from 1991. The cemetery measured 50 by 60 meters. The burials were primarily in pithoi, as well as a smaller number of simple inhumations and cist tombs. Burial goods from the cemetery included ceramic vessels, copper and bronze beads, copper and bronze pins, and weapons including mace heads, a crescent-shaped axe, an axe, a spearhead, and daggers (Joukowski 1996:165).

Exact information on each grave is currently being prepared for publication. A total of 497 graves were excavated, with a total of 363 individuals recovered, most in very poor condition. In total, four individuals were found to have healed cranial fractures, one child and three male adults. One of them, skeleton 357, exhibited a healed cut mark on the left zygomatic bone, measuring 15 millimeters. Two male adults, 280 and 484, were found with possible parry fractures on the lower arms, possibly a defensive fracture. Skeleton 280 was found to have a healed cranial wound. Finally, one adult male exhibited signs of a fatal cranial trauma, from grave 21, a 66x27 mm blow on the right frontal bone (Wittwer-Backofen 2000)

Elmalı-Karataş (Semayük)

The remains of a total of 584 people were found within the site of Elmalı-Karataş dating

from around 2700 to 2300 BCE. The earliest burials were from Period I. The vast majority of the burials are pithos burials, with only a small number of other types, such as a Period I built tomb. Generally, the earliest tombs were placed away from domestic areas, though the areas used may once have served as a domestic area before becoming a cemetery, even setting some of the burials at times into disused walls. In Period V, a very large cemetery, known as the Main Cemetery in the northeast, was in use, located nearby but outside of the village area; a smaller cemetery was found in the southeast (Warner 1994: 170-173). No signs of any ritual or religious architecture or spaces were found at the site (*Ibid*: 181).

Of the remains found at Karataş, the infant:child:adult ratio was 6:5:10, with a MNI of 897. This number comes not only from the remains of the 584 skeletons recovered, but also including the number of empty pithoi also found, and estimating the number of adults, children and infants from the size of the vessel. Of the 584 skeletons recovered, 395 were highly fragmentary and while recovered as carefully as possible, less anthropological work was possible on these remains. A total of 82 well preserved skeletons were recovered from excavations. The remains at Kalınkaya were studied by J.L. Angel and C. Bisel, with metric traits and pathologies recorded (Angel and Bisel 1986: 12-13).

The dead of Karataş were buried mainly in pithos, at least those burials found during excavations. A total of 328 pithoi were found and excavated, and a further 17 simple inhumations, all of adults. This may be more due to preservation than to a lack of child and infant inhumations burials. Both genders and all age groups were found buried in pithoi. The remains were found in two extramural cemeteries, the Main Cemetery, where 140 tombs were excavated, and the southeast cemetery, where 58 tombs were excavated, as well as a small number of scattered tombs found throughout the side (Angel 1976:388-389).

For the most part, the remains inside the pithos were primary, though a small number of secondary burials were also found, always added to a previously occupied primary burial. The number of burials in a pithos ranged from one to eight individuals, thought to be entire families, though not all pithoi were found intact, as the cemetery was used as farmland prior to excavations. Though plowing did destroy a large number of the pithoi, there did seem to be a general east-west orientation, with the jar openings to the east. The pithoi placed into pits dug into the ground, and the shoulder and lip of the large pots located near the surface so that the locations of each pot were visible, at least for a period of time. Each jar was closed by either sherds of ceramics or stones, and often were surrounded by a ring of field stones, with a diameter between 1 to 6.5 meters. The pithoi were placed roughly in parallel rows, in an orderly fashion, further indicating that the tops of the burials were visible, likely for the entire period the cemeteries were in use (Bartel 1981:10-11).

In general, the smaller pithoi were used for children, the larger for adults, and the largest for multiple internments. Also, in general, the size of single male burial pithos was significantly larger than single female. Burial goods were differentiated by gender and age. Female burials contained spindle-wholrls, pins, bracelets and spiral hair rings. Children were often buried with rings or bracelets. Males were found with razors, knives, daggers and maceheads. These gender differences were also confirmed by the sexing of the skeletons themselves and not just by the type of grave good present. Both genders and all age groups were buried with ceramics, with no significant difference between these categories (Angel 1976:386-387). The skeletons were found placed in a contracted position, on either the left or right side, and the heads towards the opening of the pithoi. In multiple internments, older bodies were pushed towards the back to make room for the new individual (Bartel 1981: 11).

The health of the Early Bronze Age populations was quite good, with only 6% of the studied population showing signs of hypopolasia on the tooth enamel, which would indicate illness or malnutrition in children between the ages of three to seven. Other diseases present in low numbers include malaria, anemia, hookworm, as well as arthritis and dental lesions (Mellink and Angel 1970: 255). A total of 36% of the studied population showed signs of arthritis (Angel and Bisel 1986: 18). Adult longevity for females averaged to just under 30, and 34 for males, likely with the main difference a result of deaths in childbirth. This is a rather typical result for known populations prior to the second millennia. The average female birth date was 4.1, with a date rate of 2.0 of juveniles (Angel and Bisel 1986:18).

At Karataş, a number of healed fractures were noted on the remains of adults, both males and females. In comparing the remains to those of adults in the US, the amount of healed fractures was similar at Karataş. A number of adults had clear signs of fighting, including ulnar parry fractures, likely the result from hand-to-hand fighting, and healed and unhealed trauma to the skull, much higher than the average in modern American populations. Such injuries were high in the male population, but not the female. Two of the male skulls showed evidence of death due to blows to the head, one (287 KA) with a blow in the occipital as a result of blow from an axe. Unfortunately, the burials could not be sequentially dated, so that while evidence of fighting is highly visible on the male population especially, it cannot say how frequent this fighting was or if there were a number of fighting events over time or a single larger event (Angel and Bisel 1986: 18-25).

Gâvur Evi Tepesi

Three hundred meters to the west of the city mound, upon a low promontory, a small Early Bronze II and Middle Bronze extramural cemetery was partially excavated, though

previous quarry work in the vicinity had also caused a large amount of damage to the cemetery before excavations could be begun. The cemetery lies 14 meters above the level of the surrounding plain, with clear view of the rest of the valley, and, from survey of the area, was likely around three hectares in size originally, but may have been as small as one hectare. All of the burials investigated were pithos, often closed with large stone slabs over the pithos opening, with an east-southwest orientation. Grave goods were scarce; only a small number of ceramic bowls and jugs were found, although because the cemetery was largely disturbed, more types of grave goods may have been included originally. None of the human remains were found intact or *in-situ,* though a small number of long bones and human skulls were recovered, largely fragmented. All were badly preserved, and attempts at C-14 dating or DNA analysis proved impossible (Vandam 2013:244-248).

Gelveri-Güzelyurt

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Gözlü Kule/Tarsus

A Late Chalcolithic cemetery was partially excavated at the site, with a total of seven graves excavated. Four were jar burials, one was a cist burial, and the remainder various badly preserved secondary burials. All individuals but those found in the cist burial were children or infants. The anthropological work done on the remains was very concerned with racial types of the crania, and little else (Goldman 1956: 7-8).

No graves were recovered from the Early Bronze levels (Goldman 1956: 32-39).

Güvercinkayası

No burials were discovered at the site, indicating a likely extramural cemetery for the

settlement (Gülçur and Fırat 2005: 44).

Hacılar

The fortress burned very throughly at the end of Level IB in the Early Chalcolithic, trapping a larger number of children and some adults in the remains, hot enough to calcify the skeletons. A total of 21 burials were found on the mound itself from the Late Neolithic to Early Chalcolithic levels. Three were found in Level 6, eight in an abandoned area of Level 4, one from Level 3, three from under the shrine of Level 2A, and five from under the floors of buildings in Level IB. Mellaart estimated around 5000 graves in the surrounding area, based on population estimates, not from the density of the cemetery. Mellaart did not collect any remains from the cemetery and little was published on the site, as he said the area was highly looted with little to be found of use (Mellaart 1970: 88). Later attempts by Duru to find the cemetery mentioned by Mellaart were unsuccessful (Duru 1986).

Hacılar Büyük Höyük

No burials were found from the Early Bronze I levels (Umurtak and Duru 2012: 22-23).

In the Early Bronze II level, a number of human remains were found on the surface of the mound, though without sufficient context to date them to a particular period (Umurtak and Duru 2012: 23-25). A bioarchaeological study of the recovered remains has not been published.

Harmanören

A total of 124 individuals were recovered from the Early Bronze Age cemetery at Harmanören. Of these, only 26 individuals were preserved well enough for further study, 23 adults and three sub-adults, by Alpaslan-Roodenberg. Of these, one adolescent was found to have a healed fracture on the clavicle, one adult had a healed fracture on the left radius, and one adult female showed signs of a cut mark on the frontal (Aplaslan-Roodenberg 2011).

Horoztepe

An Early Bronze Age tomb was found at the site. The human remains associated with the tomb were badly preserved, only part of a skull and the bones from the arms (Özgüç 1957: 41-43). A study of the remains was not published, and the remains themselves were likely not curated.

İkiztepe

In the Early Bronze Age I period, a small number of isolated child jar burials were found beneath the floors of houses.

Most burial information comes from the extramural cemetery found between mounds I and II, in area D. The remains dated to the Early Bronze Age II or III, but pining them further down was difficult due to the erosion on the mound. The finds of the graves suggest the cemetery was in use for approximately 200 years, between 2400 and 2200 BCE. As of 2012, a total of 699 burials were excavated from the site, of which 627 to date were excavated from the Early Bronze III cemetery (Erdal 2012: 82). All the burials from the cemetery were simple inhumations. Some simple inhumations of both adults and subadults were also found dating to the Early Bronze Age II scattered throughout the domestic quarter of the settlement. (Bilgi 2005:15-17).

The cemetery area was excavated down to virgin soil, and nearly the entire area of the cemetery was excavated; the excavators estimate more than 90% of the cemetery was excavated by the time excavations in the area were completed, meaning that the burials recovered would represent nearly the complete population of individuals buried in the cemetery (Witter-Backofen 1988:173).

Of all the graves excavated, a total of 46 were categorized as “distinguished burials,” based on the number and type of grave goods included in the grave. Only graves with

undisturbed contexts were considered, for a total of 329 graves. None of the grave goods were found in all graves, each being a unique mix, with a clear sexual dimorphic difference. Of these 46 burials, 36 were males, five females, three children and two infants, showing a high number of male over female for high value grave goods, and a high number adult to child ratio. The grave goods found included 275 metal objects, and the rest were of clay, bone, stone, frit or shell. Of the metal objects, 250 were arsenical copper, 16 were lead, six were silver, and three were gold. Further, 74 were weapons, 81 tools, 90 jewelry, 19 "symbolic", nine spiral wires and the rest decorative plaques and a single metal vessel. The weapons were 60 spearheads, nine daggers, and five axe-heads, as well as six "blades" from the tool section. Axe-heads were found only in male burials, while the remainder of the tool types were found in both male and female burials. No weapons were found in the burials of children or infants. The excavators believe these burials to belong to the rulers of İkiztepe, and their families (Bilgi 2005:15-17).

Of the 329 undisturbed graves excavated, 247 contained at least one grave good, while 81 contained none. Of these, 47 were adults, the remainder of children or infants. In total, the ratio of graves with grave goods to those without grave goods was nearly the same across all ages and both genders; approximately 25% of all graves, across categories, did not contain grave goods. (Witter-Backofen 1988:74).

Of the total population of remains studied by Y. Erdal from Ikiztepe, 43% of the male population showed signs of severe trauma, while 17 males showed signs of violent death. None of the females studied showed any signs of perimortem cranial trauma, while one sub-adult, aged 10-12 years at death, showed signs of perimortem cranial trauma (Erdal 2010: 14). Of 445 individuals studied, a total of 84 (18.9%) showed signs of cranial trauma. Trauma was not observed on any infant remains, and of 104 children studied, only four (3.8%) showed cranial

fractures. Of young adults, 105 between the ages of 15 to 30, showed signs of injury, a total of 26.7%. Of middle aged adults, ages 30-45, of 123 individuals, 29.3% showed signs of trauma, and in order individuals, over age 45, in 48 total, 33% showed signs of cranial trauma. Of all adults, 28.9% showed signs of cranial trauma, with males much higher (43.4% of 143 males) than 12.4% of 125 adult females. A total of 84 individuals had cranial trauma, 55 with a single wound, while 29 had two or more. Three females had two injuries, while two males had six separate wounds each. The wounds were mainly small depressed fractures, 61.3% total. Seven depressed and compound traumas were also found, where small fragments of bone would have been driven into the brain. Of these, five would have been fatal. Of the 84 individuals with cranial trauma, 53 had penetrating injuries, of which 27 were canoe shaped from edged weapons. Of these 12 were certainly fatal. 26 were ovoid or circular in shape, with 20 being definitely fatal. Further, of the 53 penetrating traumas, 20 were puncture wounds, 12 were incisions wounds and five were depressed wounds. Of the fatal wounds, 15 were on adult males, one on a child and one an adult of indeterminate sex. Of the four men with fatal wounds, four also showed signs of long-term healed cranial wounds (Erdal and Erdal 2012:82-83).

The wounds found on the crania matched in size the cross-sections of both spearheads and axes found elsewhere at İkiztepe. The ovular shaped wounds mentioned above matched "almost exactly" the shape of spearheads found at İkiztepe, while the sharp-edged incisions matched those of flat axes and rectangular-shaped spear blades. The injuries would have been caused then by similar size and shaped weapons to those found at İkiztepe (Erdal and Erdal 2012:84). There are no further signs that the İkiztepe cemetery was put aside for warriors, as all genders and all age groups were represented. Instead, it seems that the males buried in this location may have been of the general population. The remains show very clear signs of

violence, especially in the male population.

Kalınkaya-Toptaştepe

A total of 72 people from 34 graves were excavated at Kalınkaya, dating to from 3100 to 2300 BCE, the Early Bronze I period. Most of these burials were simple inhumations, as well as 13 pithos burials and one cist burial dating to the Late Chalcolithic. In total, the remains of 54 adults, 13 children and five infants were recovered. All remains were fragmentary, with six relatively complete adult skeletons recovered. Stature information was established for 19 individuals and metric studies of skulls were completed on 18 individuals. The remains at Kalınkaya were studied by J.L. Angel and C. Bisel, with metric traits and pathologies recorded (Angel and Bisel 1986: 12-13).

Grave goods included small animal figurines, metal sun disks, bracelets, pins, a terracotta fiddle-shaped figurine and copper daggers (Yaker 1985: 202). Adult longevity for females averaged to just under 30, and 34 for males, with the main difference attributed to deaths in childbirth. This is a rather typical result for populations prior to the second millennia (Angel and Bisel 1986:18).

An extramural cemetery was also located and excavated at Kalınkaya. As rescue excavations, only a small portion of the cemetery at Kalınkaya could be investigated, and the original extent of the area remains unknown. The cemetery was highly damaged prior to excavations, and later structures built on top of the area further disrupted the graves. A total of seven simple tombs were excavated, with no common orientation. From these seven graves, only three contained burial goods. The most abundant tomb, burial M-20-73, containing an adult female and an infant, included a spiral gold ring, two bronze bracelets, a bronze pin, and a necklace of rock crystal beads. Outside of the tombs, possibly removed by looting, a bronze

hook-butted axe and a bronze bull statuette were also found, probably from inside these tombs originally. It remains unclear from the publications how many individuals were recovered inside the tombs, though two adult females and two infants are mentioned (Zimmeran 2006: 279).

Two cist tombs were also excavated from the Early Bronze I cemetery. Both were crudely made, formed with naturally shaped, irregular stones, and lacked a built ceiling. Both contained human remains, but only very badly preserved fragments, without any indication of age or sex in the publication. Only a small number of pottery shreds and a stone bead were recovered as grave goods (Zimmeran 2006: 280).

Finally, a total of 42 pithos graves were recorded, nearly all highly disturbed and damaged. No common orientation was observed for the pithos tombs, and the openings were often closed with small limestone slabs, or other smaller stones. One of the pithos burials was formed by placing two pots mouth-to-mouth. When remains were found inside, the individuals were found flexed. The pithos contained between one to four individuals, though many of the pithos contained no bones. Of the recorded remains inside the pithos, ten adult females, ten adult males, four infants, one juvenile female, one juvenile male, and two uncertain remains. Grave goods included earplugs, bronze bracelets, bronze rings, bronze pins, frit beads, miniature clay vessels, clay pots, clay idols, stone idols, stamp seals, a shafthole axe, a bronze macehead, and three bronze daggers (Zimmerman 2006:280-282).

In additiona a circular burial, called a “silo-type” by the excavators was found. Dated to the Early Bronze Age, the tomb was built with large irregular-shaped limestone blocks, separated into two halves by a limestone wall built down the center of the burial; human remains were found on both sides. The burial itself contained the remains of three adults, all likely buried in a single burial event. The only grave goods found intact inside the burial were seven spindle

whorls. Similar sized and shaped buildings were found elsewhere in contemporary levels of Kalınkaya, although those were used strictly as silos, without any signs of burials inside and without the central dividing wall. A similar burial style was also found from the Early Bronze Age level at Kültepe-Kaneş, also built with limestone blocks and a central wall dividing the circle into halves. In the Kültepe example, one half was used for the human remains, while the other half was used for the burial goods, including alabaster idol statuettes (Zimmermann 2007: 375-377).

Additionally, a number of simple inhumation graves were noted from Toptaştepe. The simple inhumation graves were all placed in a flexed position, with no primary orientation, dating to the Chalcolithic I level of the site. All the remains were placed in a natural indentation in the bedrock, then covered in soil. In these simple graves, no grave goods were noted by the excavation team, though Zimmerman later suggested that a single golden idol currently residing in the site museum collection may have originated from these tombs, but was illegally looted (Zimmerman 2006:277).

The simple inhumations ranged from one to five individuals buried together. A total of 15 individuals were recovered from this area. Of those, five were adult males between the ages of 20 and 45+, six adult females between the ages of 22 and 29, one infant, and three unspecified individuals (Zimmerman 2006: 277-278).

Köşk Höyük

A "number" of burials were found from the Early Chalcolithic level at Köşk Höyük, mainly a large number of infants and fetuses found most commonly under the floors of storerooms or sleeping platforms, as is common in the earlier Late Neolithic levels. Only three adult burials were found, all found in courtyards outside of buildings. One adult burial was only

an individual skull, found inside a pithos inside a house. The majority of burials were simple inhumations, with a small number of jar burials and a single pit burial dug into the bedrock behind a house. There was no standard orientation to the burials, though most have a small amount of grave goods, especially in the infant burials, such as a small ceramic vessel, shells, bone tools, obsidian tools, jewelry, seals, or stones (Öztan 2008: 87; Öztan 2003: 71).

Küllüoba

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Kültepe-Kaneş

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Kuruçay Höyük

A total of seven burials were dated to the Neolithic and Early Chalcolithic period, all simple inhumations of adults and children found in contracted positions. As no other burials were found, there was likely an intramural cemetery elsewhere for the remainder of the burials from these periods. Little further anthropological work was completed on the burials excavated (Duru 1994: 18).

A total of 55 burials dated to the Late Chalcolithic, mainly to Level 6. Fifty of these were urn burials, and five were simple inhumations. All the simple inhumations were adults. The urn burials were children, aged between zero to eight, and were buried below the floors of houses, courtyards and streets without burial goods. The remainder of the population must have been buried in an as of yet unfound extramural cemetery (Duru 1996: 125).

The Early Bronze Age levels of Kuruçay were very badly preserved. Nine simple

inhumations were dated to the Early Bronze period, though it remains unclear how the burials were associated with Early Bronze Age settlement itself. Little was learnt from the human remains at this site as a whole (Duru 1994: 117)

Maşat Höyük

A total of four graves were excavated from Maşat Höyük from the Early Bronze Age period, one simple inhumation and three pithos burials. All were found under the floor of a single building. All contained grave goods, consisting of ceramic vessels and metal jewelry, though no weapons were recovered from any of the graves. (Yakar 1985: 204-205).

Orman Fidanlığı

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Oymaağaç

The cemetery was visited but not excavated during excavations of nearby Maşat Höyük in 1975. The site was noted to be "ruined," highly looted with few or no graves intact. A number of items that were pillaged from the cemetery ended up at the Archaeological Museum in Istanbul and were later studied and published by Tashin Özgüç (1978:89-99) as a side note of the Maşat Höyük publications. No human remains were studied or published.

Resuloğlu

Between 2003 and 2005, a total of 118 graves were excavated in the Resuloğlu cemetery. Pithos, cist, and jar graves were all represented; no simple inhumations were found. The majority were pithos graves, a total of 90 out of 118. The pithoi found ranged in size from 50 x 140 cm to 40 x 95 cm in size. There was no standard orientation of the pithoi, with openings found oriented towards the south, southeast, northwest and west. The pithoi tombs were placed in pits dug into

virgin soil. While some jars were left opened, the majority were sealed with stone slabs, pot sherds or small jars or globular bowls, and a small number of pithoi were placed in mudbrick lined pits. A number of the pithoi graves were marked by a 30 cm. high pile of stones or a stone circle around the location of the burial pit, to mark the location of the grave. Other pithoi graves were formed by placing the openings to two pithoi against each other. The pithoi graves were of both adult and children, all placed in a flexed position, with most of the individuals placed with their heads at the top of the jar, and feet towards the base. The vast majority of the pithos graves were single internments, with a smaller number of double internments recovered. No triple burial pithos graves were recovered. Grave goods in the pithos burials were left both inside and outside of the large pots. Grave goods included ceramic vessels, miniature vessels and animal bones (Yıldırım 2006: 2-7).

A total of 21 cist tombs were also excavated at the Resuloğlu cemetery. The tombs were rectangular in shape, with limestone slabs lining the walls. Some, but not all, of the cist tombs were capped by a single stone slab or a number of smaller stone slabs. The floors were paved with mudbrick or not paved at all. The graves varied in size from 80 x 55 to 160 x 125 cm. None of the cist tombs were built with a dromos entrance. Like the pithos graves, there was no common orientation of the cist tombs. The majority of the cist tombs were located in the southeastern and eastern edges of the cemetery. Nearly all of the cist tombs were robbed in antiquity, with the human remains highly disturbed and mixed, with poor preservation. The remains were placed in a flexed position inside the tomb, with the heads to the west, except for two examples with the heads to the east. The majority of the individuals buried in cist tombs were adults, with only a small number of children found in the tombs. Only one of the cist tombs was a double burial, of an adult male and female. Grave goods were generally found inside the

cist tomb, with occasional metal vessels, intentionally broken, also placed nearby the tombs. Remains of animal bones, likely from funerary feasts, were found outside of the cist burials, as was also found in the pithos burials. All but one the cist tombs date to an earlier phase of the cemetery. (Yıldırım 2007: 7).

A total of seven jar burials were recovered. All but one contained the remains of infants or children. The jars measured between 25 to 35 cm in height and 30 to 50 cm in width. The jars, like the pithos burials, were closed with small stone slabs. In general, the jars were oriented with the opening towards the east, though there were a number with other orientations. Burial goods were left inside the jars. The jar burials date to the second, later phase of the cemetery (Yıldırım 2007: 7-8).

Burial goods from the Resuloğlu cemetery consisted of ceramic vessels and miniature ceramic vessels. All of the graves excavated contained at least one vessel. In the cist and pithos graves, a small number of copper, bronze or lead vessels were recovered, both inside and nearby the graves, and often intentionally broken. A large number of bronze and copper clothing pins were found, as well as bracelets, earrings, hair rings, anklets, ear plugs, torques and beaded or metal necklaces, and beads made of frit, faience, shells, stones, carnelian, bronze, silver, gold and electrum. A number of metal weapons were found as well, including axes, daggers and spearheads. Many of the daggers were intentionally bent before being deposited in the graves. (Yıldırım 2007: 8-11).

Unfortunately, no anthropological study of the Resuloğlu remains is published.

Salur North

The site was a single period, Early Bronze Age cemetery, likely an entirely pithos-style burial ground. The excavators estimated a total of approximately 40 burials present at the site,

though this was based on the remains of the cemetery, rather than through extensive excavations. Due to the highly disturbed nature of the site, the human remains collected were highly fragmentary, and only a few grave goods, including small ceramic vessels, a bronze pin, a bronze razor and a gold pendant, were recovered, and no anthropological work was completed on the remains. The site is a good indicator of small, single period extramural cemetery from the Early Bronze Age period. (Matthews 2004: 59-60).

Suberde

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Yumuktepe/Mersin

No data on human remains was provided in any of the publications on this site for the relevant time periods.

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Bioarchaeological Data from Southeastern Anatolia

Arslantepe (Malatya):

A Chalcolithic to Early Bronze Age cemetery at Arslantepe has been noted but not excavated. A small number of graves were found in various layers inside and around domestic spaces: under floors, or in the open areas between buildings. A total of 18 individuals were recovered dating to the Late Chalcolithic (Layer VII), ten sub-adults and eight adults. The sub-adults were buried in both pots and in simple inhumations. The adults were all found buried in simple inhumations, without grave goods. One individual was buried with a juglet, and was perhaps buried on top of a reed mat, as seen by an organic residue recovered underneath the body. The adults found were all female, one young adult (15-3), four middle adult (30-45) and

three older adults (over 45) (Erdal 2012: 302). Of these individuals, one, an elderly adult female, was found with signs of a parry fracture (Erdal 2011).

From the VIBC layer, six individuals were recovered, all found in simple inhumations. Four were of sub-adults, and two were adult males. One individual was found buried, articulated in a contracted position, missing a skull; the second burial contained only a skull, with the mandible missing (Ersal 2012: 302).

The so-called "Royal Tomb" from the Early Bronze I level is the best known of the Arslantepe graves. The burial contained the remains of a single adult male, with 75 grave goods; the remains of four adolescents were possibly sacrificed at the time of burial (Frangipane 2001 et. al.: 120).

More recently, a burial pit was excavated in an area only 50 meters from the Royal Tomb, and dating to the VIB period (Sepulture 216). This burial, possibly of a local chief, was in a stone cist tomb which contained the remains of an adult male, around 40 years of age, along with the remains of four adolescents, probably killed in sacrifice to the deceased. No structural elements were associated with the pit, with was filled with a large number of human remains, as well as pot sherds and animal bones. All the human remains were found disarticulated. Small bones, such as carpals or patellae, were underrepresented in the collection, while some of the long bones had signs of gnaw marks from small carnivores such as rats,, all of which indicate secondary burials, in which remains were left to rot in the open air before being moved to the pit (Erdal 2012:303).

The body was likely wrapped in a shroud, as traces of fabric were found around the body, and the remains were placed on top of a wooden board. The pottery was a mix of red-black Transcaucasian type pottery and more local light colored wheel made pottery, similar to that of

VIA pottery. The cist was closed by two large stone slabs, on top of which, the remains of two adolescents were placed, with the remains of two young women found at the southern edge of the tomb. The adolescents were decorated with copper-silver hair spirals, copper pins, gold and diadems placed on their heads, and wearing clothes similar to those found on the man in the tomb, while the young women had no grave goods. Signs of violence were found on all the remains, with signs that all four women were struck on the skull, prior to death, indicating a possibility of human sacrifice of the youths in the burial ritual (Frangipane et. al. 2001: 107-111; Frangipane 2010: 40).

In looking at the number of bones found from the Early Bronze II period, an MNI of 16 was obtained, primarily from the 15 different skulls recovered, as well as the various remains of the rest of the body. Of the individuals, 12 were adults and four were sub-adults. Of the 12 adults, six were male and six female. The four remaining indiviiduals were infants. Of the 12 adults, eight were young adults and four were middle adults present. The adults ranged in age from 18 to 45, with no older adults present. Upon study of the remains, a large amount of trauma was present on the skeletons. Three of the remains had signs of healed trauma, the rest were perimortem or postmortem, including three individuals with healed rib fractures and a healed parry fracture, all of which give indication of previous, possibly interpersonal violence in the population (Erdal 2012: 304-305).

An even higher amount of unhealed trauma was found. Three sub-adult crania and four adult craniums showed no signs of violence, while the remaining eight adult craniums did. Both males and females showed signs of violence, with four only showing one area of trauma, and the rest showing multiple fractures, with one individual having up to 15 fractures. The cranial fractures were found on the frontal, parietal and occipital bones, with a higher number of

fractures in the male skulls than the female skulls. All the fractures were ovular or circular in shape, 27.5 to 52 mm in diameter, with the average around 30 to 40 mm in diameter, and correspond quite well to the trauma that would result from being hit in the head with a macehead or club. All of the traumas found corresponded with coloring and shatter patterns associated with perimortem trauma, rather than post-mortem trauma associated with the modification of remains after death. The trauma on the frontal seems to correspond to face-to-face combat with a right-handed opponent, while trauma on the occipital and parietals were more likely caused while fleeing (Erdal 2012:305-306).

Post-cranial violence were also noted, with fractures on two ulna, five ribs, three metcarpals and one metatarsal, with some green residue on the ribs, ulnae, metacrapals and metatarsals indicating the remain os of metal weapons used to create the trauma. Overall, the picture of the remains found in Sepulture 216 was one of violent death. Unlike other more ritualistic deaths, such as the Royal Tomb from Arslantepe, or the Royal graves at Ur, there were no signs of ritual death in Sepulture 216, such as a higher status burial, signs of feasting or a nearby ritual building. The pit was simple, and contained primarily the human remains. The fact that both males and females were found together in the pit is more likely indicative of a massacre than more common warfare, as women less commonly take part in fighting (Erdal 2012:306-308)

Birecik Dam:

Rescue excavations at the Birecik Dam site uncovered an Early Bronze Age extramural cemetery, covering an area of three hectares. Due to time constraints from the construction of the dam, only a portion of the cemetery was excavated, a total of 312 burials in two seasons of excavation. Additionally, a 90 x 40 meter area to the southwest of the cemetery was left protected and intact for future excavations (Sertok and Ergeç 1999: 87).

Portions of the cemetery were destroyed by constructioni work prior to excavations, so the exact numbers of burials in the cemetery remains unknown. The burials within the cemetery were found in various small groupings throughout the cemetery, each group a small distance away from other groups. Based on the layout of the burials in relation to each other, and the lack of overlap, the excavators believed that the cemetery was probably in use very intensively for a relatively short period of time. It remains unknown which, if any, nearby settlement the cemetery was associated. The associated settlement either was destroyed by movements of the nearby Euphrates River, or the settlement (or settlements) have not been found. Nearby and around the burials, a number of small pits and depressions were found as well, filled with stones, ceramic sherds, mudbricks, remains of fires, stone tools and animal bone fragments. These were thought to have been remains of burial feasts associated with the burial of individuals in the cemetery (Sertok and Ergeç 1999:88-89).

Of the 312 burials excavated, two types of graves were found: 299 cist tombs and 13 "jar burials." The cist tombs were rectangular in shape and lined with limestone slabs, in a northwest-southeast orientation. All were similar in construction, with only minor variation. Often, these tombs were closed using a large slab over the top of the tomb, but not always. The tombs grouped together usually were very similar in size. The cist tombs contained both singular and multiple internments. The remains were placed with their head to the east, on their left or right side, in a flexed position (*ibid:* 89-90)

The jar burials were made of cooking or storage vessels, with a flat stone, bowl or fruit stand placed over the opening. The designation of "jar burial" is somewhat misleading, as these burials were also usually placed in limestone-lined cist tombs, and so were really more jar burials placed in cist graves. One of the cist tombs was actually placed inside a wooden chest before

being placed in the cist. These burials were found scattered, seemingly at random, among the far more numerous "normal" cist tombs. The majority of the 13 jar burials were of children (*Ibid*: 89-90).

The preservation of the remains was often very bad, due to frequent rain and drought causing the bones to be alternatively flooded then dried out, effectively largely destroying the remains, though some tombs did have more intact remains than others. Only 37 graves in total contained remans sufficiently preserved to give information. A total of 64 individuals were recovered. Of these, 11 were multiple burials, with anywhere between two and nine people in a single tomb, though most had two to three. Only one burial had nine individuals, all of which, interestingly, were adults. Nine of the individuals were infants or subadults, 18 were male adults, nine were female adults, and the rest, while adults, could not be sexed.

The burials excavated from the cemetery only came in two types: cists tombs and jar burials. The most numerous were the cist tombs. The cists were generally made up of large limestone slabs lining a rectangular pit, with a northwest-southeast orientation. The tops of the tombs were constructed of either a single large slab or a small number of smaller slabs. While many of the floors of the tombs were earthen, a small number were also lined with thin stone slabs. None of the excavated tombs in the Birecek Dam cemetery were built with dromos or open doorways, and all seem to have been filled in a single event rather than being opened and reused. The size of the tombs ranged from 110 x 60 x 40 cm to 220 x 160 x 100 cm, which each grouping of tombs usually roughly the same size. Burial goods in the cist tombs typically consisted of only a small number of ceramic vessels found piled in the eastern edge of the tomb. At least one individual in a cist tomb was also placed inside a wooden chest within the cist tomb, indicating that the remains were often further encased inside the cist tomb (Sertok and Ergeç

1999: 89-90).

A total of 13 jar burials were excavated, found scattered seemingly at random among the more numerous cist tombs, even at times buried directly against a cist tomb. The jars were generally small, with round bases, squat bodies and wide necks, and closed with a ceramic bowl, fruit stand or stone. All of the excavated jar burials contained the remains of infants or children. The jars were not simply placed in pits in the ground, but were also placed in pits lined with stones and further covered by limestone slabs, so that jar burials did not differ significantly from cist tombs (Sertok and Ergeç 1999: 90).

The human remains from inside the cemetery were often not well preserved, due to environmental conditions. A number of the cist tombs were opened to reveal a complete lack of preserved remains, while others contained a jumbled pile of remains of several individuals in the western corner of the tomb. A total of 37 complete or fragmentary skeletons were recovered. In the majority of tombs excavated, each cist tomb contained at least two individuals, with only a small number of single tombs found. The remains were usually placed in a flexed position, with the head to the east (Sertok and Ergeç 1999: 90). Of the 63 total individuals recovered, 13 showed some signs of trauma, mainly in the form of cut marks on the long bones, found on both sexes and across all age groups. These marks appear to have been made postmortem, and were more likely part of the burial process than due to interpersonal violence (Sevim et. al. 1999).

Grave goods consisted of primarily ceramics, both complete and broken vessels, as well as smaller numbers of beads, bronze clothing pins, and bronze spearheads. All the burials contained at least a single ceramic vessel, while one cist tomb contained as many as 150 vessels. The vessels were generally positioned in the northern edge of the tomb, often in horizontal and vertical rows. Beads were generally from necklaces or bracelets along the head and body of the

remains. A total of ten animal and human clay figurines were also recovered from the cemetery, as well as a flint blade and two cylinder seals. Finally, a small number of the individuals were buried with bronze spearheads, arranged along the north and south edges of the tomb. The spearheads all had a squared blade and tang. A small number of flat axes and daggers were also recovered (Sertok and Ergeç 1999: 90-93).

Carchemish

The Early Bronze Age levels contained a very high number of cist and pithos burials, but far less architecture, though no anthropological studies were undertaken on the Carchemish burials (Falsone and Sconzo 2007: 75-76). All the burials recovered from Carchemish were from under the floors of houses. A total of 31 pot burials were excavated from the Early Bronze I/II period, though only 20 of which were more fully recorded in the publications, and 15 cist tombs. Very little skeletal data was recorded about the burials, and that which was recorded remains somewhat suspect, so that little can be said about the bioarchaeology from Carchemish (Woolley 1978: 214-215.).

Of the reported remains from within the tombs, a total of 5 children, two adult males, and 14 unspecified adults were recovered from the pot burials. No weapons were reported from the graves, and grave good were primarily small vessels. Of the cist tombs, a total of two children and eight adults of unknown gender were recovered. Most of the cist tombs were single burials, though one was a double burial and one was a triple burial. All the remains were reported to be in very poor condition at the time of excavation, and many of the cist tombs had only very small traces of their original inhabitants. Grave goods from the cist tombs included vessels, bronze pins and beads, as well as some bronze tools and weapons. Of the tombs with weapons: Tomb KCG1 with the remains of a child, buried with two bronze spearheads; Tomb KCG7, a triple adult

burial, with a bronze axe and two spearheads; Tomb KCG 8, a single adult burial with two bronze axes, four spearheads (one round, three square in section), and one "very good" dagger (flat forged, short tang); Tomb KCH13, a single adult grave with bronze macehead and other unnamed "weapons"; and Tomb KCG, with no remains recovered, and a spearhead with a bent tang and leaf-shaped blade, a "poker" spearhead (*Ibid*).

The publication notes that "one the body were such personal ornaments as beads, necklaces, and bracelets; by it were put, if it was a man, his bronze spears, axe, or knife" (*Ibid* 219). One of the cist tombs with weapons was from a child burial, no knives were mentioned in any of the grave inventories, and for none of the remains was sex determined, so this statement does not seem well founded.

Değirmentepe:

A small number of burials were found, mostly on infants found in jars or pithoi, and some adults found under the floors or in niches in the walls. A single Coba-bowl was the only burial good found in any of the remains (Esin 1985:253-254).

Human remains from Değirmentepe were recovered from the Chalcolithic period. A total of 31 subadult remains were uncovered during excavations of the Chalcolithic levels. No adult remains were recovered from this time period, with ages ranging from fetuses to juveniles. All burials were found in or near domestic contexts, so perhaps the adults were buried in an undiscovered extramural context. All the remains were found in flexed positions, in both small pots and clay cylindrical containers. No signs of violent trauma were noted on the remains, though interestingly, of the 14 remains that were in good enough condition to study, 13 showed signs of cranial modification. This is of interest, but not of any further use in this dissertation (Özbeck 2001:239-240).

Domuztepe

One of the most famous features of the site of Domuztepe is the so-called Death Pit, formally called Feature 148, dating to the Halaf period. This feature was located in the southern portion of the site, in an area that was free of other buildings. After the pit was completed, covered over and abandoned, it was not for another few generations that the area was reused for any further architectural features. The death pit contained the remains of between 36 to 40 individuals, all highly fragmentary. The meaning behind this feature remains unknown. Was it a ritual burial? A massacre site? How were the individuals related? How does this reflect general burial practices at Domuztepe (Kansa 2009: 166-167; 170)?

The pit was built in a number of stages, likely completed over the course of a few days at the shortest, a few weeks at the most. First, the pit, four by five meters in area, and around one meter in depth was dug, with a small number of animal bone deposits, mainly from cattle and dog and some amount of articulation present. After some unknown period of time and a small amount of silting, a second deposit was made, far larger than the first, of both human and animal bones (including a very wide number of animals, both domesticated and wild), all highly processes and disarticulated. The pit was filled in with a hard packed mud, ash and plaster, then covered in ash, which created a slightly raised area as the final product. None of the ash was from burning inside the pit, but took place elsewhere. Overall, very few artifacts were found inside the pit, a small scattering of pottery sherds from two fine ware painted vessels that were smashed and scattered along with the bones, and a number of courseware jars were found just above the pit. Some of the animal bones found were worked somewhat, and a small number of stone seals were in and around the pit, as well as a single stone human figurine, without a head. The bones, while fragmentary, were often well preserved, though only a small amount of

deliberate deposition of bones seems to have taken place, with many of the bones seemingly thrown in at random. Many of the individuals studied retained evidence of both peri- and postmortem trauma, especially on the skulls. The morphology of the remains revealed a varied population in the pit, both males and females of all ages, from neonates to elderly adults with closed cranial sutures. The majority, 68%, were between the ages of ten and forty, which lends some evidence to these individuals resulting from some sort of catastrophe or single death event that affected mainly those in their prime, e.g. adolescents and adults. The human remains were broken up very soon after death, and were not left exposed to the elements or to other animals before being prepared. In all, the results of study of the bones from the Death Pit reveal evidence of a large feast (Kansa 2009: 166-167, 170).

The human bones had a wide range of processing, including cut marks from disarticulation, de-fleshing and evisceration, crushing of long bones to remove marrow and grease, burning at levels indicative of cooking, blunting of bones as is commonly found in "pot polish" from bones being stirred in a pot during cooking, and a small number of tooth marks indicative of consumption. All these factors are evidence of cannibalism. The animal bones found in the pit often had similar marks of processing. The main difference between animal and human bones was that the human skulls were often found far more complete than any of the animals, except for dog skulls (Kansa 2009:168).

All the individuals were decapitated prior to burial in a similar manner, and most have evidence of severe blunt force trauma on the skulls, though it is not known if these were fatal blows or from postmortem events. Some of the skulls show evidence of being de-fleshed before placement in the pit, while others were completely crushed and scattered throughout the pit. One theory is the skulls were crushed in order to gain access to the brains (Carter et. al. 2003:120-

123; Kansa 2009:163).

A small number of later pits were found around the Death Pit, including one containing a single human jaw, the nearly complete skeleton of a juvenile, the secondary burial and a single isolated skull, all with blunt force trauma to the skull and decapitation similar to that found in the Death Pit, even the complete burial, which was missing the cervical vertebra, with all other bones present, and the skull, which was placed atop the body in roughly anatomical position, may have been originally placed in a basket. This indicates the area was used for a small number of other burial activities after the completion of the Death Pit (Carter et. al. 2003: 125).

Fıstıklı Höyük

Burials were found at Fıstıklı, but the presence of iron in one of the burials indicates a far later date than the Halaf; it remains unknown to what period the burials date, due to a lack of grave goods in the burials, but they are likely Roman in origin (Pollock et. al. 2001: 41).

Gedikli/Karahöyük

An Early Bronze cemetery is located on the eastern slope of the mound, including simple inhumations, built tombs of limestone slabs, and cremations. The largest tomb, a built dromos tomb, measured 3.5 by 1.5 meters, and was 1.6 meters in height. The tomb was entered from the east along a passage way with two built in steps. Fourteen ceramic vessels were found inside of the tomb. Nearly 200 cremation burials were found in this cemetery as well. All burials were jar burials, The vessels were 30-50 cm in height, and the remains of similar smashed jars indicates even more cremation burials were originally present than survived into the modern day. The remains of ash and charcoal levels as well as a small building nearby, seems to indicate the cremations themselves took place in a spot adjacent to the cemetery. Grave goods for the cremations typically included a small ceramic vessel and a bronze pin (Duru 2010).

Gre Vikri

Gre Virike was not a habitation site, but a small, ritual site used for funerary feasting and special burials. Burials were recovered from Period IIA/B, dating to the Early Bronze III period. A total of ten graves were excavated, all intramural cist and chamber tombs, located on the mound summit and along the slopes of the mound. The tomb types included three simple inhumations, one pithos grave, and three jar graves, one mudbrick lined cist tomb, one stone lined cist tomb, one shaft tomb and one oval chamber tomb (Ökse 2006: 3-6). The remains of 13 individuals were recovered from the tombs, including one adult male, one adult female, two unknown adults, three children and six infants. All the human remains recovered from the graves were very poorly preserved, though all remains were studied by G. Uysal, and no signs of trauma were noted (Uysal 2006).

All the stone tombs were made of cut limestone. The chamber tomb, K9, consisted of a rectangular main chamber measuring 2.3 by 3.7 meters, with limestone walls 1.2 meters thick and 1.9 meters high. An anti-chamber, made up of two smaller chambers, was connected to the main chamber by a small passageway. The tomb was somewhat similar in layout to Tomb 302 at Jerablus Tahtani. Tomb K9 dated to Period IIa . The human remains from inside the tomb were very badly preserved, but were from an adult of unknown sex and age. The chamber tomb was found intact, with no signs of looting. Grave goods were found within the chamber tomb, including a single bronze spearhead and a bronze tanged triangular projectile point (Ökse 2005:23-24).

The jar burials contained infant remains, and all had numerous accompanying vessels as grave goods. The single pithos grave was an adult female burial. The two shaft graves were circular in constructed, lined with stones, with the remains of children interred inside. One tomb

contained two children, age 6-12 months and one a child of 4 years of age. The second oval tomb did not have any human remains preserved. The mudbrick lined cist tomb contained the remains of a child (7-8 years of age) and an adult male. The stone cist tomb was found robbed and empty (Ökse 2006: 4-22).

Grave goods included numerous vessels, a ceramic bell, model oxcarts, terra cotta figurines, bronze clothing puns, red agate beads and a ceramic basin, as well as animal bones and grains. Remains of feasting were found around the tombs, including animal bones, cooking pots and ash, as well as broken fragments of libation vessels. Likely, the site was used as a complex for elite burials and funerary feasting, though the associated settlement is unknown, though numerous small Early Bronze Age settlements were noted in surveys of the Carchemish area, but were never excavated before being flooded by the Carchemish dam. Gre Virike may have also served as a central ritual place for numerous smaller local settlements (Ökse 2006:23-36).

Girikihaciyan

Three complete burials and one fragmentary burial were found within and around the houses, though it was not always clear if the burials were associated with the occupation of the houses, or with the later use of the spaces as dumps for trash. None had grave goods associated with the burial. The burials were oriented east to west, and left in a flexed position. One burial was a highly fragmented adult, two young children, and one was indeterminate. No signs of violence was visible on the bodies (Watson and LeBlanc 1990: 121-122).

Gritille

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Hacınebi

After the Late Chalcolithic settlement was abandoned, an Early Bronze I cemetery was found at the site, approximately two centuries after the abandonment. This cemetery dated from approximately 3100-2900 BCE. The settlement associated with the burials was not located. A small number (n=12) of burials were excavated from the Early Bronze cemetery (Operation 18), which included four limestone lined cist tombs sealed with plaster, located in a Northeast-Southwest orientation. The remains were all of adults. Three of the cist tombs were found plundered, unfortunately. The bodies were positioned with the heads to the east, on their sides and in a flexed position. The intact burial contained 17 ceramic vessels, beads, and bronze pins. From Operation 12, an additional 8 burials were excavated, in better condition. A total of 12 individuals were recovered, with cist burials, simple inhumations and jar burials. A total of four jar burials were excavated, all of infants in storage jars, sealed with a bowl. Grave goods consisted of beads, pins or small ceramic vessels. The two simple inhumations were both of adults, in different orientations, one in a flexed position, and no grave goods, and one, strangely, positioned on its stomach, with a onager mandible. It is possible this individual was thrown into the grave. Two cist tombs were found, one intact, one robbed of all of a skull. The intact tomb contained ceramic vessels (Stein et. al. 1997:115-117).

A total of 35 skulls from Hacınebi were studied by Erdal. In this set, a single skull showed a depressed cranial fracture which may have been caused by interpersonal violence. Additionally, five individuals showed postcranial trauma, in the form of finger, clavicle and long bone injuries, dating to the Late Chalcolithic and Early Bronze Age graves (Erdal 2004; Erdal and Erdal 2012:81).

Hallan Çemi

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Hassek Höyük

A total of four graves were found that date to the Late Chalcolithic period, two infants and two adult males (Helwing 2002: 14-20).

The Early Bronze levels contained a small extramural cemetery, located to the west of the mound, with a total of 62 graves excavated. Of those graves, 39 individuals were well enough preserved to be more fully studied. 26 were infants, one was a juvenile, eight were adult males and four were adult females. The burials were a combination of simple inhumations, stone cist tombs and pithos burials. One of the cist tombs was more intricate, made of river pebbles, and containing the remains of a single adult male, found lying in a fetal position on its right site, and buried with two copper spearheads, a dagger, a flat axe and a macehead, as well as a chisel and a pin and two pottery vessels (Behm-Blancke 1984: 49-50).

Hirbemerdon Tepe

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Kalaycık Tepe

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Kazane Höyük

No burials were recovered from any levels during the excavations at Kazane Höyük.

Kenan Tepe

In the 2004-2007 field seasons, a total of 22 burials were excavated. The burials dated to the Middle Chalcolithic period (Ubaid Period) and the Early Bronze Age, and were found in four separate areas of the site. The remains were analyzed by David Hopwood, using primarily the pelvis and cranium to determine sex in adults and dental eruption in juveniles to determine age, and any signs of pathologies were recorded and noted in the report (Parker et. al. 2008:122-123).

Nine burials dating to the Ubaid period were recovered. None were well preserved, and so signs of trauma were not visible if any were present. One was an adolescent in a simple inhumation, the second was an adult female pithos burial, without any signs of trauma present (Parket et. al. 2008: 131-133). Six further burials, all dating to the Ubaid Phase 1 period, were infants or children younger than five, found in pithos burials or wrapped in a thick cloth and placed into a small simple pit. The only burial goods noted from this period was a single bead, in one of the infant burials, and no pathologies were noted (Parker et. al. 2009: 114-117).

A total of four pithos burials of young children were recovered dating to the Late Chalcolithic/Early Bronze I transitional period. No signs of trauma were noted on the remains (Parker et. al. 2008: 123-124).

Nine burials were located in the northeastern side of the main mound, dating to the Late Chalcolithic period. One was a uncertain sexed young adult, three uncertain sexed adult, two adult males, two adult females, and two infants. The burials were found in six simple inhumations, all in a flexed position and two mudbrick lined pits, and a pot burial. All but one of the infants were found in pot burials, with a single infant found in a small mudbrick lined pit No signs of trauma were noted on any of the remains (Parker et. al. 2008:124-131).

A total of six burials were excavated that dated to the Late Chalcolithic, of which four

were pot burials of children, and one was a simple inhumation of an adolescent, and one other was brick-lined adult female inhumation, found in a flexed position, with no grave goods (Parker 2007: 10-12; Foster 2009:161-172).

In addition, a total of thirteen burials were found in the first three seasons of excavation, directly below the surface level of the mound. Due to their location, and the various orientations found, as well as a general lack of securely datable grave goods, the burials can only be said to date from somewhere between the Early Bronze Age and the Islamic Period (Creekmore 2007: 79-80). As all or some of these burials may be Early Bronze, but not conclusively, these burials will not be included in any analysis for the purposes of this dissertation, despite being well published and analyzed by the bioarchaeologists involved at Kenan Tepe.

Korucutepe

The northwest area of the mound was used as an extramural Late Chalcolithic cemetery, though it was only partially excavated, and no data on the human remains was published. In this cemetery (Strata XXXVII-XXXIX), a total of five burials were excavated. Only one was a simple inhumation. Three had rectangular tombs constructed of yellow mudbricks, possibly with wooden roofs covering them. Two of these tombs were double, one was a single inhumation (van Loon 1978: 12-18).

Kurban Höyük

A Halaf period, Period VIII, burial found below a hard compacted exterior surface of a tholos stone structure. It was found below a hard compacted mud later. It was a well-preserved, articulated burial, oriented south-east, with the head to the east, and the arms flexed tightly against the body (Alpagut 1986:149). From examinations of the bones by Berna Alpagut, the individual was adult, all permanent teeth being erupted, and all the epiphysis of all post-cranial

bones being completed. The individual was further aged using the macroscopic suture, the epihysis union and dental aging to be approximately 40 years at age of death, and from the skull and pelvis remnants, likely a female. Measurement of the skull indicated artificial skull elongation, through binding as a child. No signs of violence were found upon the skeleton (Alpagut 1986: 150-157).

From the Late Chalcolithic, Uruk Period VIB, in Area A (Step Trench), a double adult burial was recovered. The remains were found in a shallow ovoid pit (1.3 x 1.75m) associated with a platter and pebbled surface, as well as a small hearth and a stone foundation wall. Two individuals inside, articulated but poorly preserved, in sprawled positions, as if "the individuals has been flung, one after the other, into the pit in a casual or perhaps violent manner" (Alpagut 1986:149). S2, the upper skeleton, was better preserved than the S1 lower skeleton. S2 was aligned east to west, arms outflung, with the head on the left side facing south. The backbone was arched, further indicating the body was flung into the pit. S1 was below s2, with the skull facing east and the body positioned north to south, also with the backbone arched. (Alpagut 1986: 149). S1 was an adult female, between 25-30 years old at the time of death. S2 was male, between 20-22 years old. No signs of violence were noted on the bodies (Alpague 1986:158-159).

The Early Bronze/Middle Bronze Transitional period (Period III) was begun after a short abandonment of the Period IV settlement, and was found only on the southern mound. A cist grave was found near one of the houses, but was largely robbed, likely in the Abbasid period (Algaze 1990: 57-60: 189-193).

A study of the human remans at Kurban Höyük focused very much on metric traits and the presence of elongated modified skulls, but did not mention any visible injuries on the remains

(Alpagut 1986).

Lidar Höyük

A total of 205 graves were excavated at Lidar Höyük from an extramural cemetery in use from the Pre-pottery Neolithic to the Middle Ages. The osteological material at Lidar Höyük was analyzed by J. Steinmann, D. Butz and U. Wittwer-Backofen. The study of the Lidar remains was focused largely on skull size and shape, with little said about signs of violence or pathology. Further, the Early Bronze remains recovered from the extramural cemetery at Lidar Höyük were not well preserved, largely due to environmental reasons and a lack of any protection over the graves. Burials found from the mound itself were far better preserved, as the many cultural layers above the graves acted as a buffer from the elements (Wittwer-Backofen 1987: 191).

The extramural cemetery was located directly outside of the Lidar Höyük mound. Excavations of the cemetery revealed a total of 200 graves, which consisted of both simple inhumations and stone cist tombs. Only a small number of the graves contained any grave goods, mainly small ceramic pots. As mentioned above, preservation in the cemetery was quite poor, so the remains of only 87 individuals were recovered from the 200 graves excavated. Strangely, the remains in the simple inhumation graves were better preserved than the cist tombs. Of the individuals recovered, 22 were children and 65 were adults. Of the adults, 14 were male and 23 were female. None of the remains recovered were from individuals younger than five, though this was almost certainly due to poor preservation than lack of younger burials, as a number of appropriately small, but empty, tombs were also recovered from the cemetery (Wittwer-Backofen 1987: 192-193)

On the mound of Lidar Höyük itself, a further 26 individuals were recovered, of which four were children and 22 were adults. Of the adults, 12 were male and ten female. The remains

were found inside a stone complex built at the foot of the mound. The stone tomb was highly disturbed, and none of the remains were found in their original location, but scattered around the inside and outside of the burial chamber, though the scattered remains recovered were in generally good condition, indicating the chamber tomb was looted in antiquity rather than more recently (Wittwer-Backofen 1987: 193-194).

Norşuntepe

In the southeastern edge of the mound, a sounding revealed what was likely an Early Bronze extramural cemetery, though unfortunately, this area could not be further explored before the site was destroyed. No further information on these burials has been published, and it is unknown where the remains have been curated, or if they were destroyed (Schmidt 2002).

Oylum Höyük

A Late Chalcolithic 2 cemetery was excavated at Oylum Höyük, though the remains were badly preserved. The graves were both simple inhumations and pithos burials of both adults and children. The inhumation burials were often in pits with one side lined in mudbricks, with the body led in a crouched position, and placed sometimes in a large pithos vessel, or wrapped in textiles, and perhaps lying on wooden boards. This style of burial is so far unique in southeastern Anatolia, and is more similar to tombs found at contemporary Tepe Gawra (Tobler 1950: 108-109). There was no overarching orientation to the burials, and grave goods were rare, consisting most often of a small ceramic bowl or a bead. Two neonate burials were found under the floors of domestic buildings, buried in a simple pit (Özgen and Helwing 2003:63-66, 72).

Along the northeastern edge of the mound, an Early Bronze cemetery was located, though the area was previously found and looted. A total of 51 graves were excavated, consisting of simple inhumations, infant burials in cooking pots, pithos burials and stone built chamber tombs.

Grave goods were often simple, most commonly ceramic vessels, and a small number of personal adornments such as bronze pins, and copper or bronze bracelets or rings. More rarely, grave goods such as gold disks or cylinder seals were recovered, but no weapons reported (Özgen 1993: 467-468).

Five chamber tombs in total were excavated, all dated to the Early Bronze III periods, though all were looted before excavations of the site were begun. The tombs were oriented north-south, with a southern entrance. The walls and roofs were made of limestone slabs, though one tomb had a preserved mudbrick roof. These tombs would have been visible from the surface as late at the Middle Bronze Age, further explaining their highly looted nature. These tombs are more similar to the Syrian sites of Til Barsib and Jerablus-Tahtani, with other chamber tombs found at Lidar Höyük and Titriş Höyük. Though highly disturbed and looted originally in antiquity, some human remains were preserved, indicating that the tombs were for multiple interments, with the remains of adults and children, men and women, indicating there were family tombs. Single tombs were placed around and between the chamber tombs, often in large pithos or in simple stone cists, and with no overarching orientation. Only one adult burial was found in these single interments, the rest being of children. The single adult burial was not looted, giving a better sense of the grave goods and layout of the burials. The adult was buried with a large number of ceramic vessels, as well as personal adornments such as pins, hair rings and seals. No weapons were found in any of the tombs, though the large chamber tombs were found to contain little of their original materials (Özgen and Helwing 2003:66-67, 72).

Pulur (Sakyol)

Two human skeletons were found from the Early Bronze Age, but little information on them is given in the excavation report (Koşay 1976: 156).

Samsat

A total of 25 burials were found dating to the Late Chalcolithic period, four from Level XXV, ten from Level XXVI, and eleven from Level XXVII, though all were of children in pots, and two from pits from under the floors of houses (Özgüç 1992: 152). No bioarchaeological study of the remains has -been published.

Tepecik/Makaraz Tepe

A total of 14 individuals were recovered and analyzed from the Late Neolithic/Early Chalcolithic levels at Tepecik (Büyükkarakaya et. al. 2009). The remains were studied by A.M. Büyükkarakaya and Y. Erdal. No signs of cranial trauma were noted on any of the remains, though three of the individuals showed signs of post-cranial fractures. One with multiple bone fractures, a second healed fractures on the right upper arm, and a third with a possible parry fracture on the left ulna along with two healed rib fractures. None are clear signs of interpersonal violence (Erdal and Erdal 2012:79).

Tilbes Höyük and Surtepe

No burials were recovered in these excavations (Fuensanta 2007).

Tilbeshar

A number of burials, mostly of children, were uncovered from the Early Bronze II levels, under the floors of the houses (Kepinski 2007: 156-157). A small number of burials were found uncovered upon the floors in the Early Bronze III levels (Kepinski 2005: 150; Kepinski 2010: 309).

A large burial chamber was discovered in the 2006 season dating to this period, between 2600 and 2300 BCE. A large, corbeled construction made of undressed blocks and covered with flat flagstones, it measured 6 by 2 meters, and was 2 meters high, with a large door built of two

monolithic blocks in the western edge of the tomb. The tomb was robbed and flooded in ancient times, so only scatterings of human remains were found inside, as well as an assorted of broken pottery. The excavators estimated a few hundred vessels were initially included in the burials, many of which were probably funerary offerings, filled with the remains of seeds and animal bones. The position of the tomb within the Early Bronze city remains unknown, was it outside the city limits, or within a large courtyard or under a home? The tomb is similar in construction to those found in the Euphrates valley Syria, such as the hypogeum at Tell Asmar, tomb 302 at Jerablus Tahtani and the tombs at Tell Hadidi. This tomb is the northern-most such tomb yet found (Kepinski 2010: 308).

Tell Hadidi Tomb:

The Area D tomb is the most spectacular tomb found at Tell Hadidi. It was a stone built tomb with a corbeled ceiling. Two different rectangular burial chambers were created, with a stairway leading down to them from the ground level. The tomb was robbed completely in antiquity, and was reused in the Late Bronze Age, so nothing further is known about the original Early Bronze construction and use of the tomb (Dornemann 1979:118-120).

Tilmen Höyük

A total of three graves were excavated dating to the Early Bronze Age. One was a chamber tomb, with stone walls and a stone ceiling, measuring 4 by 2 meters, and 2.4 meters in height. The tomb contained the remains of two adults, a male and a female, found at opposite ends of the grave. A bronze knife was found next to the male grave, the only weapon recovered from the Early Bronze levels at Tilmen Höyük. Two small cist tombs were found as well, both containing the remains of a child (Duru 2003: 54).

Tishrin Dam Sites

Shiukh Fawqani/Siyuh Fauqani

No data on human remains was provided in any of the publications on this site for the relevant time periods.

Jerablus Tahtani/Garablus Tahtani

In the Early Bronze Age, two major phases were excavated, Periods 2A and 2B. A single infant jar burial was recovered from this period.

A number of burials were recovered from the Early Bronze Age period, including a high number of infant pot burials, as well as some adult simple inhumation, pithos, cist and chamber tombs. A total of 12 pit graves, three cist, and one large chamber tomb (Peltenburg et. al. 2000: 71). Intramural burial probably became more common in the settlement by the end of the Early Bronze period. Grave goods included ceramics, metal bracelets, pins and beaded necklaces, and some metals, as well as a single polished stone hammer axe. A small copper pendant was found in one adult burial, in the shape of a crescent axe, similar in shape to actual axes found elsewhere in southeastern Anatolia and northern Syria, likely having a ceremonial meaning (Peltenberg et. al. 2000: 72).

One large monumental tomb, Tomb 302, a large above ground corbel-vaulted duel chamber tomb that would have been highly visible on the landscape dates to the Early Bronze III period. The tomb was similar to those found at Tell Ahmar, Ebla, ‘Usiyeh, Mari and the White Monument at Tell Banat, though such a tomb is otherwise unique in the sites considered for this dissertation. This tomb is in fact larger than all other known Syrian Early Bronze Tombs, with the exception of the White Monument at Tell Banat. Indeed, this tomb appears to be the northern-most tomb of its type in this time period (Peltenburg 1999b: 428).

The tomb was placed outside of the city wall, unlike the other known graves from the period at Jerablus Tahtani. It was robbed in antiquity, though some amount of the original grave goods and the human remains of twelve people were found inside, including the remains of numerous men, women and children, indicating a family tomb used and reused over time. Found grave goods included ceramics, gold, silver and rock crystal jewelry and ivory plaques, as well as weapons including daggers, shaft-hole axes and poker-butted spearheads. (Peltenburg 1999a:102-103).

Excavations of the tomb noted three phases of fill or three events. Phase one included the remains of 12 individuals, one infant, four children, and seven adults, as well as the burial goods listed above (Peltenburg 1999b: 431). Phase 2 was a fill phase, with no human remains and only small fragments of broken ceramics, likely incidentally in the fill used to level the tomb contents. Phase 3 also did not contain any human bone, but did contain a number of small caches of what may have been later tomb offerings, such as remnants of food and small pots (Peltenburg 1999b: 432-433).

Tell Shiyukh Tahtani/Siyuh Tahtani

The Early Bronze levels, Period 1, date to the Early Bronze I and II periods, and were excavated along the lower sloped on the western edge of the mound. No burials were excavated (Falsone 1999: 137-138).

Period 2 was dated to the Early Bronze III and IV periods, and was excavated along the eastern edge of the mound. A total of eight burials, containing 13 individuals were excavated, dating to the Early Bronze III period. The burials were of both adults and infants, simple inhumation in ovular pits for the adults, and jar burials for the infants. A total of seven adults, four children and two infants were recovered in total. Burial goods included ceramic vessels,

pins and beads (Falsone 1998: 31-32; Falsone 1999: 137-138).

Tell Amarna/ ʿAmarna

No data given in any of the publications on human remains recovered from this site in the time period covered.

Tell Al-'Abr/ ʿAbr

Three infant burials, dating to Level 3, and three infant burials, found from Level 2, were recovered from the Ubaid levels. The Level 3 burials were simple inhumations in small clay-lined pits, and the Level 2 burials were all urn burials. All were found under the floors of buildings, and the only grave goods were flint tools found with the Level 2 burials. The only adult burial came from Level 7, near the edge of the tell, very near the surface. The body was very badly preserved, so no information on the individual, age, sex or any pathologies, was possible (Hamade and Yamazaki 2006: 55-57).

Titriş Höyük:

The human remains from Titriş Höyük were all studied and analyzed by Y. Erdal, with all remains currently housed at the Biological Anthropology Laborary of Hacettepe University in Ankara, Turkey (Erdal 2010: 5).

From the Early Bronze I levels, two tombs were discovered. The first was B93.41, a rectangular cist-tomb found near the foot of the High Mound in the western lobe of the Lower Town. The tomb was constructed of rectangular limestone boulders, with a limestone slab roof, similar to those found at Carchemish and Hassek Höyük (Honça and Algaze 1998: 104). The inhabitant was an older adult female, with no major pathologies found other than arthritis and teeth caries (*ibid:* 110). A second tomb was found in the Outer Town,

In addition, a large extramural cemetery was dated to this period, located around 400

meter west of the main settlement. Unfortunately, the cemetery was in terrible condition due to both looting and plowing. Accordingly, while the cemetery area was surveyed, no excavation work was undertaken in the area. The cemetery consisted of a large number of pithoi graves, similar to that of the nearby and contemporary Lidar Höyük cemetery (Laneri 2007: 249)

In the Early Bronze II levels, no burials were found associated with architecture, indicating that all burials were probably extramural rather than intramural. A small Early Bronze II extramural cemetery dating was discovered approximately 400 meters to the west of city wall. A second cemetery was located in the eastern edge of the Outer Town; a third cemetery was located in the western edge of the Lower Town, The first cemetery was the largest, with the highest number of tombs excavated. An earlier excavation by a German and American team excavated a total of three pithos and 31 cist tombs excavated in 1981. Initial excavations of the cemetery revealed that the cemetery had been very seriously disturbed by modern plowing and looting. A total of fifteen tombs were excavated in the 1994 summer season, but all were badly disturbed and badly preserved, and so further excavations of the cemetery were halted. The tombs excavated were small chamber tombs and surrounding cist tombs, with semi-circular *dromos* that lead into a small main room. Most of the tombs contained numerous individuals, and so were likely family tombs. The remains found, often badly preserved, had few grave goods, including ceramic vessels and bronze pins or bracelets, or bone rings and earrings (Laneri 2002:15; Honça and Algaze 1998).

From these cemeteries, a total of 21 graves were excavated and 31 individuals recovered. All but one were rectangular cist tombs, built of limestone slabs with a series of horizontal limestone slabs as roofs. One burial was a disturbed pit burial of a child with no grave goods. The cist tombs were both singular and multiple burials, with more single than multiple

found. The single tombs were smaller than the multiple ones, with the larger multiple internment graves commonly having an entrance door and a dromos, while the single tombs had neither (Honça and Algaze 1998:104-106).

While the tombs excavated were not well preserved, a general east to west orientation was noted for the graves, and most graves contained multiple internments. Grave goods found near and inside of graves included a variety of ceramics, bronze pins, silver bracelets, necklaces, bone rings and earrings, as well as a small number of "Violin-Shaped" stone human figurines (Laneri 2007: 250).

Of the 31 individuals recovered, 15 were juveniles, seven were young adults and nine were older adults. The remains were often badly preserved, so sexing of many of the remains was not possible, with only three female and five male adults identified. Of five individuals preserved well enough to give such information, three of the remains showed signs of trauma. Two showed signs of healed trauma and one a more recent perimortem trauma (*ibid*: 110-111).

In the Early Bronze III period, a number of tombs were excavated, including cist tombs, jar burials and intramural tombs associated with domestic architecture. This period saw a change from extramural burials to intramural burials, mainly found in cist tombs located under the floors or courtyards of private residences, at the same time as the suburbs of Titriş were abandoned, and large fortifications walls built around the city to protect it from invaders. The city of Titriş became a centralized site, rather than one with a central mound and surrounding suburbs (Matney et. al. 2012: 338).

Excavations of the Early Bronze III domestic spaces at Titriş Höyük revealed that each house had at least one if not more stone-lined cist burials underneath the floors of the rooms. This was a large change from the Early Bronze II period, where burials were placed in an

extramural cemetery, as mentioned above. In the Early Bronze III period, it seems nearly all burials were placed under the floors of the family house (Algaze and Matney 2011: 999-1004).

All were made of limestone cists with an exterior dromos leading to a sealed door made of a single or double limestone slab, which allowed the tombs to be reopened and reused. The tombs ranged in size from 1.0 x 1.t meters to 2.9 x 3.5 meters (Laneri 2007: 251). The cist graves were reopened and reused, the tomb itself being built at the same time as the house was constructed, so that a cist tomb was used for entire families, with up to eight individuals found in a single grave. Many, though not all of the domestic spaces excavated from the Early Bronze III period contained such tombs under the floors, usually under the central courtyard and nearby the courtyard. Most likely, the tombs were part of the initial construction of the houses. While two of these intramural tombs contained only a single individual, most contained numerous, up to eight. The remains inside the tombs were often not articulated, with the final internment sometimes partially articulated and the remaining individuals mixed together and often, the post-cranial bones removed for unknown reasons, leaving only the skull of previous inhabitants. All ages and genders were found inside the tombs, further suggesting these were family crypts (Honça and Algaze 1998:107-108).

Of the 32 individuals recovered, 12 were juveniles, 18 were young adults and two were older adults. Of these only 15 could be sexed, with seven adult females and 8 adult males. Out of seven well preserved individuals, a total of four of these individuals showed signs of violent trauma (Honça and Algaze 1998: 112-113).

Grave goods found inside these intramural tombs included a wide array of ceramics, including imported goods from Syria and from Western Anatolia. The remains of a thistle and of sheep bones would perhaps indicate that pots were left filled with food offerings for the dead

(Matney et. al. 2012:-338-340). Other grave goods included bronze pins, bronze and silver earrings, rings and necklaces, and a small number of bronze weapons, including a dagger and a large spearhead found underneath the skulls of two males (Laneri 2007:253-254). In general, the grave goods of the Lower Town were of higher quality and of higher value than those found in the Outer Town; bronze weapons were recovered from the Early Bronze III intramural burials came from Lower Town burials (Laneri 2011: 48).

Near the edge of the Outer Town, a plaster lined basin was excavated and found to contain a large number of disarticulated human remains, dating to the Early Bronze III period, contemporaneous with the final occupational phase to a nearby building and close to the city wall. A total of 17 skulls were recovered from the basin with an MNI of 19, which were carefully placed in a circle around scattered bones in the center of the basin, and without any grave goods included. The remains largely belonged to young adult males aged between 15 and 50, a total of 12 (three young adults, five middle adults, and four old adults, in addition to three adult female, aged between 15 and 35 (one young adult and two middle adults), one unspecified adult, two children and one infant (Erdal 2010: 4-6). All but one of the adult males, one adult female and the one unspecified adult all showed signs of cranial trauma. Six of the individuals, five male and one female, had only one area of trauma on their skulls. Three, two males and one unidentified adult, had two areas of trauma, two males had three areas of injury, and two males had four areas of injury. Neither of the children showed any signs of violence on the remains recovered, while the infant was only represented by teeth, so no further information is known. Analysis of the shape of the wounds indicates the wounds were made by quick blows from a sharp instrument such as a battle axe, while ovoid-shaped wounds on the skulls would most likely come from pointed weapons such as spears and daggers. Overall, the evidence seems to indicate the remains

of a battle or massacre (Laneri 2011: 49; Erdal 2010: 4-7).

The positioning of the wounds on the skulls, 19 on the parietal, two the occipital, and four on the frontal, would seem to indicate the victim were held down when being killed, rather than being killed in battle, which tends to injure the face. This may indicate the remains of a massacre rather than a battle (Matney et. al. 2012: 341). One of the adult males had two healed traumas on the occipital and the parietal, indicating violence to the individual prior to his death (Erdal 2010: 7).

All of the remains showed signs of being de-fleshed and dismembered. Other similar plaster bins were found from inside domestic spaces in the Outer and Lower towns, but without the collection of human remains inside, likely indicating the reuse of the Plaster Basin as a burial pit. The pit was approximately 1.4 meter in diameter, and was roughly circular, with a base form of limestone coated in mud plaster, a layer of pebbles, then a thick layer of limestone plaster (Erdal 2010:3). The bins were built into the floors of rooms during construction of the domestic spaces, and may have originally been used for wine production, as evidenced by remains of tartaric acid in the bins (Laneri 2007:255-256).

The Plaster Basin was originally located in a room of a house (House 2), but the room itself was later blocked off so that the rest of the house no longer accessed the room, while a new door was built facing the street, making the basin room an independent room with street access (Matney 2012: 341).

Tülintepe

No data given in any of the publications on human remains recovered from this site in the time period covered.

Yarım Höyük

A single burial, badly preserved, was found from under the floor of a house, of a child in a pithos vessel, with a single bead as a grave good, dating to the Early Bronze I period (Rothman et. al. 1998: 74-75).

Zeytinlibahçe Höyük

Only a small number of infant jar burials were recovered, from under the floors of domestic structures, dating to the Late Chalcolithic period (Frangipane et. al. 2004: 35, 41).

Chapter Five : Weapons

Introduction

In this chapter, weapons data from central and southeastern Anatolia will is considered and analyzed. The chapter begins with a brief history of weapons and weapons technology in the ancient Near East in general, and Anatolia in particular, with definitions of the types of weapons known from the prehistoric past. A short history of metallurgy in the ancient Near East follows, in order to better contextualize weapons technologies. Next, an analysis of all collected data is presented, finished with a summary of the main points of the chapter. The chapter concludes with the raw weapons data, site by site, for both regions. A table of all data from each time period (Early Chalcolithic/Middle Chalcolithic, Late Chalcolithic/Early Bronze I, Early Bronze II/ III) is available as Appendix Four at the end of this dissertation.

Background, Definitions and Methodology

Weapons are the direct tools of war. The study of weapons is highly problematic in a variety of ways, such as the difficulty in identifying objects that were variously used as tools, used to hunt animals, or had a purely ideological function, from those meant to cause injury to other human beings. For example, a knife may be used to cut leather, or to cut an enemy; a projectile arrow may have been used solely for hunting purposes, or for warfare, with little to no difference in appearance or in the wear patterns; a stone macehead may have served a purely ideological function as a symbol of power, or could be used to hit someone over the head.

Little in the archaeological record offers clues to the uses of objects that can be either labeled as tools or as weapons, though context can help. The presence of a projectile point in the

vertebrae of a skeleton clearly shows the object was used as a weapon, while the presence of arrows, a knife and macehead in a single grave would seem to indicate a warrior and his weapons rather than a farmer and his tools. Piles of projectile points and sling balls found in the rubble of a fallen wall likely indicate the remnants of a battle rather than stockpiles for hunting. Given some context, objects may be more powerfully interpreted as weapons rather than tools, so it is crucial that the context of such objects be considered when information is available.

Scholars divide weapons available to the ancient world into two classes: fire and shock. Fire weapons include any type of weapon used at a distance from the holder, and mainly include projectiles such as arrows, atlatls, stones, pellets, and spears. Shock weapons include weapons that require close contact between combatants, such as knives, swords, clubs, axes, or maceheads. A third category, far more uncommon in the ancient world and harder to locate archaeologically, are chemical weapons, such as Greek fire, poison, or boiling pitch, although the firing of a settlement may also be called a use of a chemical weapon (Keely 1996: 49). Overall, shock weapons are more likely to be accurately identified as true weapons, whereas fire weapons tend to have more functions than merely the destruction of fellow human beings. The identification of an artifact as a weapon is rarely perfect, especially when dealing with the prehistoric period.

By the Chalcolithic period, a number of possible and probable weapons were already in use in Anatolia, including the bow and arrow, mace, spear, dagger, sword, and sling. The battle axe and sickle sword were invented by the end of the Early Bronze Age, while body armor did not appear until the Middle or even Late Bronze Age and so will not be considered in this dissertation (Gabriel and Metz 1991: 47). Prior to the Chalcolithic period, such weapons were almost all made of obsidian, stone or organic materials, with some copper present, though by the

end of the Early Bronze Age, weapons were more and more often made of either copper or bronze (Hamblin 2006: 19-22).

The most complete attempt at a typology of Anatolian weapons is the 1957 publication by Stronach, "The Development and Diffusion of Metal Types In Early Bronze Age Anatolia." This work remains the foundation for Anatolian weapon typology, although the study is incomplete and many more finds have been discovered since its publication. Other authors have attempted smaller typologies, based on regions or particular types of weapons (Arcan 2012; Philip 2007; Efe and Fidan 2006; Zimmermann 2006a; Anlağan and Bilgi 1989; Bilgi 1984; Yakar 1984), or have written general overviews of ancient weapons (Gonen 1975).

The result is a more-or-less universally used system of categorizing spearheads in particular, these being the most common Early Bronze Age weapon recovered, with a total of five types and various subtypes. Stronach also included dagger shapes (nine types with various subtypes) and shaft-hole axes (two local types and three from the "Western Asiatic"), halberds, and crescent axes (four types). Stronach included the weapons recovered from Alishar Höyük, Tekeköy, Dündartepe, Alaca Höyük, Ahlatlıbel, Tarsus, Horoztepe, Soli, Kültepe, Pınarbaşıgöl, as well as a number of sites from the Aegean coast that are not covered in this dissertation. The study was to conclude with a Part Two, which would have covered swords and projectile points; sadly, this volume was never completed (Stronach 1957).

Other overviews of ancient weapons technology from contemporaneous and nearby areas include Gonen's *Weapons of the Ancient World* (1975), Philip's *Metal Weapons of the Early and Middle Bronze Ages in Syria-Palestine* (1989) and Moorey's *Ancient Mesopotamian Materials and Industries: The Archaeological Evidence* (1999).

Weapons Descriptions

Sling Balls: Perhaps the most common non-metallic weapon in the prehistoric ancient Near East is the so-called sling stone, also called a clay ball or a sling ball in various publications (Gualon 2013:345). These weapons were often made of clay, though stone versions existed as well. For clarity, these weapons will be referred to as sling balls in this dissertation, to avoid confusion about materials.

Sling balls greatly differ in size and shape. Examples are known to be round, ovoid, piriform, or irregularly shaped, even within the same site. As mentioned above, sling balls can be made of clay, either baked or not, or made of carved or naturally smoothed stone. The clay variations sometimes have small stones at the center to mold the ball around, or are made entirely of clay. Sling balls are not exclusively weapons, especially in early settlements. The balls were used in conjunction with a slingshot, often made of leather, in order to fling the stone at high velocity towards the target. Sling balls could have been used either for hunting purposes or for warfare. The same shape and material could also be used for another purpose altogether. As some sites, similar shaped objects were possibly used for cooking, rather than for killing (Atalay 2003). In this case, the balls would be heated in a fire, then placed inside a clay pot in order to heat up the materials, such as a stew. The context the balls were found in best reveals the use, though it remains difficult to understand the difference between sling balls used for hunting and those used for warfare.

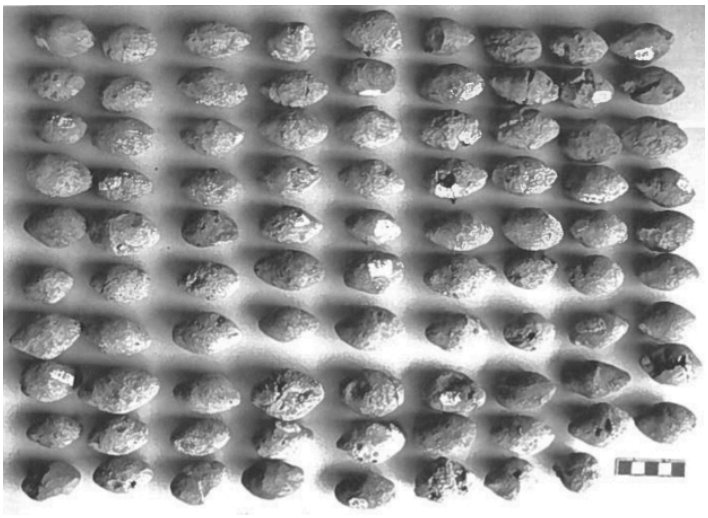

Figure 5.1: Clays sling balls from Kashkashok I (Gaulon 2013: Figure 31.3)

In Neolithic and earlier societies, sling balls were more likely for hunting. In later societies, once hunting was no longer a primary source of protein, sling balls were more likely weapons. For example, excavations from the Late Chalcolithic levels at the site of Hamoukar in northern Syria revealed a well-fortified site, with evidence of incipient complexity. At around 3500 BCE, the settlement burned and destroyed. In the destruction level debris, more than 3000 sling balls were recovered, with indications that many of the balls were used while the clay was still wet, a sign of desperation for those using the sling balls (Reichel 2009: 23-25). Hamoukar remains of the best settlements for evidence of Late Chalcolithic warfare, and the abundance of well formed, but unfired sling balls are further testament to the story of the site's destruction.

Sling balls remained an important weapon through the ages in the ancient Near East. At the Iron Age site of Lachish in modern day Israel, hundreds of sling balls of various shapes, sizes, and materials were found in the remains of a large siege of the site that led to its destruction by the Neo-Assyrians under king Sennacherib in 701 BCE (Tufnell 1953: 90). A

second famous example is the story of David and Goliath, from the Hebrew Torah, in which the famous king slays the giant using a slingshot and a sling stone (Sellers 1939). The simple sling ball was in use as a major weapon in the Near East until Roman times, and indeed, remains in use even to this day in some areas of the modern Middle East (Shimelmitz and Rosenberg 2013: 433).

The appeal of the sling ball is easily understood. The weapon at its simplest requires only clay to create, and a leather strap to let fly. Unlike stone or metal projectile points, which take both skill and valuable materials such as obsidian, flint, or bronze to create, sling balls are quite simple to fabricate. The ammunition would be very easy to make, from material abundantly available. Many balls could be created quickly, in case of emergency, or in spare time. If the ball is lost during the hunt or a battle, it is no great loss. Additionally, the sling could be a highly successful and accurate weapon when the user is well trained. In a battle against the Greeks in the 4th century BCE, the Greek historian Xenophon wrote of the use of sling-armored soldiers. It was estimated that iron sling balls could be accurately fired up to 400 meters away, farther than even a well-made bow and arrow (Korfman 1973:37).

Figure 5.2: Neo-Hittite Soldier with Sling, from Tell Halaf, Syria (Korfman 1973: Figure 37)

Sling ball are quite abundant from prehistoric Anatolian settlements. Gaulon claims that small clay balls make up as much as 50% of a small find assemblage at some Halaf period sites in the ancient Near East (Gaulon 2013:345). The numbers of these artifacts is so high that, often, site reports do not even mention their presence or properly publish the number of sling balls recovered in a given context. This does, however, make the differentiation of sling balls as weapons or as hunting materials difficult, as the presence of the objects is often missing from even otherwise well written publications. Some recent publications have attempted to correct this oversight (e.g. Gaulon 2013; Rosenberg 2009; Özdoğan 2002).

Previous studies by Childe and Korfmann suggest that sling balls were used more frequently than bows and arrows during the Neolithic, based on their relatively abundant prevalence as opposed to the far smaller numbers of arrows remaining in the archaeological record (Gaulon 2013: 345; Child 1951; Korfmann 1973). Additionally, Korfmann proposed that mastery of the bow and arrow and of slings would not likely have possible for a single individual, so that early societies would have used either bows or slings as a primary weapon, with archaeological evidence to back up this claim (Korfman 1973: 38-39). Later Neo-Assyrian depictions of armed forces also supports this claim, with scenes of both slingshot-armed troops and bow-armed troops in separate divisions, but none showing troops carrying both weapons (Gabriel and Metz 1991: 61-62).

The earliest known clay sling balls date to the Aceramic Neolithic, in the 7th millennium BCE. Small stone balls are also known from earlier than this date, but whether these stones are natural, collected or created has not been adequately studied (Gaulon 2013:349). Hundreds of clay balls were found at Çatal Höyük, though the balls were often found in and around ovens and so were more likely used for cooking purposes rather than as weapons (Atalay and Hastorf 2006:

304). During the Later Neolithic, sling balls became increasingly common. In some Halaf period sites, collections of sling balls have been found placed in pits or piled on the floor, as at Sabi Abyad in Syria, where hundreds of sling balls were found in Level 3b (Gaulon 2013:348; Akkermans 1993: 63).

Projectile Points: The bow and arrow is a very ancient weapon found in early sites in Anatolia, with evidence of stone projectile points from at least the Aceramic Neolithic (Özdoğan 2002: 438). The bow is the earliest known composite weapon, made up of wood, bone, sinew, stone, or metal. The bow allowed for long distance firing of an arrow, which would be of use both for hunting and warfare, with depictions of the bow and arrow dating as far back as the Upper Paleolithic in both Europe and the Near East (Gonen 1975: 8).

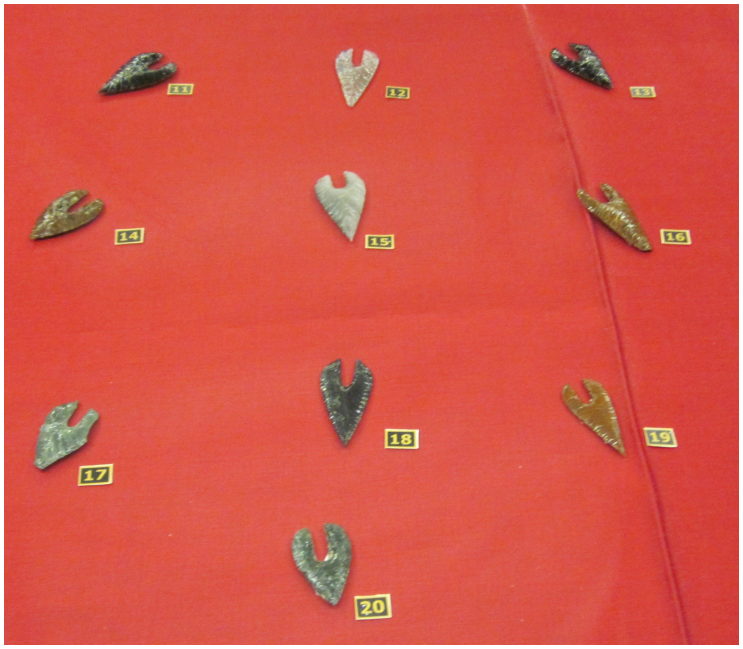

Figure 5.3: Third Millennium flint and obsidian projectile points from the Museum of Anatolian Civilizations, Ankara (Photo by the Author)

The earliest projectile points were made of stone, usually flint or obsidian, with a fair amount of variation, both between sites and within the same site (Özdoğan 2002:438). While projectile points are often well represented in archaeological reports, the use of the objects as tools for hunting or as weapons for the harm of other humans remains difficult to determine, especially in societies still largely reliant on hunting for their protein sources. Arrowhead projectiles are not commonly found in Chalcolithic and Early Bronze Age sites in central and southeastern Anatolia. Indeed, Özdoğan finds a pattern that suggests that arrows nearly disappeared in central Anatolia by the end of the Late Neolithic in favor of the sling (Özdoğan 2002: 441-443).

Maceheads: Maceheads are often considered the first true weapons (Yadin 1963). Unlike projectile points, arrows, and axes, there is no known use for a macehead as a tool. The macehead is used to strike another person on the head or body in order to cause them harm. Hunting with a macehead would largely be a futile effort, as animals do not often stay still long enough to be struck at such a close range. The main attribute of the macehead is that the victim of its attack must be close by to be struck by the hand-wielded object, making it ideal in warfare and in fighting, but less so to bring down a deer.

Figure 5.4: Stone maceheads from the Museum of Anatolian Civilizations, Ankara (Photo by the Author)

The macehead is usually a round, ovoid or piriform shaped object, generally solid and rarely hollow. It can be made of stone, wood, or any type of metal. The macehead would have a rounded striking surface on the top, with a perforation at the base to hold a shaft, such as a stick or baton, which would most often be made of wood. Maceheads can be carved by hand, or cast in molds in the case of metal maceheads. The earliest known maceheads Anatolia date to the Neolithic period, found at such sites as Aşıklı Höyük and Çatal Höyük (Eslick 1992). Even earlier, maceheads have been recovered from Pre-pottery Neolithic settlements in the Levant, such as Sha'ar Hagolan, Ein Ghazal and Hamadiya (Rosenburg 2010; Rowan and Levy 2011). The earliest known metal macehead in Anatolia is from the site of Can Hasan, dating to the Neolithic, in the 6th millennium BCE (Anlağan and Bilgi 1989:97). It was made of copper and was formed in a two-part mold, while copper maceheads are also known from Nahal Mishmar in the southern Levant (Bar-Adon 1980).

Maceheads often have highly symbolic meanings, being the weapon of choice in iconography of a strong and mighty king subjugating his enemies. The earliest known iconography of maceheads comes from Egypt from the Narmer Palette, which depicts Pharaoh in the act of smiting a fallen man with a macehead held high in the air (O'Connor 2011). The macehead remains the weapon of choice of avenging deities and victorious kings, through the Iron Age and the art of the Neo-Assyrians (Gabriel and Metz 1991: 58).

Knives: As a rule, knives have a single blade, generally asymmetrical in shape with one sharpened cutting edge. They are shorter than a spearhead or sword, having a short handle rather than the long hafting of a spear. Knives can be made from stone, obsidian, or metal, though bone knives are not entirely unknown. Knives are not necessarily weapons, as the objects can also be used as tools to cut or scrape as needed, and are more likely to be utilized as tools than are

daggers, discussed further below. Knives, like maceheads, require close proximity to the target to be of any use, and so are less likely hunting weapons, though would be useful in the processing of the remains. The earliest known knives, made of flint and obsidian, are found in the Aceramic Neolithic in Anatolia at sites such as Nevalı Çori and Göbekli Tepe (Zimmermann 2006:251-252).

Daggers: In contrast to knives, daggers generally have a short, symmetrical blade sharpened on both edges, and a sharp tip. Dagger blades and handles are usually shorter than knives. Like knives, dagger blades can be made from metal, stone, obsidian, or, less commonly, bone. Although they can be used as cutting or scraping tools, daggers, with their short blades and sharp tips, are primarily stabbing weapons, and are only secondarily used as tools. Daggers are commonly found in warrior burials across the world. Daggers require close proximity to the target to be of any use, and so are most commonly used in hand-to-hand combat, similar to the macehead. The earliest known daggers, made of flint and obsidian, are found in the Aceramic Neolithic in Anatolia at sites such as Nevalı Çori and Göbekli Tepe (Zimmermann 2006:251-252).

Daggers can have both practical and ceremonial uses, as daggers that show wear have been found in tombs, as have daggers that would have been practically useless as weapons, such as the famous golden dagger found in the Royal Tombs of Ur (Zettler and Horne 1998: 30-31). The earliest known worked iron weapon in the world is a small, likely ceremonial dagger. This dagger has an iron blade and a gold haft, and was discovered in the Royal Tombs of Alaca Höyük from the Early Bronze Age (Bachhuber et. al. 2011), which will be discussed further below.

Figure 5.5: Gold and iron dagger from Alaca Höyük from the Museum of Anatolian Civilizations, Ankara (Photo by the Author)

Axes: Axes shapes vary the most of any of the weapons covered in this chapter. The term "axe" covers a wide range of shapes, from roughly rectangular flat axes to circular crescent axes. The earliest axes were made of stone, dating to the Aceramic Neolithic, from Aşıklı Höyük, and Göbeli Tepe (Anlağan and Bilgi 1989:43-44). Often, the stone used would be imported or high quality, such as the hard green stone axes from Neolithic Çatal Höyük (Mellaart 1967). These early axes were flat axes, rectangular shaped with a sharpened edge. The axes were tied onto a shaft, likely made of wood, using straps of leather or twine. Flat axe blades ranged from flat and rectangular, to highly flared (Anlağan and Bilgi 1989: 43). The earliest copper flat axes were produced by the Middle Chalcolithic, found from Çatal Höyük West (Mellaart 1965) and Mersin (Canvea 2000a). Flat axes were possibly used as weapons, though many were used as tools, to cut wood, skin animals, etc. Stone flat axes are documented in Anatolia at least through the end of the Early Bronze Age (Anlağan and Bilgi 1989: 43).

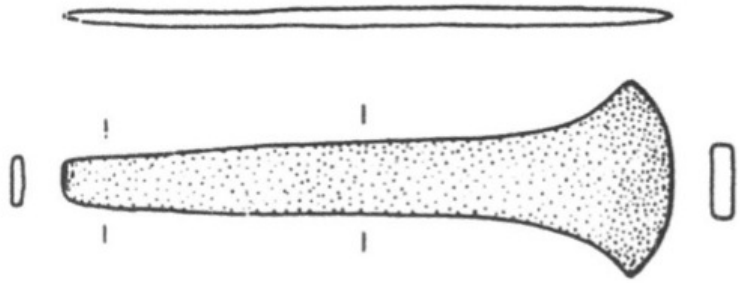

Figure 5.6: Flared flat axe from İlipinar (Begamann et. al. 1994: Figure 1390)

By the Late Chalcolithic, the first shaft-hole axes appear in Anatolia, primarily in the southeast, with examples from Arslantepe (Balossi Restelli 2012) and Norşuntepe (Schmidt 2002). These axes had a larger, more rounded blade, with an open hole at the other end for the shaft. Such axes, sometimes called "battle axes" in publications, were more likely used as weapons than the flat axes, and have a wider variety of shapes. By the Early Bronze III period, these axes, mold formed and made of bronze, were far more common than the flat axes.

Figure 5.7: Stone shaft-hole stone axe mold with reproduced axe, from the Museum of Anatolian Civilizations, Ankara (Photo by the Author)

The final common type of axe, though only a small number are known from Anatolia, is the crescent shaped axe. These axes were almost certainly not produced in Anatolia, and were brought in from Mesopotamia. These axes were only found from the Early Bronze II and III periods onwards, made of bronze or, rarely, gold, with examples from sites such as Demircihöyük (Korfmann et. al. 1996) and Jerablus Tahtani (Peltenburg 1999).

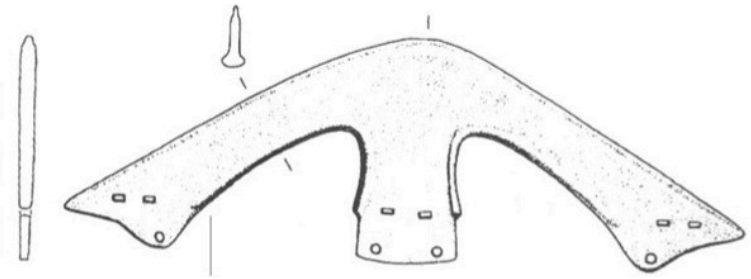

Figure 5.8: Crescent axe, from Sarıket-Semayauk (Seeher 2000: Figure 49:G)

Spears: Spears are one of the most ubiquitous weapons known from the ancient Near East. In Mesopotamian iconography, soldiers were commonly depicted wielding spears on long wooden shafts. The earliest iconography of spears comes from the Egyptian "Hunters' Palette," dating to 3000 BCE (Gonen 1975: 29). Spears are known from archaeological contexts that predate the palette, including from Anatolia.

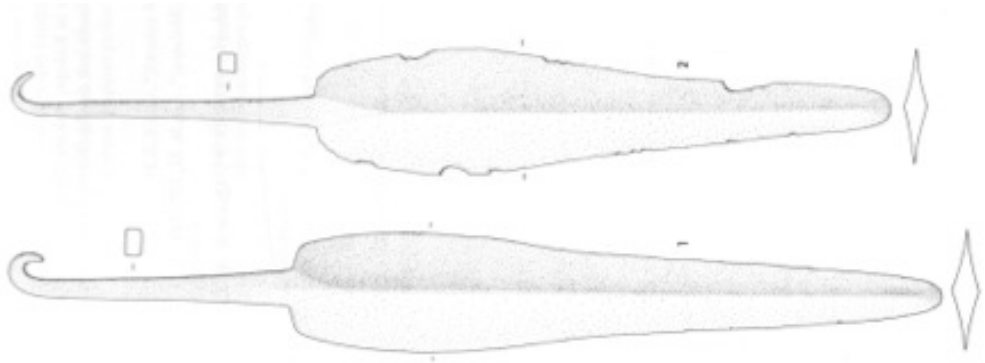

Figure 5.9: Bronze spearheads with bent tangs and rounded shoulders, from İkiztepe (Bilgi 1984: Figure 7.1)

Spears were generally close-range, stabbing weapons. Warriors or foot soldiers would use them to fight one another as close as the distance of the wooden shaft would allow, while keeping the soldier out of range of the enemy's other weapons. Though spears could be thrown from a distance, this was likely not a common occurrence, as it would mean the loss of a valuable weapon. Spears were useful both for hunting as well as for war. From the Standard of Ur, soldiers are depicted carrying spears, particularly the soldiers riding on two-man chariots (Woolley and Burrows 1934). Neo-Assyrian depictions of spears show them being used both to hunt and taunt lions, as well as by soldiers in battle (Gonen 1975: 29). Spears remained the primary weapon of solders throughout the Roman period, usually used by infantry forces directly behind archers.

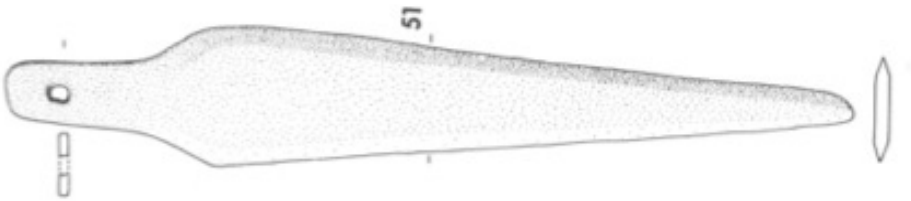

Figure 5.10: Bronze spearhead with flat, perforated tang and angular shoulders, from İkiztepe (Bilgi 1984: Figure 13:51)

Spearheads were made primarily of stone, such as obsidian, slate or flint, until the start of the Early Bronze Age, when bronze technology allowed for superior and more cheaply manufactured bronze spearheads.

Swords: Swords may have a single or double-edged blade, and can be straight or curved in shape. Curved blades first appeared at the very end of the Early Bronze Age, and are nearly non-existent in Anatolia until much later. Unlike the other weapons mentioned, swords are only known from ancient sources as metal weapons, as stone or wood would not be strong enough to

withstand the force necessary to wield a sword. Swords often differ from knives or daggers only in length, usually over 20 cm. in length. The end would be attached to a handle, which could be made from a variety of materials, such as wood, stone, or metal. The handle could be a separate piece attached to the blade, or an extension of the blade itself, forged as a single piece (Philip 142-143).

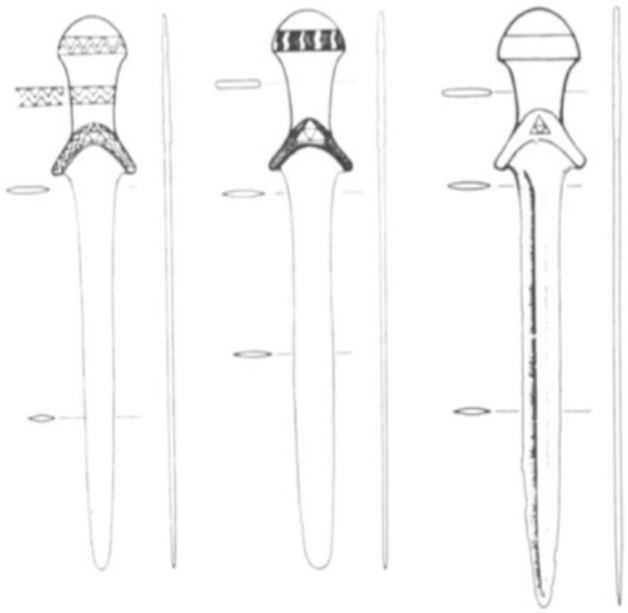

Figure 5.11: Bronze swords with silver inlay, from Arslantepe (DiNocera 2010:Figure XIII.3)

The sword is a relatively late weapon, due to its extreme length. The blade of a sword is long and thin, so a copper sword would have been of no real use, as the metal would not have been strong enough to support the weight of its own length. Accordingly, swords were not invented until the popularization of bronzes. The earliest known swords in Anatolia came from the Late Chalcolithic levels at Arslantepe in southeastern Anatolia, which will be further detailed (DiNocera 2010: 259-260). The sword is primarily a weapon rather than a tool. Swords must be

made in a mold, then further worked, reheated and annealed in order to make the metal of the weapon strong. In general, the cost of making a sword would be too high for use as a tool, when other far cheaper and easier to produce options are known. Like the knife, macehead and dagger, this tool was only useful in close combat, making it less useful for hunting (*Ibid*).

History of Metallurgy in Anatolia

By the end of the Early Bronze Age, the majority of tools and weapons were made of metal, in particular bronze. The earliest weapons were made of stone, and likely wood, though wooden artifacts rarely are preserved in the archaeological record. Preservation of ancient metals is problematic, however. Unlike other materials, metals can be used and reused; an Early Bronze Age sword could become a Middle Bronze Age chisel. Metal was very valuable, took considerable effort to refine, and was relatively rare, especially in the Early Bronze Age period, when tin was still rare and quite expensive. As a result, metals found in the archaeological record are unusual. Metal artifacts are most commonly recovered from graves, as burial goods. Such a deposit was often high symbolic, as leaving such valuable materials in a grave necessarily removed the object from circulation. Placing metals in a grave was a great show of respect for the dead, as the wealth of the metals could not be taken back.

Metals are also found in non-burial contexts, though usually only by accident. For example, the objects recovered from "Hall of Weapons" at Arslantepe, were only preserved *in-situ* because the room was burnt before the valuable contents could be removed. The population of Arslantepe did not choose to abandon the well-made and very valuable spears and swords found in the room, but did so only because of a catastrophe (Di Nocera 2010: 257-261).

Metal weapons are most often found in burials or destruction layers, and rarely in other contexts (Anglağan and Bilgi 1989:10; Philip 1989: 164). Artifacts recovered in domestic or public contexts tend to have been placed there intentionally and permanently, such as built furniture, benches or altars. Additional artifacts might found in the remains of trash, such as broken pots or food refuse. A third category would be small, misplaced items, which often accounts for archaeological deposits of jewelry, clothing pins, or smaller tools. Few weapons are small enough to be easily lost, or disposable enough to simply leave behind, with the notable exception of sling balls. A final type of find spot are buried caches of materials, often a result of a population suddenly forced to leave an area and to hurriedly bury valuables, likely with the failed intent of coming back later (Philip 1989: 163-165).

Weapons are among the least likely objects to be abandoned and thus rarely become a part of the archaeological record. When weapons are found, it is often worth trying to understand why the weapons were found in that particular context. It also must be remembered that only a very small fraction of weapons from a society remain in the archaeological record, so our knowledge of weapon technologies is highly incomplete. Contemporaneous iconographic depictions of weapons help to bolster our knowledge of ancient weapons technologies, such as the depiction of maceheads in the Egyptian Narmer Palette (O'Connor 2011).

Evidence for metalworking within the ancient Near East dates back as early as the Aceramic Neolithic period (8^{th} millennium, B.C.). The first pyrotechnic explorations of metal predate pottery production (Efe and Fidan 2006: 19). The earliest metal objects were made from native metals, namely malachite and copper. Native metals (metals in a naturally metallic form, 99% pure) can be cold worked in their natural form without the need to smelt or further refine them. These early metal objects show evidence of cold working and even some annealing, which

required low heat, proving that some pyrotechnical manipulation of metals occurred during this era. Uncoincidentally, the first metallurgy appeared along with the first settled communities and the first domestication of plants and animals. Early metal artifacts simple items requiring little working of the metal, such as beads, or ornamental items requiring some additional working, such as pins or awls (Yener, 2000: 18-25).

The oldest known evidence of metallurgy comes from Anatolia, from the site of Çayönü, dating to the Aceramic Neolithic period. Over 4,000 malachite and native copper artifacts were collected from excavations at Çayönü (Muhly, 1989: 6). Other Aceramic settlements, such as Hallan Çemi, Nevali Çori, and Aşıklı Höyük, also had evidence of early metallurgy in the form of beaten sheets of native copper made into jewelry, beads, and trinkets (Efe 2002: 49; Esin 1996: 39-40).

As copper is a relatively soft metal, weapons made from this material would not have been very useful, with a few exceptions. The earliest known large, worked metallic object in the world is a macehead found in Can Hasan, dating to the early 6th millennium BCE (Gabriel and Metz 1991: 60).

The first experiments in smelting metal ore occurred in the Early Chalcolithic period. The first cast metals in the archaeological record date to this period. The earliest example of a smelted metal comes from the site of Yarim-Tepe. The item, a lead bead, was recovered from a burial. Analysis of the bead revealed it was smelted from lead ore, most likely from the lead sulphide galena (Muhly, 1989: 4). Other early smelted metals are known from Mersin levels XVI in Cilicia (Yalçın 2000: 20-24).

Bronze is an alloy of copper, formed with either arsenic or tin. Arsenical bronzes are far easier to create, with a lower melting point, less strength, and were silver in color. Tin bronzes

require higher temperatures to create, but are less brittle, and have the golden color more commonly associated with bronze (Scott 1991: 25-26).

Tin bronzes were superior in strength and versatility to arsenical bronzes. Tin was one of the most rare metals of the ancient world. Tin sources few in the Middle East, with the best known tin mines found in what is now Afghanistan. More recent evidence suggest tin sources were worked in Anatolia from at least the Early Bronze Age, though it remains unclear how much tin these mines could have produced, and if there would have been enough to provide the amount of tin bronzes created throughout the Bronze Age in Anatolia (Yener 2000).

Tin was clearly a very valuable substance, and, regardless of the productivity of tin mines in Anatolia, tin was traded between Mesopotamia and Anatolia. By the Middle Bronze Age, private archives of Assyrian merchants recovered from the site of Kültepe-Kaneş revealed that one of the primary materials traded between the Anatolian settlements and Assur was tin. In the Late Bronze Age, tin became one of the most important objects traded between the kings of the great empires of the day (Bass 1989). From the Late Bronze Age Ulu Burun shipwreck, one ton of tin ingots were recovered, enough to make an entire arsenal of bronze weapons, and likely among the most valuable of materials on the ship (Bass 1989).

Anatolia is a very rich land with a wide array of natural resources, including a number of metal mines. Copper especially, both in its natural metallic form and in copper ores, is quite plentiful throughout the region. In particular, the central Anatolian Plateau is a great source of copper, as is the northeastern Lake Van region and the southeastern region, near modern day Diyabakır (Di Nocera 2010: 255).

Non-ornamental and luxury items were produced for the first time contemporaneously with the appearance of the earliest metal weapons, such as axes and projectile points. The earliest

alloyed metals, namely arsenical bronzes, were produced in the Late Chalcolithic period (Egeli, 1995: 175), with evidence of small chisels and axes made of arsenical bronzes found at Arslantepe, Orman Findanlığı and Ilipinar (Efe 2002: 51).

In the Early Bronze Age, there were advances in smelting technology, so that a greater range of ore types could be smelted. By the end of the Early Bronze, arsenical bronzes were common, and the earliest tin bronzes were created. Well-made arsenical bronzes are known from Arslantepe, Tepecik and Norşuntepe (Efe 2002: 52). The "lost wax" method of casting, used to make more complex molded metals, was known by the mid-Early Bronze Age in Anatolia, though the famous Chalcolithic Nahal Mishmar hoard from Israel proved that the lost wax method was already being used elsewhere in the ancient Near East far earlier (Bar-Adon 1980). Bi-mold casting was also discovered in this period. Both of these new techniques allowed for better casting and better metals, making way for the creation of the first swords, known from Late Chalcolithic Arslantepe (Di Nocera 2010).

By the Early Bronze II, long distance trade routes made tin bronzes not only easier to create, but far more plentiful. Both the raw materials for bronze making, namely tin, as well as finished metal objects, such as crescent axes, were exported. Metal objects of all sorts became more common, no longer only in the wealthiest of graves. Daggers, crescent axes, spearheads and swords were found in various graves from Karataş-Semayük, Demircihöyük and Beycesultan (Efe 2002:54). The majority of the analyzed bronzes from Demircihöyük Early Bronze II levels were made of tin bronze (Efe 2002: 55). Metalworking in jewelry also made great strides, with the discovery of repoussé, filigree, granulation, and soldering to help make more decorative and beautiful metals. Weapons were only rarely thus decorated, though contemporary weapons found in Mesopotamian tombs used such methods, such as the gold

dagger from the Royal Cemetery of Ur mentioned previously (See Figure 5.5). The metal materials from the famous Royal Tombs at Alacahöyük are the best example of fine metalworking from Early Bronze Anatolia, and will be further discussed below.

Tin bronzes first appeared before the end of the 4th millennium B.C., and by the Middle Bronze Age became more common than arsenical bronzes in many places in the Near East. Arsenical bronzes, however, never disappear from the record altogether (Egeli, 1995: 176; Yener, 2000: 25-29). In some areas of the Near East, notably in Mesopotamia, there may have been as much arsenical bronze used in the Middle Bronze Age as in the previous Early Bronze Age; here, tin bronzes did not show up in higher proportions until the Late Bronze Age (Eaton and McKerrel, 1976: 170). By the 2nd millennium B.C., the main aspects of metallurgy had been mastered, including mining, smelting, alloying, annealing, and cold working. It was during this period that many Near Eastern civilizations began to use metals in earnest, as metal objects became some of the most important prestige items available (Emre, 1978: 117-120).

Unlike in the case of human remains publication, discussed in the previous chapter, nearly all archaeological publications publish information on the metal objects recovered on site. Non-metallic weapons, such as projectile points and most especially sling balls, are not always considered important or even noted during excavations and so are often left out of the final publications. Sometimes, only a mention of their existence is all that is given, with no further data on find spots, shapes of the objects, or numbers.

Publications give differing amounts of information on small finds such as weapons. While some publications will give the find spots, a description of the object, its method of manufacture, and an isotopic study of the materials, other publications, especially those from

before the 1960s, will often give only a rough estimate of the number of such objects found in their time period within the site.

Accumulated Weapons Data from Central and Southeastern Anatolia:

Central Anatolia

Early to Middle Chalcolithic

In central Anatolia, weapons increased in variety and numbers from the Early Chalcolithic to the end of the Early Bronze III. In the Early to Middle Chalcolithic period, out of 20 sites with levels dating to this time period, weapons were recovered from six sites: Can Hasan, Çatal Höyük West, Tarsus, Güvercinkayası, Hacılar, and Mersin. Due to the lack of information in the published reports from these sites, exact numbers of each type of weapon recovered from sites are not available. Clay sling balls were reported from Çatal Höyük West, Tarsus, Hacılar, and Mersin, and stone sling balls were reported from Güvercinkayası. Stone maceheads were recovered from Hacılar, while a single copper macehead was recovered from Can Hasan, dating to the 6th millennium BCE, which remains to this day the oldest known metal weapon in the world. Green stone axes were recovered from Çatal Höyük West, and open-mold made copper flat axes from the Middle Chalcolithic levels at Mersin. This breakdown of weapons is considered typical for the early period.

By far, the most abundant types of weapons are the clay and stone sling balls, which could be used for either hunting or against other humans. The same can be said of the stone and copper axes. The only items that are truly unique in being weapons alone are the stone and copper maceheads from Çatal Höyük West and Can Hasan. Maceheads, as previously stated, were highly ceremonial and the oldest known item that is only useful as a weapon. All known

weapons, of which there are few from this time period, were almost certainly made at their find sites, with the possible exception of the green stone axes of Çatal Höyük West. At the least, the stone was brought in from elsewhere, though the axe itself may have been formed at site.

Late Chalcolithic to Early Bronze I

From the Late Chalcolithic to Early Bronze I period in central Anatolia, the number of sites with published weapon finds does not increase much from the previous period, though the number and types of weapons does change, as does the materials used. Of the 23 sites covered with levels dating to this time period, weapons were published from six of those sites: Alişar Höyük, Beycesultan, Büyük Güllücek, Tarsus, Kuruçay Höyük and Mersin. While clay and stone sling balls were still collected in this era, with stone sling balls recovered from Mersin, they are not as numerous or ubiquitous as in the previous period. No maceheads were recovered from this time period. Stone flat axes were still available in small numbers from Bağbası and Mersin.

The larger change in this period is to arsenical bronzes, first appearing by the Late Chalcolithic, and increasing in numbers into the Early Bronze I period. Copper weapons are known from a few sites, notably copper flat axes recovered from Büyük Güllücek, Kuruçay Höyük and the Late Chalcolithic levels at Mersin. Bronze axes were also recovered from Mersin. Projectile points remain rare, with a bronze arrowhead recovered from Tarsus. The earliest daggers known in central Anatolia date to the Early Bronze I level, with arsenical bronze daggers recovered from Beycesultan and a copper knife from Kuruçay Höyük. The earliest arsenical bronze spearheads are recovered from Beycesultan and Mersin, as well as copper spearheads from Kuruçay Höyük.

Weapons were not abundantly recovered from this time period. As mentioned in Chapter Four, weapons were rarely found in graves, as at Kalınkaya and Güllücek; otherwise, weapons were only recovered from various public and domestic contexts. There was a change from stone weapons only to small numbers of copper and arsenical bronze weapons, as well as more war-like weapons, including spearheads and daggers, which will become far more common in the next period.

Early Bronze II to III

In the Early Bronze II and III periods, far more weapons were recovered from excavated contexts, most notably from the graves of adults, mostly males but some females as well. Of the 28 sites with levels dating to this time period, weapons were published from 13 of the excavations. Stone weapons were nearly nonexistent by this time period. The exception was from Demircihöyük, where 47 obsidian projectile points were recovered. Arsenical bronze projectile points were recovered from Demircihöyük, five in total, as well as from Tarsus and İkiztepe. Interestingly, two clay arrow straighteners, used in the manufacturing of arrows, were recovered from Demircihöyük.

Clay sling balls were still present, recovered in large numbers in caches from Demircihöyük, Tarsus and İkiztepe, though no stone sling balls were reported from any site. Maceheads were relatively abundant as well, all made of copper or arsenical bronze, recovered from Ahlatlıbel, Alaca Höyük, Elmalı-Karataş and Tarsus. Arsenical bronze axes were recovered from Ahlatlıbel, Alaca Höyük, Alişar Höyük, Tarsus, Horoztepe, İkiztepe, Kalınkaya, Oymaağaç and Resuloğlu.

The axes from this period range from simple shaft-hole axes that are common in Anatolia from the Late Chalcolithic onwards, to Mesopotamian style crescent axes found from Demircihöyük. The crescent axes were almost certainly imports to this area. Crescent axes were more common in southeastern Anatolia, as will be further detailed below. A clay mold for a shaft-hole axe was recovered from İkiztepe, indicating that at least some weapons production was taking place at the settlement.

Other weapons recovered included spearheads, daggers, knives, and the first appearance of swords in central Anatolia. All such weapons were made of arsenical and tin bronzes. Knives were recovered from Bademağacı, Demircihöyük, and Tarsus, while daggers were recovered from Ahlatlıbel, Alaca Höyük, Bademağacı, Elmalı-Karataş, Hacılar Büyük Höyük, Horoztepe, İkiztepe, Kalınkaya, Oymaağaç and Resuloğlu. Spearheads became one of the most common weapons in this time period, and was found at six sites in total: Alaca Höyük, Tarsus, Horoztepe, İkiztepe, Oymaağaç, and Resoloğlu. Spearheads were found in a variety of shapes and sizes, with a classification of six types made previously by Bilgi (1984).

Many of the spears were found in grave contexts, found most often either on the hip of the inhabitant or lining the edges of the tomb. Often, the tip of the spearhead was purposefully bent, so as to make the spear unusable before being interred in the burial. This likely had a symbolic meaning, making the spear a gift to the dead and no longer usable by the living. Finally, swords, a new technology only possible due to the new and superior bronze making found in the later Early Bronze Age, were recovered from both Alaca Höyük and Oymaağaç.

Metal technologies were greatly improved in this time period, with many new forms of metal weapons, such as the spearheads and swords, and better, stronger weapons. The weapons recovered from this time period were mostly from grave contexts, likely indicating that these

objects were the personal property of those whom they were interred with, rather than storehouses of weapons. Many of the weapons showed signs of use before deposition in graves, or were intentionally bent and 'killed'.

A large number of weapons were made of bronze rather than copper. Copper is a poor metal for weapons due to its softness, as previously noted. The weapons from this time period were made of both arsenical bronze and tin bronze, which would have required a trade in tin, as it was usually not easily available. Finally, the oldest known iron dagger was found at the Royal Tombs at Alaca Höyük, though this dagger was almost certainly a ceremonial rather than practical weapon. It is likely that some of the weapons were made in the settlements in which they were found, as further indicated by the clay molds found at İkiztepe, though certainly some were imported, such as the crescent axes from Demircihöyük. The weapons in this time period had become the private possessions of individual adults, particularly males, further showing how violence and warrior society had become a codified aspect of society.

Southeastern Anatolia

Early to Middle Chalcolithic

Changes to weapons technologies in southeastern Anatolia were somewhat similar in trajectory to central Anatolia. In the Early to Middle Chalcolithic period, of the 19 sites with levels dating to this time period, weapons were mentioned in the publications from seven sites: Fıstıklı Höyük, Girikihaciyan, Kenan Tepe, Korucutepe, Kurban Höyük, Tell Al'Abr and Tulin Tepe. As in central Anatolia, sling balls were a commonly recovered weapon, with clay sling balls collected from Fıstıklı Höyük, Girikihaciyan and Tülintepe, and stone sling balls from Tell Al'-Abr.

In contrast to central Anatolia, more projectile points were also recovered from this period, with obsidian projectile points recovered from Fıstıklı Höyük, Kenan Tepe, Korucutepe, Tell Al'Abr and Tülintepe, and flint projectile points recovered from Fıstıklı Höyük. No maceheads were reported from this time period. A stone flat axe was recovered from Kenan Tepe, and a flint dagger from Kurban Höyük. No metal weapons are known from this time period, only those of clay and stone. All recovered weapons could have been used for hunting or as tools. No weapons were associated with burials.

Late Chalcolithic to Early Bronze I

Unlike central Anatolia, weapons, especially of metal, became far more common in the Late Chalcolithic to Early Bronze I period. Out of 30 sites with levels dating to this time period, weapons data was published from seven sites, with a wider variety of types than in central Anatolia from this same time period.

Sling balls are not as well represented in this time period. Sling balls were only published from Norşuntepe. Flint and obsidian projectile points were present, though in small numbers, from Değirmentepe and Kenan Tepe, and bronze projectile points from Norşuntepe. Maceheads were found at a few sites: stone maceheads at Değirmentepe and Norşuntepe, and an unusual iron ore macehead from Korucutepe.

Stone flat axes were recovered from Değirmentepe, Norşuntepe and Tilbeshar, and stone shaft-hole hammers from Değirmentepe and Norşuntepe, while bronze axes were recovered from the Royal Tomb at Arslantepe. A clay mold for shaft-hole axe was also recovered from Norşuntepe.

Bronze “warrior” weapons, such as daggers, knives, and spearheads, were recovered, as well as the oldest known swords in the world, found at Arslantepe. Arsenical bronze knives were recovered from Arslantepe, and copper knives from Hassek Höyük. Arsenical copper daggers were recovered from Arslantepe and Kenan Tepe, and copper daggers from Hassek Höyük. Spearheads were even more abundant, with many arsenical bronze spearheads, 21 in total, from Arslantepe, as well as three gouges. As mentioned previously, a total of 11 well-made and well-balanced arsenical bronze swords were recovered from Arslantepe. Many of them showed signs of use, indicating the swords were not merely ceremonial.

At Arslantepe, the excavators believed the weapons came from a local workshop, as the swords and spearheads were very similar in make. The shaft-hole axe mold from Norşuntepe also points to local manufacture of metal weapons in this time period.

At all sites except for Arslantepe, weapons were found in public or domestic contexts, rather than burials, so the weapons were not commonly used as a form of identification as burial goods, or were considered too valuable to destroy though deposition in tombs. Late Chalcolithic Arslantepe presents a special case. Recovered weapons originated from two contexts, the “Hall of Weapons”, and the “Royal Tomb.” These find spots allow for a new interpretation regarding weapons and ownership at Arslantepe. First, weapons were collected and kept within the palatial district and distributed as needed. Second, the important person buried in the Royal Tomb was interred along with a very large number of well-made and well-used weapons, indicating that this person's power and prestige was highly associated with ownership of weapons. This may indicate two levels of ownership of weapons: weapons owned by the central authority and distributed as necessary, and weapons personally owned by the elite classes, such as the individual enshrined in the Royal Tomb. Although there is little indication of personal weapons

ownership in this time period, the Royal Tomb at Arslantepe suggests the upper echelon of society may have indeed owned their own weapons as part of the trappings of power associated with elite status.

Early Bronze II to III

Weapon technology only increased through the Early Bronze II and III periods in southeastern Anatolia. Of the 28 sites with levels dating to this time period, weapons were recovered from eleven sites. Only one site recorded any evidence of clay sling balls, at Norşuntepe, while chert projectile points were recovered from Kenan Tepe, Korucutepe, Pulur and Tilbeshar, and bronze projectile points from Norşuntepe, Gre Virike and Pulur. Stone maceheads were found at Birecik, Gre Virike, Norşuntepe, Pulur and Gre Virike. A single bronze macehead was recovered from Carchemish.

Axes were of various types in this time period. Stone axes were known from Norşuntepe, Pulur, and Jerablus Tahtani, as well as stone flat hammers from Norşuntepe. Both shaft-hole axes and flat axes are known, with shaft-hole axes more appropriate for warfare. Shaft-hole axes were known from Birecik, Carchemish, Norşüntepe, Tepecik, and Jerablus Tahtani. Flat axes were recovered from Birecik, Carchemish and Norşuntepe. Crescent axes, Mesopotamian in style, were found in Tell Amarna, and a pendant in the shape of a crescent axe at Jerablus Tahtani, as well as clay molds for flat axes from Norşuntepe.

Bronze daggers were recovered from Birecik, Carchemish and Jerablus Tahtani, as well as a dagger mold from Jerablus Tahtani. Bronze spearheads were found from Birecik, Carchemish, Gre Virike, Norşuntepe, Pulur, and Jerablus Tahtani, in a variety of shapes.

Unlike in the previous periods, most of the weapons recovered from the Early Bronze II and III were found in grave contexts, nearly always with adult males and some adult females and never with children. The weapons often showed signs of use, and were well-made arsenical and tin bronze weapons that were likely the person property of the individuals associated with the weapons.

Summary of Weapons Data

The weapons data reveals the following broad trends for central and southeastern Anatolia: In the Early to Middle Chalcolithic period, weapons were made primarily of stone, and included sling balls, projectile points, maceheads and flat axes, nearly all of which were also possibly used as tools or for hunting. Weapons were not recovered from graves in either region. Sling balls were more abundant in central Anatolia, and projectile points were more abundant in southeastern Anatolia. The earliest metal weapon, a copper macehead, was recovered from Early Chalcolithic Can Hasan. In the Late Chalcolithic to Early Bronze I period, stone weapons were still widespread from both regions, with sling balls still common in central Anatolia and projectile points still common in southeastern Anatolia. The first metal weapons were produced in both areas, including flat axes, shaft-hole axes, projectile points, daggers, knives and spearheads. The earliest iron macehead and the earliest bronze swords were recovered from southeastern Anatolia. In general, southeastern Anatolia had more abundant and better-made arsenical bronze tools in this time period than did central Anatolia. Importantly, elite ownership of weapons and state distribution of weapons were indicated at Arslantepe in southeastern Anatolia.

In the Early Bronze II/III period, both regions once again were similar, with nearly no

stone weapons recovered from either area. Arsenical and tin bronze weapons from both regions included projectile points, flat, shaft and crescent axes, spearheads, knives, daggers and swords. Weapons were commonly found in adult graves, mainly males but some females, indicating a higher personal ownership of weapons as more of the adult population was involved in warfare activities, with evidence of both local production and long distance trade of weapons, which will be further discussed in Chapter Nine. In the next chapter, the broad trends revealed by the burial and weapons data will be compared to changes in fortification technologies.

Weapons Data from Central Anatolia:

Acemhöyük

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Ahlatlıbel:

Axes and daggers were found in a number of graves. Daggers were found at the hips of the individuals. All but one of the axes and one of the daggers were found in adult male graves, the final two were found in adult female graves. Only one of the daggers was bent before being placed in the grave. Other weapons found at Ahlatlıbel included a shaft-hole axe, and a macehead (Barcan 2012:21-23).

Alaca Höyük

No information on weapons was published for the Late Chalcolithic and Early Bronze I levels, Levels 12-9.

The Early Bronze Age II and III levels, Levels 8 to 5, were largely focused on the cemetery region of the site, with far less information on the remainder of the site in this period. The best known architectural levels are from the Early Bronze III period, Levels 5 and 6, mostly

in the areas around the cemetery rather than in the center of the site. A small number of maceheads were recovered from non-domestic storage rooms from this level, with no further information on the weapons given in the publications (Gürsan-Salzmann 1992: 55-58).

The best known aspect of the Early Bronze Age settlement at Alaca Höyük are the 14 so-called "Royal Burials" located in the southeastern portion of the mound. The burials are known for their vast and astounding array of burial goods, including over 700 metal objects made of gold, silver and bronze, as well as the oldest known forged iron dagger, with stylistic similarities to the grave goods found at Horoztepe (Özyar 1999: 80). All the burials contained rich burial goods, though the exact types varied by tomb. All had some items "indicative of rank," such as diadems or maceheads, ceremonial objects such as sun-disks for statuettes, metal vessels, and ceramic vessels (Gürsan-Salzmann 1992: 67-69).

Weapons found in the Royal Tombs include: eleven knives, eight maceheads (stone with gold plating, copper and gold), two bronze swords with shard edges and evidence of use, one was intentionally broken before being placed in the tomb, only found in male tombs one battle axe, seven daggers (one made of iron with a gold haft, two of these may be spearheads), two axes. In the non-Royal tombs, a single macehead was recovered in one of the tombs (Gürsan-Salzmann 1992: 123-150).

No weapons were recovered from the other burials excavated at the site (Gürsan-Salzmann 1992: 101-112).

Alişar Höyük:

Late Chalcolithic level, 19-15, no weapons were published (Yakar 1984:65). In The Early Bronze levels, a shaft-hole axe was recovered, made of arsenical copper (Yakar 1984:77).

Bademağacı Höyük/Kızılkaya Höyük:

The Early Bronze Age was represented in five levels at the site, and took up the entire mound. A small number of bronze daggers and knives were found from the Early Bronze period (Duru 2001: 48-51)

Bağbası

The only weapon published was a greenstone axe, made of imported stone (Eslick 1988:33).

Beycesultan:

From the Late Chalcolithic, Level XXXIV, a fragment of a dagger was found, the earliest yet known from Western Anatolia (Efe 2002: 51). By the Early Bronze I period, simple daggers and spearheads made of arsenical bronze are also known, with smooth edges, flax cross sections, and no central spine on either (Efe 2002:53).

Boğazköy-Büyükkaya/Yarıkkaya:

No weapons were recovered during excavations at this site (Schoop 2005: 16-19).

Büyük Güllücek / Kaletepe

Dating to the Late Chalcolithic levels, two flat-axes made of copper with very low amounts of arsenic (less than 1%) were recovered (Yakar 1984:65).

Çadır Höyük:

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Camlıbel Tarlası

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Can Hasan

Some small amount of metals found in the Early Chalcolithic level, in particular, a copper macehead, the earliest metal macehead known in Anatolia (Efe 2002: 49).

Çatal Höyük West

From the Mellaart excavations, he reported finding "a few axes and adzes in greenstone, clay slingstones" (Mellaart 1965: 136), without any further information on these objects.

Demircihöyük/ Sarıket

The Chalcolithic levels were found only two small soundings, no weapons were recovered.

From the Early Bronze period, a total of 29 metal fragments found at the entire site. A total of 47 projectile points were found, made mainly of obsidian. A total of 48 clay sling pellets (primarily from Phase 2) were recovered, in ovular and round shapes. Indirectly, two clay arrow straighteners were recovered. Five bone knives, five bronze projectile points and two simple, straight knives were also collected (Korfmann et. al. 1996).

Elmalı-Karataş (Semayük):

Of the 420 graves excavated at Karataş, 74 contained metal goods, mainly made of copper and arsenical bronze. In the Early Bronze III levels, a number of daggers and a carinated macehead were recovered, and would have been made in bivalve molds (Yakar 1985a:26). The macehead was made of pure copper, and a number of stone maceheads were also recovered. The copper macehead was found in tomb 335, though no human remains were found intact inside the tomb. Traces of the wooden hafting were found still inside the shaft-hole. The macehead was biconical in shape, with carination, and was made in a two-piece mold (Bordaz 1978 242-243).

Two daggers had asymmetrical sloping shoulders, tapering sides and a rounded tip, with a

long rounded tang. One dagger was found on the chest of an individual, the second in the left hand of the individual. Both were made of arsenical bronzes (Bordaz 1978: 233). The final dagger had a mid-rib on both surfaces of the blade, and straight sides, with a sharp point, and a short, wide tang with a rivet and was better made and stronger than the previous two daggers, though it was made of pure copper (Bordaz 1978: 239).

Gâvur Evi Tepesi

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Gelveri-Güzelyurt

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Gözlü Kule/Tarsus:

While in the Neolithic period obsidian and chert projectiles were discovered, little was found from the Chalcolithic levels at Tarsus in terms of metal, with no weapons, only a small amount of pins, chisels and needles. In the Early Bronze I, a bronze dagger was recovered, as was a bronze paddle-shaped arrowhead with a blunt point, a flat body and a thick tang; there was an increase in bronze metal objects (Caneva 2000a: 8).

In the Early Bronze II and III stone perforated axe and hammer heads were found, and one unfinished stone macehead from the Early Bronze II period (Goldman 1956: 273). In terms of metal weapons, a two bronze knives were recovered from the Early Bronze III period. A single bronze flat axe came from the Early Bronze III. A small number of bronze projectile points are from the Early Bronze Age, but become more abundant in the Late Bronze Age. A single bronze arrowhead with a thin blade and concave edges was recovered from the Early

Bronze III period. A single bronze spearhead was collected, slender, leafshaped with a long slender tang bent at a right angle from Early Bronze III.

A cache of daggers was found from the Early Bronze III period, Room 56, all very similar in style (Goldman 1956: 288-292). Finally, a small number of clay sling balls were recovered from both the Chalcolithic and Early Bronze II periods, either rhomboid or spheroid shaped (Goldman 1956: 321).

Güvercinkayası

The only noted weapons found at Güvercinkayası were stone sling balls, dating to the Middle Chalcolithic period (Gülçur and Fırat 2005: 44).

Hacılar

The only weapons recovered from excavations at the site consisted of a pile of sling balls and a stone macehead, from Level VI. (Eslick 1988: 19). No weapons were discovered from Level II at Hacılar, and a single macehead was found from Level IIB (Eslick 1988: 22-24). From Level I, the only weapons found were sling balls, and stone maceheads (Eslick 1988:24)

Hacılar Büyük Höyük

No weapons were published from the Early Bronze I levels (Umurtak and Duru 2012: 22-23).

In the Early Bronze II level, a horn handle from this period may be the handle of a metal dagger, though this remains to be seen. No further weapons were recovered (Umurtak and Duru 2012: 23-25).

Harmanören

Obsidian and chert projectiles were discovered dated to the Neolithic, but none were found in the Chalcolithic or Early Bronze phases.

Horoztepe

An Early Bronze Age tomb was found at the site, containing a number of weapons as well as other goods, including a wood and bronze table, a number of complete and crushed ceramic vessels, bronze mirrors, bronze standards, human and animal figurines, and a number of gold jewelry pieces (Özgüç 1957: 41-43). The weapons consisted of a bronze dagger with a "strong midrib, triangular blade and short tang" (*Ibid*: 46); four bronze spearheads with flat tangs with three-faceted blades (similar to that of Anitta's dagger), with two oblong slits along the shoulders, similar to those seen in Cypriote daggers, as well as shaft-hole axes with oval perforation, well made and carefully cast. Overall, this is likely contemporaneous or nearly so to the tombs of Alacahöyük (*Ibid:* 50).

İkiztepe

By Level I there was apparently a wooden perimeter wall around the village, although perhaps not monumental. Weapons are common, but there were few fortifications or protections for this settlement, which is interesting (Bilgi 2005:15-17). A large number of the metal artifacts recovered from Early Bronze İkiztepe were analyzed, and all bronze artifacts were found to be arsenical (Çukur and Kunç 1989: 226).

A very large number of metal weapons were recovered from the graves, and many graves were buried with various weapons, often more than one per adult. Not all graves contained weapons, and some graves contained no grave goods. The adult male graves commonly had two or more weapons, while the female graves typically did not. The weapons were most often placed on the chest, between the legs, parallel to the arms or next to the shoulders of individuals, showing clear association with the weapons, ownership, between the weapons and the interred individuals (Bilgi 1984:34).

The most common type of weapon was the spearhead, over 60 different types were analyzed. Other weapons included 8 different types of daggers, axes and projectile points, as well as a mold for a shaft-hole axe. Most of the spearheads were shaped like willow leaves, with trapzoidal sections, a long bent tang and a flat ridge. Two had human figures etched onto the shaft. The metal was arsenical bronze (Yakar 1985:32-33).

As of 2002, a total of 147 spearheads, 27 daggers, and three projectile points, all made of arsenical bronze, were recovered from Early Bronze I to Early Bronze III graves at İkiztepe, as well as 14 flat axes. The weapons had consistently higher levels of arsenic, up to 5%, than all other metal categories analyzed (Özbal 2002:41-42). The amount of arsenic increases from the Early Bronze I to the Early Bronze II, is roughly the same as between Early Bronze II and Early Bronze III. The technology of manufacture also remains the same between Early Bronze II and Early Bronze III. Many men were buried with spearheads, but the excavators concluded that, based on wear on the spearheads and the uneven distribution of them, the spearheads were the personal property of the buried individual rather than a burial gift given to the dead (Özbal 2002: 43). The presence of molds, crucibles, and slag indicate that the metals objects found at İkiztepe were manufactured locally rather than imported (Özbal 2002: 45).

Types of spearheads included (From Bilgi 1984:36-37):

Type 1: Longer leaf-shaped blade, straight sides, central rib, narrow shoulders, rhombic in section, long curved angular tang (three subtypes)

Type 2: Long thin blade, crescent-shaped edge, either hexagonal or rectangular section, flat or elliptical face, rounded shoulder, curved angular tang (four subtypes)

Type 3: Spatula-shaped blade, elliptical in section, crescent-shaped terminus, semi-angular shoulders, bend angular tang

Type 4: Tapering blade, crescent shaped terminus, elliptical section, rounded shoulders, straight angular tang

Type 5:Tapering blade, crescent shaped terminus, elliptical section, rounded shoulders, bent angular tang with relief decorations on both sides of the blade, made in the cast (thought to depict the divine couple, representing the sun).

Type 6: Pointed or rounded leaf-shaped blade, central rib, bulge at the base, rounded shoulders, round or oval section butt, curved angular tang.

Type 7: Could be classified as daggers. Pointed blade, rhombic section, semi-angular or rounded shoulders, pointed tapering flat tang.

Types of daggers included: (from Bilgi 1984: 42-43):

Type 1: Single piece cast, with a hilt, leaf-shaped blade, elliptical in section, semi-angular shoulders; the hilt was decorated in various fashions (3 subtypes)

Type 2: Single piece cast, with a tang, long blade, straight sides, flat, elliptical or rhombic in section (3 subtypes)

A single projectile point was recovered (Bilgi 1984: 45): lozenge-shaped blade with a short round tang**.**

Of all the graves excavated, a total of 46 were categorized as "distinguished burials," based on the number and type of grave goods included in the grave. None of the grave goods were found in all graves, each being a unique mix, with a clear sexual dimorphic difference. Of these 46 burials, 36 were males, five females, three children and two infants, showing a high number of male over female for high value grave goods, and a high number of adult to child ratios. The grave goods found included 275 metal objects, and the rest were of clay, bone, stone, frit or shell. Of the metal objects, 250 were arsenical copper, 16 lead, six silver and three gold.

Further, 74 were weapons, 81 tools, 90 jewelry, 19 “symbolic”, nine spiral wires and the rest decorative plaques and a single metal vessel. The weapons were 60 spearheads, nine daggers, and five axe-heads, as well as six “blades” from the tool section. Axe-heads were found only in male burials, while the remainder of the tool types were found in both male and female burials. No weapons were found in the burials of children or infants. The excavators believe these burials to belong to the rulers of İkiztepe, and their families (Bilgi 2005:15-17).

Level I Weapons included a grey-green stone shaft-hole axe; two green serpentine axes; macehead fragments; Four bronze spearheads and one dagger, found in the Necropolis. Clay sling balls, more spherical in shape, sometimes included incised geometrical decorations.

In the Early Bronze II and III, there is an increase in metal weapons production, especially of daggers and spears, as well as some axes. It seems that the people of İkiztepe became experts in metallurgy in the Early Bronze II onwards(Alkım et. al. 2003: 159).

Most famously from İkiztepe are three spearheads with a human figures inscribed, two wearing a visible skirt, one without. One has a circle over its head, with a male on one side, a female on the other (Alkım et. al.l 1988: 221-223).

Kalınkaya-Toptaştepe:

No weapons were published from Late Chalcolithic graves.

From the Early Bronze graves, a hook-butted bronze axe was recovered from a female burial (Burial M-1-73). A single shaft-hole axe was recovered, though the exact provenience was not recorded. A total of four bronze daggers were recovered, two from pithos burials two from looted contexts. The daggers were rectangular or trapezoid-shaped tongue, straight diagonal or curvilinear shoulders, with a central rivet piercing the tongue of three of four the daggers, similar to other Early Bronze Age daggers in central Anatolia. Finally, a single bronze macehead, from

an unknown context, was also recovered (Zimmermann 2006:277-284).

Köşk Höyük

In the Late Neolithic period of Levels II through V, far more weapons were found than in the Early Chalcolithic, including "spearheads, arrow heads, hammer axes, scrapers and cores made of obsidian or other stone types. Piles of those finds were uncovered in almost all buildings around the entrance or beside the walls." (Öztan 2008: 87). The obsidian for the weapons was all sourced from the nearby Melendiz and Nenezi mountains (*Ibid*: 89). Nothing was noted in the publications of weapons from the Chalcolithic levels.

Küllüoba

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Kültepe-Kaneş

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Kuruçay Höyük:

From the Late Chalcolithic levels at Kuruçay (Level 6), four flat axes, a knife and spearhead were recovered, all made of copper, not bronze (Yakar 1984: 64; Duru 1996: 125-126).

Maşat Höyük

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Orman Fidanlığı

No data on weapons was provided in any of the publications on this site for the relevant

time periods.

Oymaağaç

A number of Early Bronze Age cemeteries were pillaged in northern Anatolia, with the grave goods ending up in private collection, and occasionally museums. Often, the provenience of these materials was never known, or, if found, the cemetery too destroyed by modern robbing to excavate (see Titriş Höyük, Maşat Höyük, etc.). One such site is Oymaağaç, a site 50 kilometers northeast of the modern city of Çorum, in northeastern Turkey. Another is Göller, located five kilometers from the Çorum-Merzifon road, near the 30 km mark. During excavations of nearby Maşat Höyük, the excavators, under the leadership of Tahsin Özgüç, spent some time exploring the area around Maşat, as well as private and local museum collections. In volume I of the Maşat Höyük publications, Özgüç published an account of some of the weapons supposedly found from Oymaağaç. The site itself was completely plundered, and Özgüç's team made no further attempt to excavate the site once they surveyed the region. The weapons found from a dealer in Ankara and brought to the Archaeological Museum in Ankara included a large number of Early Bronze Age weapons. Though they have no further provenience than "Çorum area," they will be considered here, as part of the central Anatolian Early Bronze Age weapons identification (Özgüç 1978: 89-90).

The collection included four bronze spearheads, four bronze daggers and a bronze sword. The spearheads measured between 20 and 16 cm in length, and 5.6 to 3.8 cm in width. The tangs were rectangular in section, with a rounded end, and bent. One had a mid-rib, the other three did not. Two were four-faceted, and two were two-faceted. One of the spears was purposely bent, in order to render it useless, before being placed in a burial. This appears to have been a common practice in Early Bronze Age grave goods. Two of the daggers were 18 cm in length and two 12

cm in length. Two have rivet holes in the upper part of the flat tang with angular shoulders, while one has "sharply profiled shoulders" and one rounded shoulders. The sword is short, 30.5 cm in length, with sharp shoulders and an elongated and thin blade. The sword is similar to those found at Horoztepe. In addition to this group, the Maşat publication also gives an account of five shaft-hole axes, all held at the Amasya museum (Özgüç 1978:90-97).

Resuloğlu

A number of metal weapons were found in the graves from this site, including axes, daggers and spearheads. Many of the daggers were intentionally bent before being left in the graves (Yıldırım 2007: 8-11). More exact numbers and typologies of the weapons remain to be published.

Salur North

Although a small cemetery site, none of the graves excavated contained weapons (Matthews 2004: 59-60).

Suberde

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Yumuktepe/Mersin

The earliest metal objects found at Yumuktepe from a good context were from Level XVI, dating to the Early Chalcolithic period, at around 4900 BCE, in the Ubaid period. Weapons included a large number of clay sling balls, as well as copper axes made from open molds. The level includes what the current and past excavators called "barracks" along the edges of the fortification walls, though weapons are not found to further support that interpretation. The same picture continued at Yumuktepe until the end of the Chalcolithic (Caneva 2000b: 70).

By Level XI-IX, there is a radical change in metallurgy at Yumuktepe, with the first appearance of knives, daggers and spearheads made of copper, made from bivalve molds (Caneva 2000b: 8). No projectile points or javelin points were found in the Chalcolithic levels, though numerous small caches of clay sling balls were present, as well as ground stone axes and bronze axes. Hundreds of clay balls were recovered, mainly from three rooms, along with rounded river stones, from what was thought to be a "barracks" from Level XVI. While metal was very prevalent in this level, metal weapons were not (Caneva 2010: 37-50).

Weapons Data From Southeastern Anatolia

Arslantepe (Malatya)

Analysis of various bronze artifacts found at Arslantepe, particularly from the VII and VI Levels, were found to be arsenical bronzes with traces of nickel. The nickel was likely a remnant of the copper ore used, rather than an intentional additive to the bronze (Di Nocera 2010: 257).

An unparallelled large weapons cache was found dating to Level VIA, from the so-called Weapons Building, which was only partially excavated. The use of the building is not known, but it did not appear to be 'cultic' in nature. One of the rooms contained a large number of arsenical bronze weapons, including spearheads and swords, the types of which were only more commonly found later in the Early Bronze I and II periods. The swords in particular were well made, with workmanship unequaled until later periods (Caneva and Palermi 1983a: 644).

Based on the *in-situ* locations of the weapons, it seems they were mounted on the walls of the room, in a display of wealth and prestige (Frangipane 2010: 26-27). The cache was found in two collections. From the way the weapons were found, both groups were apparently hung on the walls, in separate places in the room. One group was made of three swords and seven

spearheads, and the second was six swords and five spearheads (Frangipane and Palmieri 1983b: 395). The swords found at Arslantepe are the oldest swords yet found in the Near East, were well-made and well-balanced, leading the Di Nocera to conclude that "according to the sword's hardness, the balancing of the blade and the hilt and the making of the blade itself, the sword can certainly be classified as an offense weapon. The sword found at Arslantepe and the site itself are thus one of the first evidences of a radical change occurred in warfare (*sic*), which will assume an increasingly predominant role in the successive great empires of the Near East" (Di Nocera 2010: 273).

The room was destroyed in a fire; the walls of the room fell in during the conflagration, enveloping the weapons stored inside the room. The weapons were left as they fell and never recovered, with new earth heaped over the remains of the room and a new habitation layer eventually built over the older destroyed one. Carbon dating of charcoal samples from room A113 date the fire to between 3095 to 2905 Cal BCE. The weapons may have been tied together, and were certainly grouped together. The spears showed evidence of the original, not decayed, wooden hafting. The weapons were grouped in two different caches. The first was made up of three swords and seven spears, the second of six words and five spears. The weapons may have hung on the walls, or been placed against it. No other room in the palace contained weapons (Di Nocera 2010: 257-261).

All of the spears were left-shaped blades, with smooth profiles. Some had a central spine on both sides. The spears have long butts and differently shaped cross-sections, circular, bi-convex or decagonal. All of the spearheads were likely made in a single b-valve cast or very similar casts. The lengths varied from 42 to 53.7 cm, with an average of 48.5. The weight was between 293 to 709 g, with an average of 446.8 g. Similar spears are known from contemporary

and later Early Bronze I-III levels at Carchemish, Hassek Höyük, Birecik and Qara Quzaq in Syria, as well as sites in Cilicia, from Tarsus Early Bronze III levels, and from Horoztepe, and İkiztepe. The spearheads found at Arslantepe became far more common in the Early Bronze Age in Anatolia, but were not common in either the Late Chalcolithic or the Early Bronze Age in Mesopotamia (Di Nocera 2010: 259).

The swords were also similar to each other, and likely came from the same workshop, if not from the same mold. The blades had flat handles with a semi-circular edge. Several of the swords were decorated, with the hilts engraved with inlaid silver triangles or simple geometric features. The swords ranged from 45.9 to 62 cm, in length, with an average of 50cm, and the weight ranged from 410 to 960g, with an average of 541.5g (Di Nocera 2010: 259-261).

The Arslantepe swords remain the earliest known swords in the ancient Near East. They were very well made, forged with well-mixed, well-balanced, hard bronze, and could have been used as true weapons, not just ceremonial blades (Di Nocera 2010: 273).

All the spearheads and the swords were made of well-produced arsenical bronzes, with 2-4% arsenic in the spears and 3-6% arsenic in the swords, though it remains unclear whether the alloy process was intentional, as opposed to using copper ore sources high in arsenic (Di Nocera 2010: 261).

The Royal Tomb contained a number of rich burial goods, including pots, jewelry, and weapons, made from silver, gold, carnelian and rock crystal. The burial contained a total of 75 metal items in all. This included nine arsenical copper spearheads, two swords, two daggers, four axes, one knife and three gouges, and one copper-silver alloy dagger, giving the impression of a warrior burial. Other metal goods included diadems, pins, bracelets, spiral earrings and beads, as well as tools such as chisels and gouges, and metal vessels such as cups and a large bowl. The

metal goods were found grouped together in a hoard behind the human remains. The spears were found lining the walls of the tombs and around the head of the remains. The silver content in most of the bronze items was very high, as much as 70% in some of the items, and many as much as 50%. This, so far, is unique in a metal assemblage from the Early Bronze Age in Anatolia, or indeed, anywhere. This would have lead to these items having a very silvery sheen, as in a silver-alloy dagger, which again, is unique to this assemblage. The rest of the items were made of a more usual copper/arsenic alloy (Palmieri and Di Nocera 2000: 180-181).

The spearheads found in the Royal Tomb were nearly identical in shape and in material to those found in the Hall of Weapons. Indeed, carbon dates from the Hall of Weapons and from the Royal Tomb show these two levels were nearly contemporaneous. One of the spearheads from the Royal Tomb also was decorated with inlayed silver triangles, remarkably similar in material and appearance to the inlaid hilt of a sword found in the Hall of Weapons. The weapons from both contexts could have come from the same workshop, and most definitely came from a similar metallurgical school. The excavators assume that the Royal Tomb was created very soon after the Hall of Weapons and the Level VIA Palace was burned and destroyed (Di Nocera 2010: 267).

No weapons were reported from Levels VIC and VID (Frangipane 2013:239-245).

Birecik

In early 3rd millennium BC, largely from the site of Birecik Dam Cemetery, relatively large amounts of metal were found in the graves, especially weapons. Bronze flat axes, tripartite spearheads, and tanged daggers, were recovered. These were simply made, from casts and then hammer worked for hardness (Philip 2007: 190).

The majority of burials contained some metal goods, for a total of 410 metal finds

throughout the cemetery site, most of which were pins. Bronze weapons found include a "three-part spear head with leaf-shaped and round-shouldered blades, butt with round or oval section and a chisel-ended tang with a square section," similar to those found at Arslantepe, Tulintepe, Höyük and Carchemish; spearheads with "a squared section blade and tang," flat axes with round, oval and concave butts and daggers (Squadrone 2000:1543-1545).

The majority of spearheads had a bipartite structure, with a central rib on the blade, with a straight, rectangular tang, and three with bent tangs. A small number were tripartite spearheads, with leaf-shaped blades, a long butt and a straight, chisel-ended tang. Only a small number of daggers were recovered, all with triangular blades, concave sides, rounded shoulders and flat tangs. A single macehead was recovered. Axes were flat, with more variation in size and shape than the other weapons. Most had flat, parallel sides, a smaller number had sides than expanded in size towards the cutting edge, and a small number contained incised marks, which were thought to be possible proton-cuneiform signs (Squadrone 2007:200-201).

In the later half of the 3rd millennium, there is a marked change to shaft-hole axes from flat axes, which is a form with little use as a tool, and only really usable as a weapon. These were created in more complex two-piece molds, with more elaborate axes being found in elite graves throughout the Near East as a whole, as well as in the Carchemish region, but do not continue in style into the Middle Bronze Age. The tripartite spearheads are largely replaced by simple square-sectioned spearheads, often with a hooked tang; spearheads became easier to produce and more functional as the axes became more complex. Meanwhile, some small number of daggers, mainly with small riveted blades were also in fashion, and continue into the Middle Bronze Age (Philip 2007: 192-193)

The most numerous types of spears from early Early Bronze Age from Birecik Dam are

bipartite spear heads or poker-butt type, tripartite spear heads with a leaf-shaped blade, long but and chisel-ended straight tang. Far fewer are daggers, with triangular blades and concave sizes, slightly rounded shoulders and a flat tang, and some mace heads. There are finally flat axes, with a wide amount of variation in size and butt shape, some are incised with marks, or even proto-cuneiform ideograms (Squadrone 2007: 200-205). Spearheads were most commonly placed parallel to the stone slabs of the cist tombs, similar to graves found at Hassek Höyük, Arslantepe and Carchemish (Squadrone 2000:1546).

Carchemish

Weapons were only recorded from the 16 cist tombs published, and not all pertenant data was given. Published weapons included at least bronze spearheads with both round and square sections, a spearhead with a bent tang, and a leaf-shaped "poker" spearhead, three bronze axes, bronze dagger with a flat, short tang, a bronze macehead, though other weapons were mentioned in passing without numbers of descriptions of the weapons (Woolley 219-225).

The publication notes that "on the body were such personal ornaments as beads, necklaces, and bracelets; by it were put, if it was a man, his bronze spears, axe, or knife" (*Ibid* 219). One of the cist tombs with weapons was from a child burial, no knives were mentioned in any of the grave inventories, and for none of the remains was sex determined, so this statement does not seem well founded.

Değirmentepe

Weapons from the Chalcolithic included stone flat-axes and shaft-hole hammers, but no metal objects were found. In terms of the Early Bronze I, a number of obsidian and flint projectile points were found, as well as a stone axe and one shaft-hole axe. A number of stone maceheads were also recovered. No metal weapons were recovered, and no burials were

excavated (Esin 1985:253-254).

Domuztepe

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Fıstıklı Höyük

Weapons were scarce, with a small number of obsidian and flint projectile points, and a small number of ovoid clay sling balls (Pollock et. al. 2001: 52, 55).

Gedikli/Karahöyük

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Gre Virike

From Phase I, no weapons were published, though a small number of miniature votive stone axes were recovered from offering pits (Ökse 2015).

From Phase II, a single bronze spear head and a bronze tanged triangular projectile point were recovered from the K9 chamber tomb, and a single stone macehead was recovered from the above ground stone rooms, on the western edge of the terrace (Ökse 2005: 27, 34)

Girikihaciyan

A large number of obsidian and chert tools were found, though "there is a complete absence of anything appearing to be a projectile point" (*ibid*: 87). A total of 39 ovoid objects called "sling missiles" were collected from the site, made up of clay, pottery or plaster. Twelve were found in a single horde, while six more were found together in a plainware jar (*ibid*: 94-96). No further possible weapons were found.

Gritille

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Hacınebi

From Level B1, some of the houses were burnt, though this did not spread to the entire site, and so was more likely the result of an accident than a sign of violence. Virtually no signs of violence or warfare were found in Level B2. Although the settlement was protected by a city gate, no weapons were found in graves, few of the levels contained evidence of destruction, and the human remains showed no evidence of violent death, indicating peaceful coexistence between the local peoples and the Mesopotamian immigrants (Stein 2002: 152).

Hallan Çemi

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Hassek Höyük

Two copper knives and a copper dagger are mentioned in the isotope metal section, dating to the Early Bronze I; spearheads, daggers, axes and maceheads were found with the adult male burials (Behm-Blancke 1984).

Hirbemerdon Tepe

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Kalaycık Tepe

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Kazane Höyük

In the 1996 and 1997 seasons, no weapons, burials or fortification systems were found (Bernbeck et. al. 1999).

Kenan Tepe

A single stone axe was found in the domestic building, a well as obsidian projectile points from the Ubaid periods (Parker 2007:4-7). No weapons were found from the Late Chalcolithic to the end of the Early Bronze Age at Kenan Tepe, with the exception of a few chert and obsidian projectile points (Parker et. al. 2009:125-126).

Korucutepe

Some obsidian projectile points were recovered from the Early and Middle Chalcolithic, Strata I-XXIX (van Loon 1978: 7-8). From the Late Chalcolithic/Early Bronze I tombs, at the northeastern corner of the mound, a macehead, made of a metal, likely iron ore, and a tanged dagger were discovered (Yakar 1984:68). In Phase D, Early Bronze IIB (Strata LV-LXXI) a small number of obsidian projectile points were recovered (van Loon 1978: 10-11). A small number of obsidian projectile points were recovered from the Early Bronze IIa period (van Loon 1978: 12-18). In Phase E, Early Bronze IIIA (strata LXXVIII-LXXXIX) obsidian projectile points were recovered (*ibid:* 18-22).

Kurban Höyük

From the Early Chalcolithic period, labeled as Middle-Late Halaf (5000 BC, Level VIII) a single bifacial flint “dagger” (quotations marks are from the original publication) was found inside the tholos structure in Phase 3, on the floor (Algaze 1990: 23-28). There are no further weapons published from the site (*Ibid:* 405-407).

Lidar Höyük

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Norşuntepe:

Weapons from the Late Chalcolithic with good provenience included: stone axes of various sizes and materials (Schmidt 2002: plates 1-6), stone flat hammers of various shapes and materials (*Ibid:* plate 7), stone maceheads (*Ibid:* plate 12-13), clay sling ball (*Ibid:* plate 15, 40), and metal projectile points (*Ibid:* plate 48, 49). The metals found in the Late Chalcolithic levels (Level IV) were made of copper ore, with very high levels of antimony (Sb) in the ore, too high to make usable weapons or tools. All metals found from this level were jewelry or pins (Yakar 1984:66).

In the Early Bronze I levels (XXI-XIX), a two-piece mold to create shaft-hole axes was found (Yakar 1984: 66; Hauptman 1979; 1982), as well as a single stone macehead and a number of clay sling balls (Schmidt 2002: plate 12, 40).

From the Early Bronze II period, a stone axe (*Ibid:* Plate 1), stone flat hammer (*Ibid:* plate 6), stone straight axe (*Ibid:* plate 8) and a clay mold for an axe (*Ibid:* plate 41, 42) were recovered.

From the Early Bronze III period, a single stone axe (*Ibid:* plate 2), a stone flat hammer (I*bid:* plate 7), stone straight axe hammers with complete round hafting (*Ibid:* plates 8-9), stone maceheads (*Ibid:* plate 12-13), clay sling ball (*Ibid:* plate 40), a clay mold for an axe (*bidi:* plate 42), a bronze projectile point (I*bid:* plate 48, 49), a bronze spearhead (*Ibid:* plate 52) and a bronze flat axe (*Ibid:* plate 52) were recovered.

Oylum Höyük

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Pulur (Sakyol)

Weapons found from the Early Bronze Age included seven obsidian projectile points, two stone mace heads, 12 stone axes and one bronze spearhead, three bronze projectile points. Very little metal was otherwise recovered from the site (Koay 1976: 127-143).

Samsat

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Tepecik/Makaraz Tepe:

The bronze artifacts analyzed from Tepecik, dating to the Early Bronze Age I-II were arsenical bronzes (Çukur and Kunç 1989: 227). Some small number of bronze tools and weapons such as a shaft-hole axe were found (Esin 2001: 102-107; Esin 1979: 112).

Tilbes Höyük and Surtepe

A small number of burials were excavated from Early Bronze I level at Tilbes, though no weapons were recovered from the graves (Fuensanta 2007).

Tilbeshar

In the destruction levels of the Early Bronze I period, several polished stone axes were recovered. (Kepinski 2005: 147-148; Kepinski 2007: 153).

From Level IIIC in the Early Bronze III, flint projectile points were recovered (Kepinski 2007: 156-157). No additional weapons were found at this site, despite both levels IIIC and Level IIID found burnt and abandoned, with many small finds left *in-situ* upon the floors of

buildings (Kepinski 2005: 150; Kepinski 2010: 309).

Tilmen Höyük

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Tishrin Dam Sites

Shiukh Fawqani/Siyuh Fauqani

No data on weapons was provided in any of the publications on this site for the relevant time periods.

Jerablus Tahtani/Garablus Tahtani

A stone mold for a dagger was recovered, dating from the Early Bronze Age, though no other weapons were found outside of the burial contexts. A number of burials were recovered from the Early Bronze Age period, including a high number of infant pot burials, as well as some adult pit, pithos, cist and chamber tombs. Grave goods included ceramics, metal bracelets, pins and beaded necklaces, and some metals, as well as a single polished stone axe. A small copper pendant was found in one adult burial, in the shape of a crescent axe, similar in shape to actual axes found elsewhere in southeastern Anatolia and northern Syria, likely having a ceremonial meaning (Peltenberg et. al. 2000: 72).

The large monumental tomb, Tomb 302, dating to the Early Bronze III period was robbed in antiquity, though some amount of the original grave goods and the human remains of twelve people were found inside, including the remains of numerous men, women and children, indicating a family tomb used and reused over time. Found grave goods included ceramics, gold, silver and rock crystal jewelry and ivory plaques, as well as weapons including daggers, shaft-hole axes and poker-butted spearheads. (Peltenburg 1999a: 102-103).

Tell Shiyukh Tahtani/Siyuh Tahtani

No weapons were recovered from any of the prehistoric levels at this settlement (Falsone 1998: 31-32; Falsone 1999: 137-138).

Tell Amarna/ ʿAmarna

A crescentric axehead, likely dated to the Early Bronze III period, was from a looted context and currently held in the British Museum. This was 240 mm long and 12.5 grams in weight, made of beaten copper, only 1mm in thickness. Bent tang made more secure by further hammering. This type of axe is more commonly known from Mesopotamia and Syria, with only a very small number found in Anatolia, and is thus thought to have been manufactured in, and imported from, Mesopotamia (Tubb 1982:1-3, 5-7).

Tell Al-'Abr/ ʿAbr

Three flint and two obsidian projectile points were recovered from Tell Al-'Abr, all from the Ubaid levels. A single stone sling ball was recovered, found in Level 2, made of white stone and 6 cm in length (Yamazaki 1999:83-91).

Titriş Höyük

Although not well published, weapons were recovered from the Early Bronze III burials, largely from adult males, including a daggers and spearheads, often found underneath the skull (Laneri 2007:253-254).

Tülintepe

Three large caches of unfired clay sling balls were found dating to the Early Chalcolithic, along with a total of 21 obsidian projectile points (Esin 1976: 163-165; Esin 1982: 131).

Yarım Höyük

No weapons were recovered from this site for the relevant time period (Rothman et. al.

1998: 74-75).

Zeytinlibahçe Höyük

No weapons were recovered from this site for the relevant time period (Frangipane et. al. 2004: 35, 41).

Chapter Six : Fortification Systems

Introduction

In this chapter, the fortifications data from sites in central and southeastern Anatolia is considered and analyzed. The chapter begins with a brief history of the study of fortifications in general, and in Anatolia in particular, with definitions of the various types of fortifications found in prehistoric Anatolia. Next, an analysis of all the data collected is presented. The chapter concludes with the raw data, site by site, for each of the two regions. All available information on wall and fortification systems is offered. A table of all data from each time period (Early Chalcolithic/Middle Chalcolithic, Late Chalcolithic/Early Bronze I, Early Bronze II/III) is available as Appendix Five at the end of this dissertation.

Background, Definitions and Methodology

By the end of the Early Bronze Age, nearly all settlements throughout Anatolia contained large and often very complex fortification systems. These walled systems were most likely built with the security of the town in mind, though security is not the only reason for a wall system.

Of all the lines of evidence considered in this dissertation, fortification systems require the most expense for ancient peoples to create. Fortification systems are necessarily large and require group cooperation, and thus tend to be considered a sign of impending or full-blown statehood (Turney-High 1981). Like other factors mentioned for this dissertation, however, fortification systems alone are not an unambiguous indication of inter-societal clashing.

Fortification systems necessitate a huge expenditure in time and materials, and can take years to complete, as well as needing frequent maintenance (Burgess et. al. 1988). Fortifications

may be formed to keep out invaders, but examples of fortification systems are known that are inadequate for this purpose, and seem instead to be non-functional as a barrier. These fortification systems may exist to send a clear message of the ownership of an area and of the unity of those who live there. They can be a show of power and the ability of a group to conduct and finish such a monumental project (Keeley 1996: 55-58).

City walls can have a largely symbolic function, rather than just a protective one, as seen in the Late Bronze Age capital city of Hattuşa. The city wall of Hattuşa clearly was built for protection, as the texts from Hattuşa tell of the various dangers from outside invaders that threatened Hattuşa, such as the wild Gaşka men. The city was briefly abandoned when the danger from these invaders became too great, only to be reestablished again later once the threat had died down (Bryce 2005: 253). But for all those dangers, the most impressive gate, the Yerkapı rampart, where the vanquished enemy or visiting dignitaries would be taken into the city, led directly to the temple district. This imposing and gleaming white glacis was built with stairs along two sides, allowing easy access to the top. This monument was not meant for the protection of the city; in fact, it would have been one of the easiest areas to enter and attack. The sight would have been remarkably impressive to visitors, and was visible for miles before one ever reached Hattuşa. All this is evidence that this great and monumental wall, built at enormous expense and with much manpower, was built to impress and to protect.

Beyond the symbolic purposes, walls can also be built as protection against weather, rather than outside populations. One possible explanation for the Neolithic Jericho wall is as protection against flooding, rather than for protective purposes (Bar-Yosef 1986). Walls can be used to keep out water, to keep out wild animals, or to keep in domesticated animals (Düring 2011a: 70).

The construction of walls was also a statement. In Mesopotamian literature, one of the primary achievements of a great king would be to build city walls. The great literary Mesopotamian king, Gilgamesh, known for his friendship with Enkidu, his epic battle with Humbaba, and his quest for immortality, was equally praised for his construction of the walls of Uruk (Nissen 1988:95). In the Mesopotamian worldview, the construction of walls was one of the greatest and most important deeds a king could accomplish, on the same level with warfare and conquest (Van de Mieroop 1999:73-77).

Four wall construction were common in prehistoric Anatolia: simple circular walls, sawtooth construction, *kastenmauer* construction, and casemate walls. The simple structure was a single, continuous wall around the settlement. The sawtooth construction was a staggered wall system, with niches and buttresses created through straight segments of wall, then a jag inwards or outwards, then another straight segment. Casemate systems were formed by two parallel walls, with small perpendicular walls placed at regular intervals in-between, forming a ladder-like formation. Sometimes the rooms formed between the walls would be used for storage or as workshops. The *kastenmauer* construction was similar to the casemate, except that the spaces formed between the walls were filled with rubble to further strengthen the fortification system (Di Vincezi 2008: 309).

The earliest known walls in Anatolia were from Neolithic central Anatolia. Aşıklı Höyük (8500-7400 BCE) was surrounded by a stone fortification system. It remains unclear if the wall completely surrounded the settlement or only a portion, particularly in the eastern section of the site (Esin 1996: 36; Düring 2011a: 71). A second walled system was also found at Aşıklı, in the "HV" complex in the western edge of the settlement. This wall was a double stonewall next to a paved street and a large open courtyard. . The wall was similar in construction to a casemate

wall, though the thousands of years between the construction at Aşıklı and the earliest Early Bronze Age casemate walls argue against this as a continuous design, rather than a coincidental similarity. The Asıklı walls were likely not defensive in nature, as the stone portion of the wall was interior, while the exterior portion of the wall was made of softer loam material (Düring 2011a: 71).

The Neolithic site of Çatal Höyük also had a fortification-like system. The blocks of agglutinative domestic buildings formed continuing saw-tooth like construction around neighborhoods, with entrance to buildings largely through the roof. The defensive use of such a system is not clear (Mellart 1965: 81). The buildings may have been placed in such a fashion in order to protect from flooding, or to mark out sections and districts. The earliest perimeter walls in Anatolia could be viewed as purely to delineate various neighborhoods, rather than for defensive purposes (Düring 2011a: 72).

Sawtooth construction was known from Early Bronze western Anatolian sites Troy I, Demircihöyük, Gözlü Kule, and Küllüoba. Sawtooth construction was of particular use for adaption to uneven terrain. The Anatolian Settlement Plan (ASP), as exemplified at Demircihöyük, was a type of sawtooth construction, where all the houses of the town were built up against the outer wall, facing towards the central courtyard of the settlement. This set up was unique to Early Bronze Anatolia. This style was present at from Hacılar, Mersin, Demircihöyük, Troy I, Hacılartepe, Küllüoba, Pulu Sakyol X, Alişar Höyük, and Bademağacı. The use of the Anatolian Settlement Plan ends in the middle of the third millennium (Di Vincezi 2008:310).

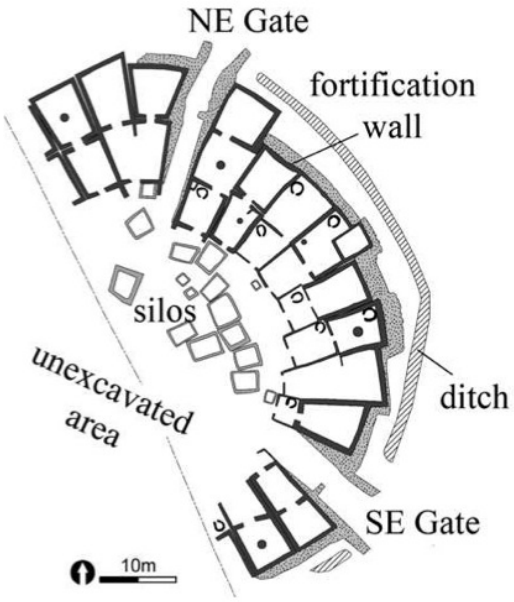

Figure 6.1: Layout of Demircihöyük (Massa 2014: Figure 3)

Fortification systems are a problematic aspect in archaeological surveys, particular for prehistoric settlements. Often, fortification systems can only be traced through large-scale horizontal excavations of a settlement. For example, many of the Chalcolithic sites covered in this dissertation are known mostly through either small areas of excavation, or only through deep soundings of a few meters in total area. Other sites are cemetery sites, rather than settlements, and would not have been fortified. Often, the associated settlement to the cemetery was either never excavated or unknown. As a result, the fortification analysis for this dissertation can only use a small number of sites, where the site is both a settlement site and was excavated enough to reasonably conclude if the site was fortified. All other sites must be excluded in the final analysis of the fortification data.

Accumulated Fortification Data from Central and Southeastern Anatolia:

Central Anatolia

Early to Middle Chalcolithic

Fortifications were rare in Early to Middle Chalcolithic central Anatolia. Of the eight sites with levels dating to this time period, and having enough horizontal exposure to reasonably conclude whether or not the site was fortified, only excavations at three sites, Mersin, Hacılar and Güvercinkayası, revealed any signs of fortifications.

Mersin is a unique site in this sense, as fortifications were found here as early as the Late Neolithic, making it the earliest known fortified site in Anatolia (the agglutinative nature of Neolithic Çatal Höyük discounts it as a true fortification). By the Late Neolithic, Mersin was a well-fortified and well-planned site, with a 1.2 meter thick wall surrounding the entire settlement, along with terracing on the mound itself. In the Early Chalcolithic, the site was fortified with a simple mudbrick and stone wall and a secondary fortification of the central citadel. The main entrance to the city was a casemate wall, the earliest known casemate in Anatolia. The walls created in Mersin were most possibly defensive in nature, but also were useful to prevent the very sloped and often damp town from slipping into the nearby river. Mersin is located in an important location for trade via the Mediterranean Sea between Mesopotamia, the Levant, and even the Aegean Sea, which is likely why the site was fortified so early, and indeed, as will be further detailed in Chapter Nine, Mersin was an important trade city from the Neolithic onwards.

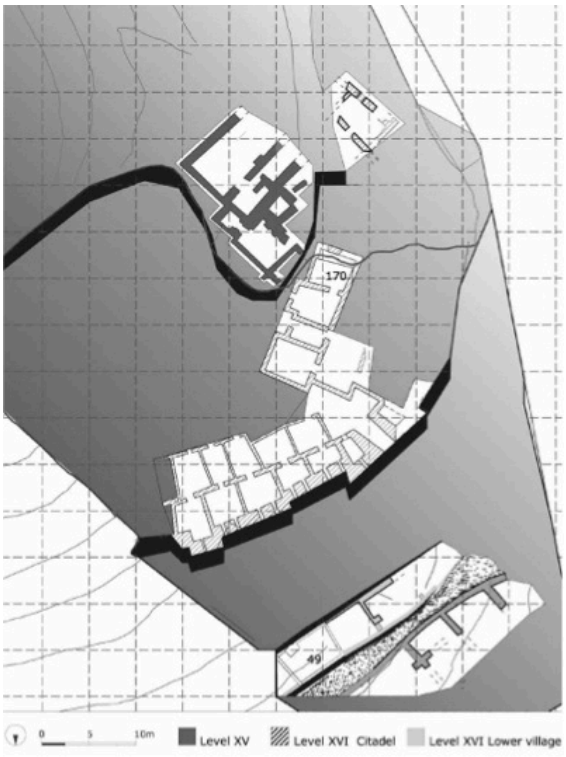

Figure 6.2: Early Chalcolithic Fortifications at Mersin (Caneva et. al. 2012: Figure 2)

At Hacılar level II and I, the walls were simple, encircling the entire site. The entire fortified area was roughly rectangular in shape, measuring 36 x 57 meters, or 2000 m2. Mellaart believed this to have been the entire settlement for this era, as he found no other signs of this level elsewhere in his excavations and no structures were found outside of the wall. There were three or four gated entrances into the settlement, with the southern entrance being the most monumental and the northwest gate likely acting as the main entrance. Two towers flanked the entrance to the western part of the settlement. A larger, more "monumental" gate was found in the southern edge, with "an open portico in front led through an antechamber into a long corridor on the left, which probably gave access to the top of the wall. On the right another door led from the antechamber straight into the south court of the settlement" (Mellaart 1970*;* 25).

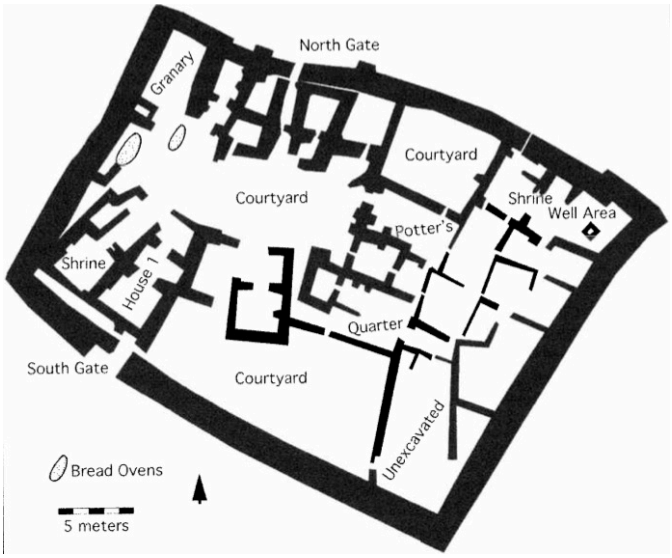

Figure 6.3: Hacılar Level II Fortification Reconstruction (Steadman 2010, Figure 1)

At Güvercinkayası, fortifications were built in the Middle Chalcolithic. Güvercinkayası made much use of the natural landscape in the fortification of the site, using both its location along natural cliffs as well as a simple mudbrick wall around the areas not protected by the cliffs. There were also some towers built into the wall, among the earliest known in this time period. Güvercinkayası had a surprisingly well-built fortification system for such an early, and short-lived, settlement.

The only other evidence of fortifications in this time period is from Boğazköy, which was placed upon a natural rocky outcrop, using the natural landscape as a form of protection. Boğazköy, however, was a small settlement during this time period, and was likely placed in a convenient location rather than being a site of great importance to trade, like Mersin.

Late Chalcolithic to Early Bronze I

By the Late Chalcolithic and Early Bronze I period, of the sixteen sites with levels dating to this time period, and having enough horizontal exposure to reasonably conclude whether or

not the site was fortified, ten of the sites showed at least some evidence of fortification, making 62.5% of known settlements fortified by the end of this time period. Of these, only Bogazköy appeared to make use of the natural landscape to aid in fortification.

Of the ten fortified sites, three were protected by a simple system of round mudbrick walls with stone foundations: Beycesultan, Çadır Höyük and Mersin. These were often rather large walls, 1.2 meters at Mersin, 1.25m at Beycesultan and 1.5 at Çadır Höyük. At Çadır Höyük, the wall was in place at least by the Late Chalcolithic, and at Beycesultan by the Early Bronze I period. As mentioned above, Mersin was fortified since the Late Neolithic. These walls completely encircled each settlement, with evidence of large monumental gates at Çadır Höyük and Mersin, and with periodic towers built along the walls at Beycesultan and Mersin.

The earliest Anatolian Settlement Plan fortification systems are known from the Early Bronze I levels at Demircihöyük, Küllüoba and Kuruçay Höyük. The settlement plan at these sites was created by the adjoining rear walls of the numerous domestic or special function buildings (megaron buildings). The backs of the buildings were arranged into a circular settlement with open space at the center for public structures and workspaces. The exterior was sawtoothed, rather than smooth, with gated openings in the walls. Kuruçay's walls, however, may not have been entirely defensive in nature, as small openings were found periodically in the wall without any protections, left open and without a gate.

Casemate walls were only known from Mersin in this time period. At Demircihöyük, however, by the end of the Early Bronze I, a second wall was built beyond the wall formed by the megaron buildings. This was a thick wall, up to seven meters in height and placed five meters from the house walls and filled with rubble, making this the earliest known *kastenmauer* wall in central Anatolia. A stone-lined rampart also led up to the top of the wall, making Early Bronze I

Demircihöyük a very well-fortified site.

Finally, while no wall was excavated at Tarsus, a large monumental gate was excavated, indicating a fortification system around the site was possibly present, even if not enough of the Early Bronze I site was excavated to know for sure.

Early Bronze II to III

In the Early Bronze II and III period, of the fifteen sites with levels dating to this time period, and having enough horizontal exposure to reasonably conclude whether or not the site was fortified, five were unfortified, uninhabited cemetery sites. Of the remaining ten sites, all were fortified. Unfortunately, for fourteen sites dating to this time period, excavations were unable to conclude if the site was fortified or not, a rather high amount. While fortifications were most definitely the norm in this time period, it is not certain they were as universal as the data initially suggests.

Five of the sites (Alişar Höyük, Bademağacı Höyük, Beycesultan, Çadır Höyük, and İkiztepe) were protected by simple mudbrick walls with stone foundations. While none of these sites were excavated enough to know if the walls went entirely around the town, evidence suggests that it is likely that the walls originally would have encircled each settlement. Monumental gates were excavated along with these walls at Alişar Höyük and Çadır Höyük, while no gates were excavated at the remaining sites, though perhaps the gates were simply not located.

A total of three sites were built with the Anatolian Settlement Plan in this period: Demircihöyük and Küllüoba in much the same way as they had in the previous period, as well as Bademağacı. All four wall systems now had a double wall: the first formed by the backs of the

megaron buildings, and a second mudbrick wall with stone foundations. The walls at Bagemağacı were both relatively smooth, while the secondary walls of Küllüoba and Demircihöyük were sawtooth.

As before, the double wall system of Demircihöyük was made into a *kastenmauer* wall by filling in the space between the two walls with rubble. The wall of Tarsus was a 1.8 thick sawtooth wall, with a second, thinner wall on the inside with rubble between, forming a *kastenmauer* wall. A single tower was also excavated along the wall, with a bent-axis gated opening as well, the only bent-axis gate known from this time period in central Anatolia.

Many of these fortified sites were further protected by constructed, stone-lined glacis built on the exterior of the walls, as found at Alişar Höyük, Bademağacı and Elmali-Karataş. At Alişar Höyük and Elmali-Karataş, only the central palatial district was fortified, not the surrounding village.

Southeastern Anatolia

Early to Middle Chalcolithic

Similar to central Anatolia, fortifications were nearly nonexistent in Early to Middle Chalcolithic southeastern Anatolia. Of the five sites with levels dating to this time period, and enough horizontal exposure to reasonably conclude whether or not the site was fortified, only one site, Fıstıklı Höyük, was found to have any recognizable wall system. In this case, along the northern and eastern boundaries of the settlement, earthworks were constructed along the very edge. These earthworks, while well-made, did not appear to extend around the entire site, and were most likely intended to help keep the settlement safe from flooding, rather than as a defensive system. Otherwise, settlements of this time period were left open and unfortified.

Late Chalcolithic to Early Bronze I

By the Late Chalcolithic and Early Bronze I period, of the thirteen sites with levels dating to this time period, and with enough horizontal archaeological exposure to reasonably conclude whether or not the site was fortified, nine of the sites showed some evidence of fortification: 69.2% of known settlements, a higher number than from contemporaneous central Anatolia. Unfortified sites from this period included Norşuntepe, Oylum Höyük, Titriş Höyük, and Yarım Höyük.

Of the nine fortified sites, only Hacınebi made use of the natural landscape, using both its location along natural cliffs overlooking the Euphrates River as well as a simple mudbrick wall around the areas not protected by cliffs.

There is a noticeable difference in the types of walled fortification systems present in southeastern Anatolia in this time period, beyond the slightly higher percentage of fortified sites. In central Anatolia, the two most common types of walls were simple walls encircled the city, and the Anatolian Settlement Pattern seen first in the Early Bronze I period. No settlements are known from southeastern Anatolia to have such a system, or are any *kastenmauer* or sawtooth walls known from this region. The most common wall system was a simple mudbrick wall with stone foundations, with either internal or external niches and buttresses to help strengthen the wall.

At Arslantepe and Tilbeshar, mudbrick walls with internal niches and buttresses were built by the Early Bronze I, and by the Late Chalcolithic at Arslantepe and Hacınebi. While niches and buttresses were unknown in central Anatolia, they were common in Mesopotamia, though only on the outside of walls (Düring 2012). The Late Chalcolithic and Early Bronze I walls from southeastern Anatolia from this time period were only known with the niches and

buttresses on the inside, showing some similarities with the Mesopotamian world, but with local variation.

Simple walls without the internal or external niches and buttresses were also found at Hassek Höyük, Kenan Tepe, Kurban Höyük, Samsat and Tülintepe, all by the Late Chalcolithic, except for at Kurban Höyük, where the first wall was built in the Early Bronze I period. At Hassek Höyük, the wall was found to have periodic towers, while large gates were excavated from Hassek Höyük.

Finally, casemate walls were known from two sites, Hassek Höyük and Tepecik. At Hassek Höyük, the casemate section was mainly around the large gate system, similar to Mersin in central Anatolia, while at Tepecik, the casemate surrounded the entire settlement.

Early Bronze II to III

In the Early Bronze II and III period, of the fourteen sites with levels dating to this time period, with enough horizontal exposure to reasonably conclude whether or not the site was fortified, two Birecek and Gre Virike, were unfortified, uninhabited cemetery sites. Of the remaining twelve sites, all were fortified. Unfortunately, at an additional fifteen sites dating to this time period, excavations were unable to conclude if the site was fortified or not, a rather high amount. While fortifications were most definitely the norm in this time period, it is not certain they were as universal as the data suggest. One site, Oylum Höyük, was found only to have a small basalt wall that only extended partially around the site. This wall was less likely defensive in nature, making Oylum Höyük arguably an unfortified site.

Of the remaining eleven sites, two were simple mudbrick walls with stone foundations and supporting niches and buttresses. Arslantepe and Tilbeshar had the niches and buttresses on

the interior surfaces, as was more common in the previous period, while Hassek Höyük moved its niches and buttressing to the exterior surfaces of the wall, as was more common in Mesopotamia. The walls of Hassek Höyük were also built with large, gated entranceways into the city.

Another seven sites had simple, round walls around the town without any known niches: Kenan Tepe, Kurban Höyük, Norşuntepe, Pulur, Jerablus Tahtani, Titriş Höyük, and Tülintepe. Of these sites, Kurban Höyük and Titriş Höyük both had excavated gate systems published. The gate at Kurban Höyük was made up of large stone orthostats with an associated gate house. Jerablus Tahtani and Titriş Höyük were also constructed with stone lined glacis on the exterior surface.

The wall of Tepecik was a casemate wall, with surrounding terracing on the interior. At Norşuntepe, the wall had a sawtooth pattern on the external surface but not on the internal surface, a feature unique to southeastern Anatolia but similar to central Anatolia.

Summary of Fortification Data

The fortification data reveals the following broad trends for central and southeastern Anatolia: In the Early to Middle Chalcolithic period, fortification systems were nearly non-existent in either region. The few examples known were likely built to combat flooding or to shore up settlements, rather than for defensive purposes. The only possible exception was Mersin, a well-fortified site since the Neolithic, that was also a major trade settlement since that time. In the Late Chalcolithic to Early Bronze I period, both regions saw an increase in fortification systems, with more than half of all settlements fortified. The fortifications in southeastern Anatolia, however, were often more monumental than those in central Anatolia, and

were more likely defensive in nature. By the Early Bronze II/III period, all large habitation settlements in both regions were fortified, with impressive and well built walls systems encircling the towns, and new fortification technologies including double wall systems, saw-tooth construction, monumental gates, glacis, moats and towers. There were different styles of fortification systems between the two regions. The Anatolian Settlement Plan and *kastenmauer* systems were common in central Anatolia, while in southeastern Anatolia, Mesopotamian style niches and buttresses were common. Casemates walls were found in both regions, though not in large numbers. The increase in size and complexity of fortifications matches the trends noted already from the bioarchaeological and weapons data of the last two chapters, and will be further discussed in Chapter Nine, as it compares to ancient trade routes through both regions. In the next chapter, archaeological evidence of destruction is studied.

Fortification Systems Data for Central Anatolia:

Acemhöyük

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Ahlatlıbel

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Alaca Höyük

The Late Chalcolithic and Early Bronze I levels, Levels 12-9, were not extensively excavated, but some information is known. The settlement size remains unknown, but it seems to have not been a planned settlement, with no signs of a fortification wall around the site (Gürsan-

Salzmann 1992: 58-61).

The Early Bronze Age II and III levels, Levels 8 to 5, were largely focused on the cemetery region of the site, with far less information on the remainder of the site in this period. There was no visible sign of a fortification wall around the site at this time, though again, not enough of the Early Bronze settlement was excavated to know for sure (Gürsan-Salzmann 1992: 55-58).

Alişar Höyük

In the Early Bronze II period, the site expanded outwards and the terrace portion of the settlement was inhabited fort the first time. After, the settlement was rebuilt, and a new fortification wall was built around the settlement on the mound, and a second fortification wall was built around the terrace (van der Osten 1933).

In the Early Bronze III period, a large mudbrick fortification wall with stone foundations was found surrounding the mound portion. At the end of Level 6, the entire system was burnt and destroyed, with a new stronger and thicker wall built in the Level 5 immediately afterwards, made of stone four meters wide. In addition, a monumental gate leading into the settlement was excavated, with a central ramp and two flanking bastions, measuring seven meters wide (van der Osten 1933).

Bademağacı Höyük/Kızılkaya Höyük

The Early Bronze Age was represented in five levels at the site, and took up the entire mound. The houses of the Early Bronze II were megaron in layout, with the entrance to the houses on the short side of the house. The houses were placed side by side, with all the entrances facing inwards towards the center of the mound, a defensible position. The entire settlement was surrounded by a defensive wall in the Early Bronze period, with a large stone-foundation wall

and a stone-covered rampart on the outside of the wall, making a rather complex fortification system (Duru 2001: 48-51).

Bağbası

This was a small, unfortified site dated to the Late Chalcolithic (Eslick 1992).

Beycesultan

The Late Chalcolithic levels did not contain any complete buildings due to the necessarily small size of the sounding, though a small number of complete rooms were found. The presence or absence of any defensive structures remains unknown, though many of the houses found were burnt (Lloyd and Mellaart 1962:20).

By the start of the Early Bronze I, there was a "substantial enclosure wall by which the settlement was now apparently surrounded and whose foundations remained partially intact. The alignment of this wall suggested that the settlement had now slightly increased in size." The wall was 1.25 meter thick, made of undressed stones with wooden reinforcement, "consisting of four parallel 'runner beams' tied together with cross-pieces at intervals of 1.40 meter." Only a portion of the wall was excavated, but "just before disappearing beneath the face of the sounding, the foundation makes a right-angle turn eastwards, suggesting that it was perhaps provided with projecting towers or buttresses" (*Ibid*: 27).

No traceable buildings were found associated with the wall, unfortunately. After Level XVIII, the settlement again increases, and the wall is no longer present in the small sounding. The excavators assumed the wall still existed beyond the limits of the sounding, but could not confirm this with evidence "as the denudation of the mound had removed all traces of it" (*Ibid*: 29).

Boğazköy-Büyükkaya/Yarıkkaya

The Prehistoric Early Chalcolithic settlement at Büyükkale was placed upon a natural, large and flat platform two meters in height, near where a small stream passes through. This location allowed for both water and protection from the often strong winds of the surrounding valley (Schoop 2005: 16-19).

Büyük Güllücek / Kaletepe

This is a small Late Chalcolithic site without a fortification system (Koşay and Akok 1957).

Çadır Höyük

From the Late Chalcolithic period, at the edge of the mound, a stone and mudbrick enclosure wall and ramped packed mud ramp and stone gateway were excavated. The gateway had a single guardhouse, with entry through the 1.5 meter thick stone wall. The excavators call the entrance an enclosure wall, as it is not clear if it was meant for fortification rather than decorative purposes (Steadman 2007). The gateway led to a large open courtyard and large building (Building 1), which, due to its location, may have been ritual in use, and oriented towards the highest peak in the region, the nearby Çaltepe hill (Steadman 2010:40). There may be a relatively wide, approximately two meter mudbrick fortification wall built higher up on the mound as early as the Late Chalcolithic, seeming to indicate a fortified upper town, and an unfortified lower town. More work remains on this section of the site to see if the two areas are contemporaneous (Author's Personal Excavations).

In the Early Bronze Age period, a large section of a fortification wall was excavated, a later reuse of the wall from the Late Chalcolithic periods. The wide (2-3 meters) mudbrick wall had no stone foundation. There does seem to be a large gated opening into the city, leading into a

paved courtyard, with a number of open air workspaces found both immediately inside and outside of the wall, including large industrial ovens for manufacturing purposes, as well as hearths for food preparation. None of the central portion of the Early Bronze city has been excavated. The wall found in the Late Chalcolithic and Early Bronze periods was rebuilt and continued in use until the end of the Late Bronze Age settlement, becoming large through time, eventually with a large stone casemate structure by the Late Bronze Hittite period (Personal excavations of the author, to be published in 2015).

Camlıbel Tarlası

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Can Hasan

No signs of any defensive architecture, and by Level 1, a very open plan on the site has been built. Excavations of the settlement indicated there was lkely no fortification system around the settlement (French 1998: 68).

Çatal Höyük West

Excavations indicated that it as likely there were no fortifications built around this settlement for the relevant time periods (Mellaart 1965).

Demircihöyük/ Sarıket

The Chalcolithic levels were found only two small soundings, nothing is known of the layout of the site from this period (Korfman 1986: 240).

The back of the megaron buildings at Demircihöyük formed a wall around the settlement, as the buildings were built into a circle, with four different gated entranceways into the settlement. The backs of the buildings were often built in front or behind each other, creating a

saw-toothed pattern rather than a smooth wall. From Phase F1 onward, a second wall of stone and mudbrick was built around the outside, beyond the back of the houses, with rubble between this wall and the houses, creating a strong fortification around the settlement. This wall was at least seven meters high, with a stone-lined rampart beginning around 5 meters from the wall itself facing the outside, encasing an area 70 meters in diameter. Two gates were excavated, with apparenty four total in the original complete settlement. These had small wooden gates that could be barred and closed. The houses flanking the gates were likely special function buildings rather than common domestic structures. These were larger in size than the other buildings, with three rooms instead of two and with more solidly built stone walls. The excavators supposed that each of the four blocks created by the four gates would have been a structural unit. (Korfman 1986: 242-244).

Elmalı-Karataş (Semayük)

In the Early Bronze period, at the center of the site was a large central palatial structure with its own fortification system, surrounded by a supporting village of megaron-style domestic houses (Warner 1994: 3-5).

From the earliest level at Karataş, the central structure was surrounded by a buttressed oval wall, which increased to include "several ramparts, and provided with additional courtyards and access ramps on the outer slopes" (*Ibid*: 7). A whole new fortification system was rebuilt by Period IV, and was quite often repaired and rebuilt. A large rampart was built leading up to this central complex from the surrounding village, using the contours of the mound, with a single entrance ramp into the center, from the south or southeast (*Ibid*: 8-9).

The village itself was never fortified at any time. Although it is possible that the inhabitants could have entered the fortified center in times of trouble, the small size versus the

larger population of the village make this seem unlikely, according to the excavators (*ibid*: 178).

Gâvur Evi Tepesi

The site itself has not been excavated, only thoroughly surveyed, so it remains unknown if the settlement was fortified (Vandam 2013:244-248).

Gelveri-Güzelyurt

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Gözlü Kule/Tarsus

The Goldman excavations of the Chalcolithic levels were only found in a deep sounding 3.5 x 4.5 meters in size, so little information is known from these excavations about the architecture or layout of the town (Goldman 1956: 7-8).

In the Early Bronze I period excavations, some small amount of architecture, with stone foundations and mudbrick structures were found, but not enough horizontal area was excavated to understand the layout of the settlement. The remains did seem to indicate a large gated entry way in the southern edge of the site, perhaps to the fortification around the settlement (Mellink 1989: 320). The site appears to become larger by the end of the Early Bronze I period, with the first indications of a fortified settlement (Steadman 1996: 151-152).

After a large destruction of all the excavated buildings, a fortification wall was built, though only a small part of it was excavated. The wall was 1.8 meters thick at most, with a stone foundation and mudbrick walls, built in a saw-tooth pattern, with earth and clay fill between it and a second, thinner wall, then a street, before interior habitations. A single tower was excavated with a bent-axis gate, with an associated tower room and gate room. The first rooms built after the creation of the wall were not as well constructed as those before the destruction. A

second wall was built on the foundations of the first, more strongly built and thicker, but in much the same construction. The wall was as thick as 2.8 meters. The gate was small, with only a 2.8 meter wide opening, made in an "L" indirect access shape. The gate and its associated rooms were later blocked up and went out of use, before the wall itself was destroyed. The houses inside the wall were similar to those in construction before the destruction of the settlement, but sometimes more hastily built (Goldman 1956: 20-32).

If a fortification wall existed in the Early Bronze III phase, it was not preserved, and may in fact have been eroded away on the edge of the mound (Goldman 1956: 32-39)

Güvercinkayası

The earliest habitation level from the start of the Middle Chalcolithic did not have any remains of architecture other than a series of postholes dug into the virgin soil, a rather unusual habitation style in central Anatolia. The excavators speculated these to be the remains of a series of permanent or semi-permanent wattle and daub houses (Gülçur 2004:143).

Later in the Middle Chalcolithic, the settlement appears to have been a well planned and laid out site, built to fit the size of the available settlement area, as allowed by the cliff faces around the site. The entire settlement was surrounded by a thick wall, where the natural cliffs did not provide enough of a barrier (Gülçur 2000: 80-83: Gülçur 2004: 143-144).

A fortification system, aside from the flanking cliffs, was built to further protect the site, two walls with round towers were built around the storage area in the southern part of the site, separating it further from the remainder of the settlement, and a separate wall was built along the eastern and northern edge of the site, acting both as a retaining wall, and, given its size and thickness, likely also a protective wall. By the later periods of the site, Güvercinkayası became increasingly more fortified, so that at some point, all houses, placed next to each other in rows

with a road in the middle had their openings facing the road sealed off and then placed ovens in front of the sealed doors, so that the backs of houses created their own type of wall from the outside, limiting the routes into the village. As no other openings into the houses are visible, it is possible that entrance to the buildings was only possible through the roof, as common in the Anatolian Neolithic at sites such as Aşıklı and Çatal Höyük. The excavators call Güvercinkayası "one of the first central Anatolian early settlements with a double fortification system" (Gülçur 2004: 144).

In the fourth occupation level, a new mudbrick fortification wall was built along the northern edge of the site, outside of the still-existent previous wall, creating what may be a stepped double enclosure wall, which is otherwise unknown in Anatolia, and may represent outside influence or the arrival of a new population at Güvercinkayası, with further evidence in the form of a new style of lighter colored pottery styles arriving at the same time (Gülçur 2004: 144).

Hacılar

The level that Mellaart pays the most attention to is Hacılar II and I, which he classifies as a fortified settlement. The entire fortified area was roughly rectangular in shape, measuring 36 x 57 meters, or 2000 m2. Mellaart believed this to have been the entire settlement for this era, as he found no other signs of this level elsewhere in his excavations and no structures were found outside of the wall. The wall was surrounded by a 1.5-3 meter thick mudbrick wall, built without any sort of stone foundation, and with numerous small towers with stone foundations. There were three or four gated entrances into the settlement, with the southern entrance being the most monumental and the northwest gate likely acting as the main entrance. Two towers flanked the entrance to the western part of the settlement. A larger, more "monumental" gate was found in

the southern edge, with "an open portico in front led through an antechamber into a long corridor on the left, which probably gave access to the top of the wall. On the right another door led from the antechamber straight into the south court of the settlement" (Mellaart 1970*:* 25).

The north-west entrance led from the settlement to the fields surrounding the town, as well as to the extramural cemetery, while inside the wall it was next to the largest domestic structures, a granary and a shrine. The southwest gate led to the Koca Çay and its surrounding meadows, with the area next to the gate open space, perhaps for animal storage. The north-east gate led to the shrine and the spring, as well as to the kitchen quarter. The south-east gate, if it indeed existed, would have led to the pastures in the hills above the settlement (*ibid*: 25-28).

Level I at the end of the Early Chalcolithic was a rebirth of the site, seemingly by a new population, though there were some areas of continuity, so perhaps it was not a completely new population, but a mix. The new population began by completely leveling the older village, creating a large platform on the top of the mound on which to build, even cutting into earlier levels to create a flat top and more squared sides. The new occupation seemed well planned, using limestone foundations, and a small retaining wall at the edge of the mound. A larger foundation wall was built around the entire mound, with a stone foundation under mudbrick. The wall was at least two meters thick, and likely sometimes thicker (*ibid:* 77).

Hacılar Büyük Höyük

In the Early Bronze I level, a well-made defense system was excavated, consisting of large walls with stone foundations and mudbrick tops, 1.5 meters in width, built into a zigzag pattern. Built directly against the walls were a number of rooms, with shared side walls (Umurtak and Duru 2012: 22-23).

In the Early Bronze II level, a small number of rooms made with stone foundations and

mudbrick walls were excavated, though it remains unclear if the foundation system continued into this period (Umurtak and Duru 2012: 23-25).

Harmanören

Unfortified cemetery site with no known associated habitation.

Horoztepe

Only the unfortified cemetery area of Horoztepe was excavated.

İkiztepe

By the Level I, there seems to have been a wooden perimeter wall around the village, but not particularly monumental (Bilgi 2005:15-17).

Kalınkaya-Toptaştepe

Excavations focused primarily on the Early Bronze cemetery site, rather than the nearby habitation site. Little is therefore known about the settlement itself, including its layout and presence or absence of a fortification system.

Köşk Höyük

Small, unfortified Early Chalcolithic settlement.

Küllüoba

In the Early Bronze Are I period, while not as fully excavated as the rest of the Bronze Age period levels, the general layout of the settlement is known. The settlement pattern at Küllüoba closely resembles that found of Demircihöyük, the so-called "Anatolian Settlement Plan," with a number of megaron-style buildings built into a circle, forming an exterior wall and a large open communal space in the center. The town was protected in this period by a large fortification wall built in a zigzag pattern, which was refurbished and reused until the site was abandoned at the end of the Early Bronze III period (Efe and Fidan 2008: 68).

In the Early Bronze II and III periods, the city plan changed quite a bit, with an acropolis built at the apex of the mound, and a lower city below, which was newly founded in the Early Bronze II period. Excavations so far have mainly concentrated on the mound itself, so less is known about the lower city region. The mound was protected by a zigzag fortification wall four meters thick, with tower-like projections at the corners, and with eastern and northern gates leading to a central court at the acropolis of the mound, and an open area between the citadel and the lower city settlement (Efe 2003: 269). The wall was largely built upon the earlier Early Bronze I wall mentioned above (Efe et. al. 2001:43; Efe and Efe 2007: 254; Efe and Fidan 2008: 68-70).

Kültepe-Kaneş

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Kuruçay Höyük

Not enough of the Early Chalcolithic levels were cleared to know if a fortification wall was present in this period, though the excavators guessed "it may well have been," as a circular fortification wall was present in the Late Neolithic phase, with half-circular towers, and at least one gateway into the settlement, on the western edge of the mound (Duru 1994: 99-100). As a flood destroyed the Late Neolithic settlement, this may have well been for flooding purposes, rather than for protection (Duru 1994: 99-100).

From the earliest phase of the Late Chalcolithic, the settlement was well laid out in a very defensive structure, with the inner-most buildings surrounded by a second round of houses, creating a reinforced ring around the settlement, instead of a free-standing fortification wall (Duru 1996: 139). The houses were arranged in a saw-toothed pattern, each house slightly in

front of or behind the next. Walls were built between houses that were not already enjoined. These exterior walls were built thicker and stronger than the other interior walls of buildings. Openings in the wall were defended by small gates, three of which were excavated. One gate, to the north, opened directly onto a stream, and was likely placed there to procure water. A small gate house or possible guard house was found next to a gate to the east. No towers were built into the fortification system (Duru 1996: 113-114). As Düring points out, this wall system at Kuruçay like was not in use completely as a fortification, as several of the entrances into the settlement were left open and ungated, making its effectiveness as a protective wall more suspect (Düring 2011a: 227-228).

The Early Bronze Age levels of Kuruçay were very badly preserved, and little could be learnt from the excavations, no complete buildings or fortification systems were found (Duru 1994: 117).

Maşat Höyük

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Orman Fidanlığı

Not enough of a horizontal exposure of this site was completed to know if it was fortified.

Oymaağaç

Small unfortified cemetery site with no known associated habitation.

Resuloğlu

Unfortified cemetery site, with unexcavated habitation located on a nearby cliffside.

Salur North

Small unfortified cemetery site with an unexcavated habitation site nearby.

Suberde

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Yumuktepe/Mersin

Yumuktepe is very unique as already in the Late Neolithic (ca. 5800 BCE), large 1.2 meter thick monumental stone fortification walls were already being constructed along the outside of the village settlement, as well as terraced buildings on the slopes of the mound, showing a well designed and well planned city, already by the end of the Neolithic (Caneva 2000b: 167).

The mound was greatly changed, with a new architectural layout starting in the Chalcolithic. The entire settlement was surrounded by a large wall, constructed with massive stone foundations and mudbrick walls, with a central fortified citadel at the very top of the mound. A large monumental gate, constructed of a circular casemate wall, leading into the town, was also excavated. Though the wall very likely was defensive, it cannot be denied that the wall was also used to shore up the town, which contained a large number of terraces throughout its history, in order to keep the city from slipping down into the nearby river. Adjacent to the wall, and found throughout the entire circumference of the fortification, were rows of small domestic buildings, interpreted as the living quarters for solders or guards (Caneva 2000b: 167), and placed in a radial pattern, further strengthening the outer fortifications. A new type of building material was used in the period than from the previous periods; for monumental walls or ramparts, stone foundations were built, while all smaller buildings and walls were made with only mudbrick.

Far less is known about the Early Bronze Age at Yumuktepe. There are Early Bronze Age

levels (Level XIIB) found, as well as Early Bronze Age pottery, but the Middle Bronze levels seem to have largely destroyed much of the Early Bronze Age stratigraphy. The site of Yumuktepe was very likely a major town on the copper and tin trade in the Early Bronze Age, though little archaeological evidence has been found on this level, also indicating perhaps the site as much smaller in the Early Bronze Age or partially abandoned (Caneva 2010: 51-56).

Fortification Systems Data for Southeastern Anatolia:

Arslantepe (Malatya)

By Level VIA, an impressive monumental gated entrance and fortification system around the central complex was completed (Frangipane 2010: 23-26). The site quickly deteriorated at the end of the VIA phase. The entrance into the central complex was made smaller, and the fortification wall was built to be larger (Frangipane 2010: 38-42).

In Level VIB, the upper part of the village was surrounded by a large mudbrick fortification wall, three meters wide, with a five meter wide stone foundation, and internal buttresses, with the lower village left out in the open outside of the wall (Frangipane 2010: 38-40). A large fortification wall was still surrounding the site, with five meter thick stone foundations, internal buttresses and at least four meters in height, though it remains unclear what the wall was built around as no structures have been excavated from inside the walled area (Frangipane 2013:247).

Birecik

Small unfortified cemetery site with no known associated habitation.

Carchemish

It remains highly contested how large of a settlement Carchemish was during the Early

Bronze Age. The arguments go from as small as four-hectare settlement, only a small regional village (Bunnes 2007) to a large, important regional center with a full fortification system (Algaze 1999). A large earthen rampart that was dated by Woolley to the "Middle Hittite" period cannot be conclusively dated to the Early Bronze Age at this point (Parr 1968: 31).

Değirmentepe

Excavations of were not expansive enough to know if the site was fortified in any of the relevant time periods.

Domuztepe

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Fıstıklı Höyük

The earliest levels at Fıstıklı Höyük did not have permanent architecture, but rather seems to have been a short-term use camp site, with evidence of quickly made architecture, and storage installations. This is followed by three phases of tholos buildings, storage buildings and ovens, before the site once again becomes a camp site, before being abandoned. (Pollock et. al. 2001: 41-45; Bernbeck et. al. 2002: 26-31; Bernbeck et. al. 2003: 16). Along the northern and eastern peripheries of the site, small but lengthy earthworks were uncovered, running along the edge of the site. Most likely, these were small retaining works, as a protection against flooding, as the Euphrates River is located directly next to the site. No further signs of fortifications were present at the site (Bernbeck et. al. 2002: 26).

Gedikli/Karahöyük

Small unfortified cemetery site with no known associated habitation.

Gre Virike

Small, unfortified cemetery and ritual site.

Girikihaciyan

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Gritille

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Hacınebi

In Phase A, the earliest settlement of the site was a series of small domestic structures, without a wall around the village. These were soon removed, as the settlement grew larger. The later settlement in Phase A was lined by a monumental enclosure wall made of stone. The interior of the wall had a series of niches and buttresses, while the outer side was straight. Contemporary Mesopotamian walls were the opposite, with the niches and buttresses on the outside (Stein et. al. 1998:147-150).

Most interestingly, in the B2 Level, the site of Hacınebi showed nearly no signs of violence or warfare. While the settlement was protected by a city gate, no weapons were noted in graves, few of the levels contained evidence of destruction, and the few human remains recovered did not show evidence of violent death, indicating peaceful coexistence between the local peoples and the Mesopotamian immigrants (Stein 2002: 152)

Hallan Çemi

No data on fortifications was provided in any of the publications on this site for the

relevant time periods.

Hassek Höyük

In the Late Chalcolithic period, the settlement at Hassek Höyük was a small, walled city, oval in shape. The exterior wall went around the entire settlement, and was made of mudbrick. A single gate was excavated, along the western edge of the site. It was a long passage, with strongly built casemates along the inside, and two small towers outside of the wall itself (Helwing 1999: 94-95).

After a period of abandonment, reestablishment and regrowth, the Early Bronze settlement was larger than that of the Late Chalcolithic, and more densely packed. The entire settlement was surrounded by an ovular fortification wall, though only approximately 1/3 of the wall was excavated. A single long gated area was excavated on the eastern edge of the site, this time without any casemate buildings, but rather the straight wall of the town, and a thinner, niched and buttressed wall on the exterior (Gerber 2005: 18-29).

Hirbemerdon Tepe

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Kalaycık Tepe

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Kazane Höyük

Excavations were not expansive enough to know if the site was fortified in any of the relevant time periods.

Kenan Tepe

In the Ubaid period, only a small portion of this early level was exposed, so that the layout of the settlement could not be ascertained, but it seemed to be restricted to the eastern and southern slopes of the mound. According to a remote sensing survey of the mound, the Ubaid period site was likely no larger than a single hectare (Parker et. al. 2008:136). In the earliest occupation at Kenan Tepe, the settlement was small, and consisted of either a campsite or semi-permanent structures. Next, the architecture became more permanent, with multi-roomed buildings made of mudbricks, both domestic and storage spaces (Parker 2007:4-7).

In the Late Chalcolithic, the town was protected by a very large fortification wall surrounding the town, in place around 3350 BCE. The wall was made of mudbrick with a stone foundation, and was over 1.5 meters wide. At the end of Level 4, the entire site was destroyed by a very large fire, and all architecture was demolished. After, the population was slow to rebuilt, though eventually the site grew again to its original size (Foster 2009:158-174).

Korucutepe

Excavations indicated that it as likely there were no fortifications built around this settlement for the relevant time periods.

Kurban Höyük

The Early Chalcolithic period, labeled as Middle-Late Halaf (5000 BC, Level VIII) in the publication, was found directly on top of virgin soil, with a total of 5 phases dating to this period. This period was only reached in small areas of deep sounding, so little architecture was excavated, and the layout of the Halaf village was not ascertained (Algaze 1990: 23-28).

The Middle Chalcolithic Period (Period VII) was found only on the northern mound, and only in the deep soundings. No standing architecture was excavated, and little beyond pottery

was recovered (Algaze 1990: 28: 120).

The Late Chalcolithic Period (Period VIA-B) was found in the northern mound, but the area was not well preserved and no standing architecture or small finds of note were uncovered (Algaze 1990: 28-29).

Starting in Level IVB, a large fortification wall was uncovered for the first time. The wall was 4.5 meters wide, with a mudbrick foundation, and likely went around the entire southern mound. Only a smaller portion of the wall was excavated, so the gate system or the presence of towers remains unknown, though the wall did not appear to have a glacis. A series of rooms were built up against the wall, with well made, plastered mudbrick walls, with likely domestic uses, and the remains of a likely street between the houses, paved in cobbles. At the end of phase 13, most of the rooms were burnt down, and filled with collapse rubble, which was not cleaned out later. A short period of time elapsed before this part of the mound was rebuilt (Algaze 1990: 34-41, 130). The area inside the wall had larger and better built houses, as well as possible public buildings and elite housing, with smaller and more dense domestic housing outside of the wall, often with open courtyards and roads between housing blocks (Algaze 1990: 427-428).

The Early Bronze/Middle Bronze Transitional period (Period III) was begun after a short abandonment of the Period IV settlement, and was found only on the southern mound. The fortification wall was still present, though not as large as in Period IV. An entrance into the settlement was excavated, created by a series of flanking buildings with large limestone boulders, called orthostats by the excavators, and a stone floor with the remains of a doorway, and a possible gatehouse, though it was not well preserved (Algaze 1990: 57-60: 189-193).

Lidar Höyük

No data on fortifications was provided in any of the publications on this site for the

relevant time periods.

Norşuntepe

When the site was rebuilt at the end of the Early Bronze I, a fortification wall of mudbrick with stone foundations was built around the entire site, similar to the walls found at contemporary Tepecik and Tülintepe. By Level XXX, the site was surrounded by a large 3-4 meter thick fortification wall, made of mudbrick with stone foundations and a saw-tooth outer façade (Erarslan 2006a: 62).

Oylum Höyük

The Chalcolithic levels were poorly preserved and mainly found in areas exposed by quarrying at the site. A large wall made of uncut basalt boulders was found in the western edge of the mound, but as the wall did not continue around the site, it was likely not a fortification wall, but instead a possible large platform or a small retaining wall to help prevent flooding (Özgen and Helwing 2003: 63- 66). No further evidence of fortifications was noted in the publications.

Pulur (Sakyol)

The buildings of the Early Bronze Age were mudbrick, usually one or two room houses, some with very simple stone foundations. Many of the houses were built directly next to one another, with the entrances facing towards the center of the village, creating a simple wall around at least part of the town. This may have been for defensive purposes, or as a retaining wall against flooding (Koşay 1976:127-143).

Samsat

The Late Chalcolithic settlement did appear to have been fortified, as remains of a large wall were uncovered around the edges of the mound, though the settlement itself likely only

covered a small portion of the large mound, and was on the small side during this period (Özgüç 1992:152).

Tepecik/Makaraz Tepe

There did not seem to have been a wall around the Chalcolithic town (Esin 1979: 109).

By the end of the Early Bronze I period, a stone foundation, mudbrick fortification wall was built around the entire mound, and was rebuilt and kept in use until the end of the Early Bronze III layers. The Early Bronze I wall was a double wall with buttressing, similar to a casemate wall (Esin 1982: 106). In the Early Bronze II period, the wall was strengthened and terraced. Houses and buildings were also found located outside of the wall. By the Early Bronze II, the wall was larger and more strongly built, with high terraces formed inside the walled area, with the houses now containing stone foundations as well, often abutting the fortification wall. This trend continued into the Early Bronze III period (Esin 2001: 102-107; Esin 1979: 112).

Tilbes Höyük and Surtepe

Excavations were not expansive enough to know if the site was fortified in any of the relevant time periods (Fuensanta 2007).

Tilbeshar

It is unknown if a fortification system was yet in place by the Late Chalcolithic. The site was abandoned for an unknown period of time, though likely only a short period of time, after the end of the Late Chalcolithic period (Kepinski 2007: 152; Kepinksi and Ergeç 2000:135).
In Level III A1, the Early Bronze I period (3100-2900), the site of Tilbeshar was surrounded by a fortification system, made of regularly sized (30x50x10 cm) mudbricks and supported with buttresses. The wall was up to four meters in width, with a preserved height of 3.5 meters. A

number of buildings were constructed directly up against the interior side of the wall (Kepinski 2005: 147-148; Kepinski 2007: 153).

By Level III A2, (2900-2700), still in the Early Bronze I, the fortification systems were gone, and the local architecture far less well made, as the settlement seems to have shrunk in size, with only the citadel itself occupied, with only a short time of abandonment in-between the two levels (Kepinski 2007: 153).

By 2700-2500, Level III B1 and B2, in the Early Bronze II period, the town was on the rise again (Tilbeshar IIIB). The size increased to 30 hectares and a lower town was established off the mound. The top of the mound was reconstructed with a well built terrace covering the previous destruction levels, though due to later medieval period construction, the terrace was not well preserved and less is known about this period (Kepinski 2005: 148-149; Kepinski 2007: 156).

By 2600 BC, Level IIIC in the Early Bronze III, the site reached its largest size, now 56 hectare. It was a well-planned city with a new city wall and well laid out streets creating neighborhoods of buildings, though the city has been mapped only through magnetometry, rather than a large amount of horizontal excavation (Kepinski 2007: 156-157).

In the final Early Bronze Level, Level D (2300-2100 BCE), the site was quickly reoccupied, with a small amount of new construction, and the reuse the many of the older buildings. The walls become quite large in this phase in the new construction, with large, megalithic stones used for the foundations, with mudbrick on top, though this was not well preserved. The walls were again well plastered, and the floors constructed of pebbles or mortar (*Ibid*).

Tilmen Höyük

Excavations were not expansive enough to know if the site was fortified in any of the relevant time periods (Duru 2003: 53).

Tishrin Dam Sites

Shiukh Fawqani/Siyuh Fauqani

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Jerablus Tahtani/Garablus Tahtani

In the Early Bronze Age, two major phases were excavated, Periods 2A and 2B. The second phase, 2B is also known at the fortified phase, built directly over the remains of the previous destroyed settlement. The settlement in this period was protected by a large fortification wall, built with a large glacis built along the exterior of the wall in some places. In the eastern portion of the site, no glacis was constructed, showing that the fortification system was not a single building project, but more likely a series of connected building events over time (Peltenberg et. al. 2000: 56). The wall had stone foundations, and enclosed a settlement of approximately 300 square meters in size, though buildings were found outside of the defensive system as well. The wall had a drainage system that connected with the heart of the settlement, leading the excavators to conclude the site was well planed and thought out in this period, with a strong administrative apparatus in place. Many of the sites along this region of the Euphrates all erected walls at this period, including Habuba Kabira, Halawa, Tell el-'Abd, Sweyhat, Banat, Shioukh Tahtani and Armana. Eventually, the interior of the settlement was artificially raised, and a 12 meter wide glacis made of crushed limestone with a smooth plastered surface was created around the exterior of the wall, blocking the earlier drainage system. This may have been

done to help with problems due to the annual flooding, rather than for protective purposes, but it also greatly changed the look of the site, making it far more imposing and visible in the landscape than before, and perhaps similar in appearance to the White Monument of Tell Banat. The interior of the settlement remained largely domestic in nature, with some amount of workspace found for the production of textiles.

Tell Shiyukh Tahtani/Siyuh Tahtani

From the Early Bronze I and II periods, Period 1, no signs of a fortification wall were uncovered, though not enough of the entire settlement was uncovered to know for certain if the site was unfortified (Falsone 1999: 137-138).

Excavations of Period 2, dated to the Early Bronze III and IV periods, were found to be highly disturbed by later Byzantine structures, so little found intact, and no architecture was excavated from this period (Falsone 1998: 31-32; Falsone 1999: 137-138).

Tell Amarna/ ʿAmarna

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Tell Al-'Abr/ ʿAbr

Only a small portion of the Middle Chalcolithic site was excavated, so little is known about the general layout of the settlement, or whether or not there was a fortification system present (Hammade and Yamazaki 2006:23-40; Yamazaki 2012: 185-186).

The Uruk Level 1 remains were badly eroded, so little information on the layout and use of the Uruk period habitation was ascertained (Hammade and Yamazaki 2006:40-42).

Titriş Höyük

Excavations of the Early Bronze II period were unable to conclusively answer if the settlement was fortified in this period or not (Algaze and Pournelle 2003: 106).

The entire city was protected, perhaps for the first time, by a large fortification wall and associated moat in the Early Bronze III period, with an external glacis made of clay, earth and limestone, and 14 meters in width, while the wall itself was six meters in width, with small rooms built into the wall that were used as housing (Algaze and Matney 2011: 999-1004).

Tülintepe

The Early Bronze Age settlement was surrounded by a wall, built in the Early Bronze I, and with strongly built stone foundations that cut into the Chalcolithic levels, further destroying a large amount of the earlier settlement. Little of the Early Bronze Age architecture was found intact at the site (Esin 1976: 148-151).

Yarım Höyük

Excavations indicated that it as likely there were no fortifications built around this settlement for the relevant time periods (Rothman et. al. 1998: 74-75).

Zeytinlibahçe Höyük

No data on fortifications was provided in any of the publications on this site for the relevant time periods.

Chapter Seven : Destruction and Abandonment Levels

Introduction

In this chapter, the data on destruction and abandonment levels from studied sites in central and southeastern Anatolia is considered and analyzed. The chapter begins with a brief background study on the use of destruction levels in archaeological analysis. Next, an analysis of all the data collected is presented. The chapter is concluded with the raw data, site by site, for each of the two regions. All available information on destruction and abandonment levels is given. A table of all data from each time period (Early Chalcolithic/Middle Chalcolithic, Late Chalcolithic/Early Bronze I, Early Bronze II/III) is available as Appendix Six at the end of this dissertation.

Background and Definitions

Destruction levels are very visible archaeologically, but the reasons for the destruction are often hard to interpret. The difference between a site burnt accidentally versus one burnt due to invasion is very difficult to recognize, especially where there is an absence of written texts to record and confirm such an event. Signs of violent origin would include the presence of weapons or bodies in the remains, and any additional destruction throughout the site, beyond what would be caused by conflagration. Even if a site is recognizable as purposely burnt, it is nearly impossible in prehistoric sites to ascertain who did the burning or why. At the Late Chalcolithic site of Hamoukar in northern Syria, for instance, a highly visible burn layer and thousands of sling balls were recorded, clear signs of violent interaction, but debate is still ongoing over who may have caused such destruction (Reichel 2009).

Further, the aftermath of destruction can be used as indirect evidence of population movements, conquest, or reactions to violent interactions. Once a settlement is destroyed, was the settlement rebuilt immediately afterwards, or was there a period of abandonment? Was the settlement abandoned forever? If the settlement was later reoccupied, were the architecture, material culture and burial practices similar to those present before the destruction? Was the site more strongly fortified after the destruction, in order to prepare for future violence? Are more weapons recovered from the post-destruction settlement? Do burials now contain higher numbers of weapons as burial goods? What does this information reveal about the populations at the settlement before and after the destruction?

For this dissertation, destruction levels at sites are best understood in conjunction with other evidence of violence, as covered in this dissertation; on their own, they are hard to interpret. Destruction levels can help answer such questions as: was the entire settlement sacked or only certain parts, such as the administrative or elite quarter? How long did it take to rebuild or was the site abandoned permanently? If rebuilt, was it rebuilt in a similar style or with a new set of material culture that may indicate the resettlement of the site by the conquerors? Destruction levels tell more about the actual method of warfare than other lines of evidence, being the only remnant of violent interaction from the archaeological record. See figure 0.2 for a pictorial representation of all destruction and abandonment levels recorded in this dissertation.

Accumulated Destruction and Abandonment Data from Central and Southeastern Anatolia:

Central Anatolia

Early to Middle Chalcolithic

In the Early to Middle Chalcolithic sites of central Anatolia, there is little evidence of widespread destruction. Of the twenty sites with levels dating to this time period, four (Can Hasan, Güvercinkayası, Hacılar, and Kuruçay Höyük) have any reported destruction levels in the publications.

Hacılar was destroyed multiple times, with a widespread destruction level noted from the Late Neolithic Level VI occupation. At the end of Level IIa and in Level IIb, the site was completely burnt down and destroyed then rebuilt. After the IIa destruction, the site was restored in nearly the exact original orientation and architectural styles, while after the IIb destruction, the reconstruction resulted in a new orientation, new architectural styles, and a far smaller settlement size. The site was destroyed for a final time in Level I, with remains of the inhabitants found in the rubble. Afterwards, the site was abandoned and never reestablished.

The Early Chalcolithic Level 7 at Kuruçay Höyük was also destroyed by fire, and the site was abandoned until the Late Chalcolithic, which seems to suggest a rather traumatic destruction. The Late Chalcolithic population was a different cultural group than the Early Chalcolithic peoples, as the architecture and material culture were quite different in style than from earlier periods.

At the end of the Early Chalcolithic, Büyükkaya at Boğazköy, Bademağacı Höyük, and Demircihöyük were all abandoned, with no evidence of destruction. Bademağacı Höyük was reestablished later in the Early Bronze I period, and Demircihöyük was later reestablished in the

Late Chalcolithic. Büyükkaya was never reestablished as a habitation settlement.

The only reported destruction levels from the Middle Chalcolithic date to Level 2B at Can Hasan and at Güvercinkayası. At Can Hasan, the entire settlement appears to have burnt down and was rebuilt in Level 2A, after the old destruction level was flattened to create a terrace for the next occupation. The new buildings of Level 2A were similar in architectural style and orientation, though the buildings were not as well constructed and were less regular. After the Level 2A destruction, the site was abandoned until the Late Chalcolithic. At Middle Chalcolithic Güvercinkayası, most of the houses were destroyed by fire after only approximately 400 years of occupation, and the site was abandoned and never reestablished.

At the end of the Middle Chalcolithic, Çatal Höyük West was abandoned, without evidence of destruction, and was never reestablished.

Late Chalcolithic to Early Bronze I

In the Late Chalcolithic to Early Bronze I period, of the 23 sites with occupation levels dating to this time period, a total of nine revealed evidence of destruction. At two of these sites, the burning seemed only to affect a small number of buildings or a limited area rather than the entire settlement, such as was the case of the so-called "Burnt Building" from the Late Chalcolithic at Çadır Höyük, and a number of burnt rooms from Level XXXII at Late Chalcolithic Beycesultan. Neither of these sites displayed evidence of full site destruction, and may be assumed to have possibly been accidental, rather than deliberate, small scale destruction.

The remaining seven sites were assumed by their excavators to have been completely burnt down. In the Late Chalcolithic period, three sites were completely destroyed: İkiztepe, Kuruçay Höyük Level 6 and Level 3, and Mersin Level XVI.

Publications at İkiztepe reported signs of destruction at the site from the Late Chalcolithic levels, though the settlement was quickly rebuilt. At Kuruçay Höyük, the site was destroyed in Levels 6 and 3, and rebuilt both times in a similar fashion, through drastically smaller in size each time, until the was site destroyed at the end of the Late Chalcolithic. In the Early Bronze I, the site was again reestablished by a new cultural group, based on the drastic change in material culture. No destruction levels were found dating to this later time period. Mersin was destroyed in Level XVI, but was promptly rebuilt, then continued to exist through the rest of the Late Chalcolithic and the Early Bronze Age without further evidence of destruction.

At the end of the Late Chalcolithic, Bağbası, Büyük Güllücek, Can Hasan and Orman Fidanlığı were all abandoned forever, without any signs of destruction.

In the Early Bronze I period at Elmalı Karataş, the Central Complex, though not the lower village, was "moderately" burnt at the end of Period I, then rebuilt in the same orientation and layout as before. At the end of Period II however, the entire site was again destroyed, then the rubble cleared and flattened to form a terrace for the new Early Bronze II settlement. The Early Bronze I settlement at Tarsus was completely destroyed by fire, though after the destruction, all structures were rebuilt in the same fashion as the previous period.

At the end of the Early Bronze I period the Yarıkkaya Cemetery went out of use, and was never reestablished.

Early Bronze II to III

In the Early Bronze II and III periods, of the 29 sites with levels dating to this time period, only six were found to contain destruction levels, despite, or perhaps because of, the universal presence of fortification systems by this time period.

In the Early Bronze II period, Alişar Höyük Level 11, Beycesultan Level XIIIb and XVIIIa and Tarsus displayed evidence of violent destruction. At Alişar Höyük Level 11, only a small number of buildings appeared to have been destroyed, rather than the entire settlement. The Level XIIIb destruction at Beycesultan was possible the result of earthquake damage rather than violent destruction. The XVIIIa destruction was more likely due to violence because the entire site was destroyed, then rebuilt with a new style of architecture and a new style of material culture, indicating a great disruption of the site and a possible brief period of abandonment in between. At the start and the end of the Early Bronze II settlement at Tarsus, the site was completely destroyed by fire, then immediately rebuilt.

While no destruction was visible from the Early Bronze II levels at Bademağacı Höyük, Demircihöyük, Hacılar Büyük Höyük and Kuruçay Höyük, all the sites were abruptly abandoned at the end of the period, and never reestablished in ancient times.

In the Early Bronze III period, Alaca Höyük Levels 5 and 6, Alişar Höyük Level 6, Beycesultan Level IX, Tarsus, Kültepe-Kaneş Level 13, Level 12 and Level 11, and Maşat Höyük showed evidence of destruction. Of these sites, Alaca Höyük, Tarsus, and Maşat Höyük were all destroyed completely at the very end of the Early Bronze III period, and rebuilt in the Middle Bronze Age. Alaca Höyük Levels 5 and 6 were both burnt completely and destroyed, though there is evidence that the Level 6 destruction may have been earthquake related rather than from violent activity. The Level 5 destruction led to the site being very briefly abandoned before being reestablished in the Middle Bronze I period. At the end of the Early Bronze III settlement at Tarsus, the site was completely destroyed by fire, then soon rebuilt with a new architectural style in the Middle Bronze transitional period.

Alişar Höyük was completely destroyed during the Early Bronze III, then rebuilt. In

Level 6, the entire site was destroyed, then immediately rebuilt, with the fortifications repaired and strengthened afterwards. The Becesultan Level IX destruction was localized to only a small number of Megara buildings, and the destruction at Kültepe-Kaneş was limited to a small number of buildings.

Finally, while no destruction was visible at Early Bronze III levels at Ahlatlıbel, Elmalı-Karataş, Horzotepe, Kalınkaya-Toptaştepe, Küllüoba, Resuloğlu, and Salur North, all were abandoned. Elmalı-Karataş was only sparingly reestablished in the Middle Bronze Period, likely as a small camp rather than permanent village, while the rest were never reestablished.

Southeastern Anatolia

Early to Middle Chalcolithic

In the Early to Middle Chalcolithic sites of southeastern Anatolia, there was slightly more evidence of widespread destruction than was noted in central Anatolia. Of the nineteen sites with levels dating to this time period, four (Değirmentepe, Girikihaciyan, Kenan Tepe, and Tell Al-'Abr) revealed evidence of destruction levels in the publications.

Of these, Değirmentepe and Girikihaciyan showed some signs of destruction in the Early Chalcolithic (Late Halaf). At Değirmentepe, all visible architecture from Subphase 3 was destroyed by fire, then nearly immediately rebuilt. At Girikihaciyan, only a small number of domestic buildings were burnt, while others were not, so violence was less likely at this site.

At the end of the Early Chalcolithic, Fıstiklı Höyük, Girikihaciyan, Hallan Çemi, and Tell Amarna were all abandoned, without any signs of destruction. None were reestablished during ancient times.

In the Middle Chalcolithic (Ubaid) period, all visible architecture at the end of the Ubaid

period at Kenan Tepe was destroyed by fire, as was also the case for Tell Al'-Abr Levels 7 and 2. Level 5 was not burnt, and while there was no evidence of destruction, the site was abandoned quite abruptly at the end of Level 5 for an unknown period of time. Material was left *in situ* on the floors of houses.

The settlements at Domuztepe and Kazane Höyük were both abandoned during the Halaf period, without any evidence of destruction. Domuztepe was never reestablished, though Kazane Höyük was settled once more in the Early Bronze II period, after a long period of abandonment.

Late Chalcolithic to Early Bronze I

In the Late Chalcolithic to Early Bronze I period, of the 30 sites with known occupation levels, a total of nine showed some evidence of destruction, especially at the end of the Late Chalcolithic. In the Late Chalcolithic Levels, Arslantepe, Hacınebi Phase A and B1, Hassek Höyük Phases 5a and 5b, Kenan Tepe Level 4, Korucutepe Phase B, Kurban Höyük Period VIB, Norşuntepe Level VI, and Oylum Höyük were found to have destruction levels. In Level VII of Arslantepe, only some of the buildings on the citadel were destroyed, though they were important ritual and administrative buildings. Similarly, at Hacınebi Phase A and B1 and Korucutepe Phase B, only a small number of buildings were burnt, and the rest of the site was left intact, though at Hacınebi and Korucutepe, the sites were abandoned for a short period of time.

Other sites were completely destroyed, including Hassek Höyük Phases 5a and 5b, Kenan Tepe Level 4, Kurban Höyük Period VIB, and Norşuntepe. After these destruction levels at Hassek Höyük, Kenan Tepe, and Kurban Höyük, all the sites were rebuilt. At the end of the Late Chalcolithic, both Hassek Höyük and Kurban Höyük were rebuilt in a new fashion over the

remains of the older settlement, while Norşuntepe was left abandoned until the end of the Early Bronze I period.

At the end of the Late Chalcolithic, a number of sites were abandoned without further signs of destruction, including Hacınebi Phase B2 (though the site was later reused as an Early Bronze I cemetery), Hirbemerdon Tepe, Samsat, Tilbeshar, Jerablus Tahtani and Tell Al-'Abr. Tilbeshar was soon reestablished in the Early Bronze I, Jerablus Tahtani was reestablished in the Early Bronze II, Hirmeberdon Tepe was reestablished in the Early Bronze III period, while Samsat and Tell Al-'Abr were not reestablished in ancient times.

In the Early Bronze I levels, Arslantepe Level VIA and Level VIB, Pulur Levels X,and IX, Tilbes Höyük, and Tilbeshar Level III A1 were found to contain levels of destruction. Some of the known destruction was localized rather than covering the entire settlement, as was found at Arslantepe, Pulur and Tilbes Höyük. Early in Level VIA at Arslantepe, a small number of buildings on the citadel were burnt, then rebuilt. Other sites, such as Arslantepe and Tilbeshar, were completely destroyed.

Later, at the end of Period VIA at Arslantepe, the entire palatial district was burnt and the site was abandoned for a period of time, then reestablished with a new architectural style and a new economic system in Level VIB, following a period of habitation by nomadic herders. At the end of Level VIB, the entire site was destroyed, including all the monumental and domestic architecture. The site was reestablished in the Early Bronze II period, although the site was far smaller lacking large monumental architecture. At Tilbeshar, at the end of the Early Bronze I period, the entire site was destroyed, then abandoned for a period of time, and reestablished in the Early Bronze II period.

Otherwise, at Değirmentepe, Hacınebi Cemetery, Kenan Tepe, Yarım Höyük and

Zeytinlibahçe Höyük, while no widespread evidence of destruction was visible at the end of the Early Bronze I period, all were abandoned. Zeytinlibahçe Höyük was not reestablished until late in the Early Bronze III period, perhaps due to flooding, while Değirmentepe, Hacınebi Cemetery, Kenan Tepe and Yarım Höyük were not reestablished in ancient times.

Early Bronze II to III

In the Early Bronze III period, of the 28 sites with levels dating to Early Bronze II/III, ten were found to contain destruction levels. Destruction was only noted from Phase C at Korucutepe. Only Hassek Höyük was abandoned in the Early Bronze II period, with no signs of destruction.

In the Early Bronze III period, these included: Arslantepe Period VID, Korucutepe Phase E and F, Kurban Höyük Period III, Norşuntepe Level IV, Oylum Höyük, Pulur Levels VIII, IX and X, Tilbeshar IIICIand Level IIID, Jerablus Tahtani Period 2A and 2B, Tell Shiyukh Tahtani and Titriş Höyük.

Some of the sites were completely destroyed during the Early Bronze III period, but then immediately rebuilt and reestablished, such as Korucutepe Phase E and F and Norşuntepe Level IV palatial complex, and Pulur Levels VIII, IX and X, Tilbeshar IIIC, Jerablus Tahtani Phase 2A, and Tell Shiyukh Tahtani.

Some of the sites were completely destroyed at the end of the Early Bronze III period, only to be reestablished later, such as Arslantepe, Kurban Höyük, Oylum Höyük, Jerablus Tahtani and Titriş Höyük. Arslantepe, Oylum Höyük, and Titriş Höyük were abandoned after the Early Bronze III destruction, and only reestablished much later in the Middle Bronze Age. Jerablus Tahtani in the Late Iron Age, and Kurban Höyük were not rebuilt until the Islamic

period. Titriş Höyük was only reestablished on the central mound, while the Lower and Outer towns were abandoned forever.

A small number of sites were abandoned at the end of the Early Bronze III period without signs of destruction, including Gedikli/Karahöyük, Girikihaciyan and Tilbes Höyük,.

Summary of Destruction and Abandonment Data

The destruction and abandonment data reveals the following broad trends for central and southeastern Anatolia: In both regions, settlements are destroyed, rebuilt and abandoned throughout all the periods covered. Numerous sites in both regions are abandoned in every period without evidence of destruction, likely due to other factors, such as movement of rivers, lack of natural resources, flooding or other factors not visible through the archaeological record. Other settlements are destroyed and either reestablished or abandoned without further evidence of outside influence, with either accidental or natural causes for the destruction.

Despite this, both regions display evidence of likely violent conflagration and destruction of sites. In central Anatolia, the number of violently destroyed and abandoned sites remains relatively low until the Early Bronze II/III period, while in southeastern Anatolia, destruction is far more widespread at the end of the Late Chalcolithic, and again at the end of the Early Bronze II/III period. This correlates well in both regions with an increase in fortification systems, weapons types and bioarchaeological trauma. The following chapter presents iconographic evidence of violence and hierarchy from the Chalcolithic to the Early Bronze Age, both in Anatolia and in contemporaneous cultures.

Destruction and Abandonment Data from Central Anatolia:

Acemhöyük:

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Ahlatlıbel:

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Alaca Höyük:

Excavations of the Late Chalcolithic and Early Bronze I levels, Levels 12-9 revealed no sign of destruction level from this period (Gürsan-Salzmann 1992: 58-61).

The Early Bronze Age II and III levels, dated to Levels 8 to 5. Level 5 was destroyed by a large fire which seemed to completely destroy the entire Early Bronze Age settlement. Level 6 was destroyed by what appears to have been an earthquake, with numerous large stones fallen and even human remains discovered under the rubble. The site was briefly abandoned at the end of the Early Bronze III period, and reestablished in the Middle Bronze Age (Gürsan-Salzmann 1992: 55-58).

Alişar Höyük:

In the Early Bronze II period, the site expanded outwards and the terrace portion of the settlement was inhabited fort the first time. On the mound, three buildings were excavated in Level 11, all of which were burnt at the end of the level (van der Osten 1933).

In the Early Bronze III period, at the end of Level 6, the entire system was burnt and destroyed, with a new stronger and thicker wall built in the Level 5 immediately afterwards, made of stone four meters wide (van der Osten 1933).

Bademağacı Höyük/Kızılkaya Höyük:

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Bağbası:

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Beycesultan:

The Late Chalcolithic levels did not contain any complete buildings due to the necessarily small size of the sounding, though a small number of complete rooms were found. Many of the houses excavated showed signs of burning, though this in itself tells us little, as there can be many reasons for burning. Many of the rooms found were destroyed by fire and then rebuilt. In particular a house from Level XXXII was rebuilt in phase XXXI, using the same foundations and orientation, then itself later destroyed by fire (Lloyd and Mellaart 1962: 18-26).

The Early Bronze Age I levels (XIX-XVII) revealed no signs of burning (*Ibid*: 29).

The Early Bronze II was comprised of Levels XVI-XIII. In Sublevel XIIIb, the area was burnt, perhaps due to an earthquake, along with evidence of possible "earthquake cracks." In the rebuilding, the walls were slightly changed in orientation and then in XVIIIa, the whole area leveled and flattened after another fire. After this phase, the style of material culture, pottery and architecture change, leading the excavators to conclude "the introduction of a new ethnic element amoung the occupants of the mound could unmistakably be detected" (*Ibid*: 36-56). It would seem then at the end of the Early Bronze II, some sort of event happened at the site, causing major changes in the material culture.

In the Early Bronze III period, Levels XII-VI, much changed at the site. It is unclear from

the reports if there was a period of desertion and reoccupation at the site after the destruction of the Early Bronze II buildings. Three *megara* were were found in Levels VII, IX, and X, being built then reused in all three levels, though in Level IX, Megaron B burns down and is not later rebuilt in Level X. The abundance of material left in the building indicates the fire was unexpected and quick to destroy the house (*Ibid:*58-62).

Boğazköy-Büyükkaya/Yarıkkaya:

No data on destruction levels is noted in any of the publications on this site for the relevant time periods (Schoop 2005: 16-19).

Büyük Güllücek / Kaletepe:

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Çadır Höyük:

Late Chalcolithic period had a single, large public building, the so-called Burnt House, destroyed by fire (Steadman 2010).

No signs of destruction in the Early Bronze Age (Personal excavations of the author).

Camlıbel Tarlası

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Can Hasan

Level 2B destroyed by fire (French 1998: 27-33), then rebuilt in Level 2A with a terracing over the older deposits, though with less regularity than found in the earlier level. Level 2A was abandoned, without obvious signs of destruction, then later reestablished in the Late Chalcolithic Level 1. Level 1 was abandoned during the Late Chalcolithic period, with no signs

of destruction, and the site never reestablished as a permanent habitation site (*Ibid*: 43, 49-50).

Çatal Höyük West

The Chalcolithic levels were found only two small soundings, nothing is known of the layout of the site from this period, though the site was abandoned forever at the end of the Middle Chalcolithic.

Demircihöyük/ Sarıket

No signs of widespread destruction wasn noted from any of the levels. At the end of the Early Bronze period, the settlement was abruptly abandoned at the end of phase P, with no previous signs of a decline in the settlement or any large destruction level, making the end of the settlement somewhat mysterious (Korfmann 1983).

Elmalı-Karataş (Semayük)

The central complex and its walls were burnt moderately at the end of Period I, after which they were rebuilt in roughly the same orientation and layout. During the Early Bronze I period, at the end of Period II, the entire structure was again burnt completely, after which the area was razed and flattened, the ash and rubble used to create a terrace to rebuild upon. The site was reestablished immediately in Period III (Warner 1994: 7-8).

There are no final destruction levels; the site was somewhat mysteriously abandoned early in the Early Bronze III period, with no signs of decline in the settlement or population (*Ibid*: 189). Unlike the frequent burnings and rebuildings of the central complex, the village itself, though moving around the mound between the different periods, was never majorly disrupted (*Ibid*: 178-179).

Gâvur Evi Tepesi

No data on destruction levels is noted in any of the publications on this site for the

relevant time periods (Vandam 2013:244-248).

Gelveri-Güzelyurt

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Gözlü Kule/Tarsus

The Goldman excavations of the Chalcolithic levels were only found in a deep sounding 3.5 x 4.5 meters in size, so little information is known from these excavations about the architecture or layout of the town (Goldman 1956: 7-8).

At the end of the Early Bronze I period, a large fire burnt down all the excavated structures. After the destruction, the structures were rebuilt (Goldman 1956: 20-32). At the end of the Early Bronze Age II period, the entire area was again burnt down and the settlement was completely destroyed (Goldman 1956: 20-32). At the end of the Early Bronze III period, all buildings were razed and a new architectural style was begun in the Early Bronze / Middle Bronze transitional phase (Goldman 1956: 32-39)

Güvercinkayası

At the end of the Middle Chalcolithic, most of the houses were destroyed by fire (Gülçur 2000: 80-83).

Hacılar

The final level of Late Neolithic Hacılar was completely destroyed by a fire, and was then rebuilt in Level VI, resettling new areas of the site and only using much of the burnt areas as open space (Mellaart 1970: 25).

The village was nearly completely destroyed at the end of IIa, but was rebuilt in nearly the exact same manner in Level IIb, with only some minor differences in the eastern quarter and

a smaller size village (Eslick 1988: 18). Hacılar IIb was also destroyed by fire, after which, the site was rebuilt completely, though it was smaller in size, and in a new orientation and fashion (Mellaart 1970: 75-87).

In Level I, the entire site was destroyed by fire, with inhabitants still found inside (Eslick 1988:24).

Hacılar Büyük Höyük

No data on destruction levels is noted in any of the publications on this site for the relevant time periods (Umurtak and Duru 2012: 22-23).

Harmanören

Small unfortified cemetery site with no known associated habitation.

Horoztepe

Small, unfortified cemetery site without excavated associated habitation.

İkiztepe

The site had a fair amount of signs of destruction at the site from the Late Chalcolithic levels (Dönmex 2006: 94).

Kalınkaya-Toptaştepe

Small unfortified cemetery site with a nearby unexcavated associated habitation site.

Köşk Höyük

At the end of the Early Chalcolithic occupation period, approximately 50 to 60 years after the level was constructed, the entire settlement was completely destroyed by fire, though little evidence of the cause of the fire were found (Oztan 2003: 71). After the fire, the settlement was reinhabited for a short period of time, with new houses built in a similar style to the older houses, even reusing some of the walls from the earlier structures, but smaller in size, and without the

external storage buildings or platforms (Öztan 2008: 86-87).

Küllüoba

No data on destruction levels is noted in any of the publications on this site for the relevant time periods (Efe et. al. 2001:43; Efe 2007b: 254; Efe and Fidan 2008: 68-70).

Kültepe-Kaneş

A small number of Early Bronze III buildings were unearthed. In Level 13, a structure with stone foundations destroyed by fire was excavated. Next, in Level 12, a small temple was uncovered, made of mudbrick. At the end of the level, the temple was burned down. In Level 11, on the same site, a large multi-roomed rectangular mudbrick structure was uncovered. The building contained a central open courtyard with a central hearth, and numerous smaller rooms leading off from this courtyard, from Level 11b. Destroyed by an intense fire, the building was never rebuilt. The building was not a domestic structure. Thought its exact use remains unknown, it may have been a public space (Özgüç 1986: 31-34).

Kuruçay Höyük

At the end of Level 7 (Early Chalcolithic), the entire settlement was destroyed in a fire, and the site left abandoned until the Late Chalcolithic (Duru 1994: 99-100). After the destruction and abandonment of the Early Chalcolithic level, the site was abandoned and reestablished later in the Late Chalcolithic, by an entirely new cultural group, likely after a gap of around a millennium (Duru 1996: 144).

The Level 6 city was burnt and rebuilt a number of times, largely in the same plan, with Level 6A being the most completely destroyed. After the destruction of Level 6, the site continued to exist, with a similar layout and material culture, but the settlement became smaller and smaller with the architecture less and less well made, with small new innovations in pottery

and architecture beginning in Level 4 and into Level 3 (Duru 1994: 117). After Level 3, the site was again destroyed, and a new settlement began with the Early Bronze Age I.

Maşat Höyük

At the end of the Early Bronze III period, the entire settlement was destroyed in a large fire (Yakar 1985: 204-205)

Orman Fidanlığı

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Oymaağaç

Small unfortified cemetery site with no known associated habitation.

Resuloğlu

Small unfortified cemetery site with no known associated habitation.

Salur North

Small unfortified cemetery site with no known associated habitation.

Suberde

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Yumuktepe/Mersin

The entire settlement was burnt down at the end of Level XVI (Caneva 2010: 37-50). No further destruction levels found.

Destruction and Abandonment Data from Southeastern Anatolia:

Arslantepe (Malatya)

The large tripartite temple of Level VII was destroyed by fire (Frangipane 2010: 25-26,

31-36). The temples of period VIA, in particular Building XXIX, a large ceremonial stone and mudbrick building located on the western edge of the mound, were also destroyed by fire (Frangipane 2001: 2-3)

At the end of Period VIA, a large fire completely destroyed the palace area, ending the way of life found in Periods VII and VIA. After the fire, the site was partially abandoned, and a period of crisis seems to overtake the entire Malatya region, with only occasional occupation by what appeared to have been transhumant pastoral nomads with a style of material culture previously unknown at Arslantepe. After, the site was rebuilt in Phase VIB, but in a completely different style than before, but with some continued cultural elements, such as the production methods of potter and the types of livestock in use, while the structure and administration of the site changed quite radically, with the *cretulae* of the previous two periods gone completely. The centralization of the previous period was gone, with no evidence of the redistribution of food any longer, or mass production of pottery. It seems then that the common folk of the previous period did re-inhabit the site, but the ruling elite changed, with a far more war-like attitude among the top strata (Frangipane 2010: 38-42).

At the end of Period VI B, the entire site was destroyed by fire, all the monumental buildings were demolished, and were never rebuilt. The site was splintered and not well populated during the Early Bronze II periods, Periods VIC and VID1, and was not well settled again until period VID2 (Frangipane 2010: 40).

The site was abandoned at the end of the Early Bronze III period for some length of time, perhaps as long as a century, before being once again inhabited during the Middle Bronze Age.

Birecik

Small unfortified cemetery site with no known associated habitation.

Carchemish

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Değirmentepe

At the end of the oldest phase, Subphase 3, the complex was destroyed by fire, and was then rebuilt (Esin 1985:253-254).

Domuztepe

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Fıstıklı Höyük

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Gedikli/Karahöyük

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Gre Virike

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Girikihaciyan

From the Halaf levels, some of the houses (e.g. Round house 4), were burnt, without further signs of violence (Watson and LeBlank 1990: 33). After the houses were abandoned and destroyed, the majority of the site was reused as a dumping ground for trash, or as a place to dig pits for various reasons (*ibid*: 40).

Gritille

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Hacınebi

Some of the buildings in the southern portion of the site were destroyed by fire at the end of Phase A, while others were abandoned and fell apart over time (Stein et. al. 1998:147-150). In the B1 Level, some of the houses were burnt down and destroyed (Stein et. al. 1998:147).

Most interestingly, in the B2 Level, the site of Hacınebi showed nearly no signs of violence or warfare. While the settlement was protected by a city gate, no weapons were noted in graves, few of the levels contained evidence of destruction, and the destruction was only to singular buildings rather than the whole site, and the human remains found did not show evidence of violent death, indicating most likely peaceful coexistence between the local peoples and the Mesopotamian immigrants (Stein 2002: 152).

Hallan Çemi

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Hassek Höyük

Two different levels in the Late Chalcolithic Phase 5, Phase 5a and Phase 5b, were both destroyed in a large fire that spread to the entire settlement (Helwing 2002: 14-20). At the end of the Late Chalcolithic, the settlement at Hassek Höyük was burned, with a new settlement placed over the remains (Algaze 1999:540, 545).

Hirbemerdon Tepe

No data on destruction levels is noted in any of the publications on this site for the

relevant time periods.

Kalaycık Tepe

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Kazane Höyük

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Kenan Tepe

In the Ubaid period, only a small portion of this early level was exposed, so that the layout of the settlement could not be ascertained, though it seemed to be restricted to the eastern and southern slopes of the mound. Next, the architecture became more permanent, with multi-roomed buildings made of mudbricks, both domestic and storage spaces. These were all heavily burnt down at the end of the phase, preserving them quite well (Parker 2007:4-7).

In the Late Chalcolithic, at the end of Level 4, the entire site was destroyed by a very large fire, and all architecture was demolished. After, the population was slow to rebuild, though eventually the site grew again to its original size (Foster 2009:158-174).

Korucutepe

Phase B Late Chalcolithic (Strata XXX-XXXIII) architecture was highly burnt, with remains of a nearly complete two-room mudbrick house with a central hearth. A number of burnt buildings were found in this phase, with various degrees of preservation (van Loon 1978: 9-10).

Starting in strata LXXIII, (Phase C) more than 200 square meters of horizontal exposure was excavated. This whole area was again highly burnt, and was rebuilt again in the next strata (*ibid*: 12-18).

In Phase E, Early Bronze IIIA (strata LXXVIII-LXXXIX), at the end of Phase E, the area was again burnt, and the settlement abandoned for a period of time until resettled by seemingly a new population, with new habitation in a different area of the mound (*ibid:* 18-22).

Kurban Höyük

The Early Chalcolithic period, labeled as Middle-Late Halaf (5000 BC, Level VIII) showed no signs of destruction levels (Algaze 1990: 23-28).

The Middle Chalcolithic Period (Period VII) was found only in northern mound, and only in the deep soundings. No standing architecture was excavated, and little beyond pottery was recovered (Algaze 1990: 28: 120).

The Late Chalcolithic Period (Period VIA-B) was found in the northern mound, but the area was not well preserved and no standing architecture or small finds of note were uncovered (Algaze 1990: 28-29).

At the end of the Late Chalcolithic, an ash layer was found, with the site being completely rebuilt in a new fashion in the Early Bronze I period (Algaze 1990: 121).

The Early Bronze/Middle Bronze Transitional period (Period III) was begun after a short abandonment of the Period IV settlement, and was found only on the southern mound. At the end of this period, the site was abandoned until the Abassid period (*Ibid*: 431).

Lidar Höyük

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Norşuntepe

After Norşuntepe was completely burnt and destroyed at the end of the Late Chalcolithic, the site was abandoned until the end of the Early Bronze I period. The Level IV palatial complex

was highly burnt and destroyed then rebuilt in Level III (Hauptman 1976: 77-79).

Oylum Höyük

There was no visible hiatus between the end of the Late Chalcolithic and the start of the Early Bronze I period at Oylum Höyük, and the transition was very gradual. One level was found to have been destroyed in a fire, and was seemingly immediately rebuilt. At the end of the Early Bronze period, the site appears to have been abandoned for a period of time, before being resettled in the Middle Bronze Age (Özgen and Helwing 2004: 66-67).

Pulur (Sakyol)

Levels VIII, Level IX, and Level X were burnt down (Koşay 1976:127-143).

Samsat

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Tepecik/Makaraz Tepe

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Tilbes Höyük and Surtepe

At the Early Bronze I level, only a small amount of burning was noted in the publications (Fuensanta 2007).

Tilbeshar

While little is known about the Late Chalcolithic settlement, the site was abandoned at the end of the Late Chalcolithic, then reestablished later in the Early Bronze I period. In Level III A1, the Early Bronze I period (3100-2900), a number of destruction levels were found, with a particularly large destruction level at the end of the Level III A1 period, then most of the site was

abandoned. In the destruction levels, several polished stone axes were recovered. (Kepinski 2005: 147-148; Kepinski 2007: 153).

By 2600 BC, Level CIII in the Early Bronze III was abruptly abandoned at the end of the period, with the floors of buildings left scattered with pottery and other small finds left *in-situ* on the floors of houses. (Kepinski 2007: 156-157).

In the final Early Bronze level, Level D (2300-2100 BCE), the site was quickly reoccupied, with a small amount of new construction, and the reuse the many of the older buildings. While other areas of northern Syria, notably Ebla, were experiencing periods of downturn, Tilbeshar continued to thrive for a period (Kepinski 2005: 150; Kepinski 2010: 309).

Tilmen Höyük

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Tishrin Dam Sites

Shiukh Fawqani/Siyuh Fauqani

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Jerablus Tahtani/Garablus Tahtani

The site was abandoned, but not destroyed, during the Late Chalcolithic period, probably due to flooding. In the Early Bronze Age, two major phases were excavated, Periods 2A and 2B. The earlier phase, 2A was an open settlement, with mudbrick constructed rectilinear buildings, founded some period of time after the Late Chalcolithic abandonment. At the end of this phase, the site was burnt and destroyed. The second phase, 2B is also known at the fortified phase, built directly over the remains of the previous destroyed settlement. At the end of the Early Bronze

Age, the site was abandoned, at around 2200 BC, and remained empty until the Late Iron Age, after, seemingly, a series of large floods made the site an island in the river (Peltenburg 1999: 100-103; Cooper 2006: 20).

Tell Shiyukh Tahtani/Siyuh Tahtani

The fill from the Early Bronze contained evidence of burning and destruction levels, though not enough of the Early Bronze settlement was uncovered to say anything further (Falsone 1999: 137-138).

Tell Amarna/ ʿAmarna

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Tell Al-'Abr/ ʿAbr

Level 7 was destroyed by burning, though it was unclear if the entire settlement was burnt, or only a few buildings. Level 5, while unburnt, appears to have been quickly abandoned, as a large amount of pottery and tools were found abandoned *in-situ* on the floors of the rooms found. The buildings of Level 2 also appear to have been destroyed by fire, then rebuilt in a similar fashion (Hammade and Yamazaki 2006:23-40; Yamazaki 2012: 185-186).

Titriş Höyük

At the end of the Early Bronze III period, the city collapsed, with most of the population deserting the city. The Lower and Outer Towns were completely abandoned, never to be re-inhabited. Only the central mound area was inhabited into the Middle Bronze Age, at only a small fraction of the size, approximately three hectares in size. Some of the hinterland settlements, previously dependent upon Titriş Höyük, continued or were newly founded, becoming instead small, independent farming villages and hamlets (Algaze and Pournelle 2003:

110).

Tülintepe

No data on destruction levels is noted in any of the publications on this site for the relevant time periods (Esin 1976: 148-151).

Yarım Höyük

No data on destruction levels is noted in any of the publications on this site for the relevant time periods.

Zeytinlibahçe Höyük

The site was abandoned at the end of the Early Bronze I period, and not reinhabited until late in the Early Bronze III/IV period. It remains unclear why the site was abandoned at this time, having already weathered out the collapse of the Uruk sphere, which disrupted so many other contemporary and local sites. The excavators' current hypothesis is a rise in the levels of the adjoining Tigris, flooding the site and causing it to be unlivable for a period of time, in combination with an unknown political or cultural issue, for which little archaeological evidence was found at the site Höyük (Balossi et. al. 2007: 359, 366).

Chapter Eight : Iconography

Introduction

In this chapter, local iconography of violence, warriors or king-figures from sites in central and southeastern Anatolia is considered and analyzed. The chapter begins with a brief history of iconography from both Anatolia and contemporaneous northern Syria and Mesopotamia. Next, an analysis of the data collected is presented. The chapter is concluded with all known iconographic data, by material type, from each of the two regions.

Background and Definitions

Iconography is perhaps the only line of evidence from the archaeological record, excluding text, to present an emic view of a society and its understanding of violence and warfare. Iconography from the Chalcolithic period emerges from a variety of sources. In prehistoric earlier periods, however, only a small amount of pictorial evidence survives, especially when compared to later periods, with modern museums full of statues, carvings, monuments and seals from the ruins of major capitals. Prehistoric Anatolian iconography derives primarily from seals, cylinders, and stamps, and the clay and mud sealings that result from these objects. In addition, a small number of statues, statuettes, stone carvings, painted plaster, and carvings on various ceremonial or utilitarian objects, such as daggers, spears, standards, and other similar objects are known.

The small amount of monumental art from this period reveals the presence of elite ruling figures by the start of the Early Bronze age, often depicted wearing stylized clothing and in stylized scenes, which continue in use until the end of the first millennium BCE. Monuments

create a visible reminder of the presence of power of the ruler, to be seen both by those he (and, rarely, she) rules and those he hopes to conquer. In particular, creating a monument to war is quite common throughout history: a permanent and highly visible record of a successful warfare venture, proving the power of both the ruler and his kingdom (Nadali 2007:336-337).

Of course, "reading" iconography is not straightforward. A scene depicted in a work of art may have been instantly recognizable to the eyes of the populace that created it, but much of that meaning died with the civilization that created it, and modern sensibilities and understandings may not properly comprehend what was meant by certain iconographic flourishes. For example, consider the many statues of naked and voluptuous women known from Neolithic sites such as Çatal Höyük. One particularly famous statue depicts a large naked women sitting upon a throne formed by two large cats. She may be giving birth, as a figure appears to be emerging from between her open legs (Mellaart 1990). The meaning behind this figure remains unknown and highly contested. Is she a goddess? Is she giving birth? Is she meant to represent fertility? Could she be something as mundane as a child's toy or a figure meant to titillate adults? The context of this clay figurine is lost to us; while the population of Çatal Höyük may have easily and intuitively understood what she represented, we can only guess, with no definitive answers possible. In the study of iconography, this is nearly always true. Texts may better explain a scene, but often we cannot know the mindset and feelings meant to be evoked by a particular scene.

Very little iconographic data remains from prehistoric Anatolia. Some of the best examples are cylinder seals, cylinder stamps, and cretulae, made locally or imported from Syria and Mesopotamia. Evidence of warriors, weapons, and chiefs or kings is largely missing from this small body of evidence. Prehistoric Anatolian art most often was geometric in nature or

presented scenes of animals. If humans appear, the figures were either naked females, commonly depicted in clay figurines, as from Çatal Höyük, or schematic non-gendered human shapes, often displayed floating in space, tending to animals or feasting (Collins 2000: 49). A rare exception is the male and female figures found on two daggers from İkiztepe (Bilgi 1984).

Figure 8.1: Human figure with quadruped, from Arslantepe (Frangipane 2007: Seal A206-015)

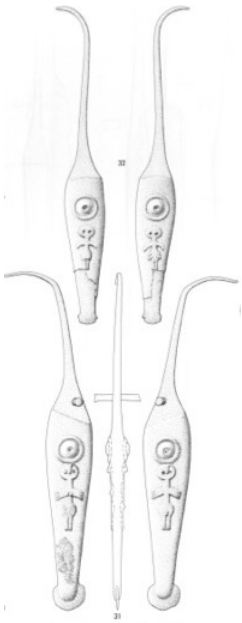

Figure 8.2 Human figures on bronze daggers from İkiztepe (Bilgi 1984: Figure 11.31)

Contemporary cultures in Syria, Mesopotamia, and the Levant depict a variety of warrior figures: kings, kings as warriors, kings as shepherds, etc. The earliest depiction of a king-like figure dates to the Uruk period: a male human figure, often with a beard, wearing either a head band or cap, a long or short skirt, and naked from the waist up. This figure began to first appear on seal impressions and later in statues, carvings, and scenes on vases such as the Warka vase (See Figure 8.3). This figure, usually referred to as the "priest-king" in art history literature, was often portrayed in various symbolic activities such as leading processions, likely to a temple, feeding animals, and scenes of violence or conquest. The violence often came in the form of the smiting of enemies, bound or unbound, using weapons such as spears, bows and arrows, or maceheads (Collins 2000: 49-50).

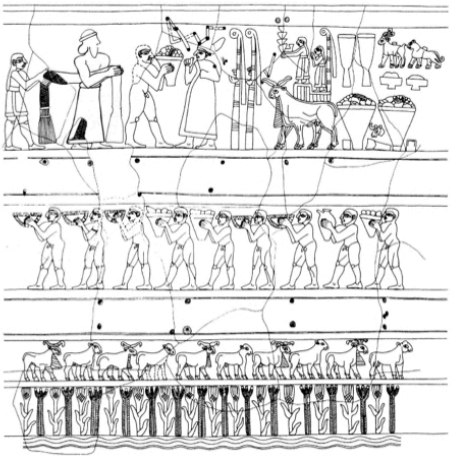

Figure 8.3: Scene from Uruk Vase with Priest-King Figure at top left (Suter 2014, Figure 1)

Scenes of bearded men wielding weapons, including maceheads or staffs probably depict a ruler figure, be it a chief, king, or priest-king. According to Schmandt-Besserat, a total of 30 artifacts are known in the Mesopotamian sphere with depictions of a ruler-like figure, from statuettes (four), a single stele, two stone plates, an ivory knife handle, a stone vessel, and twenty

cylinder seals and sealings (Schmandt-Besserat 1993:201-204).

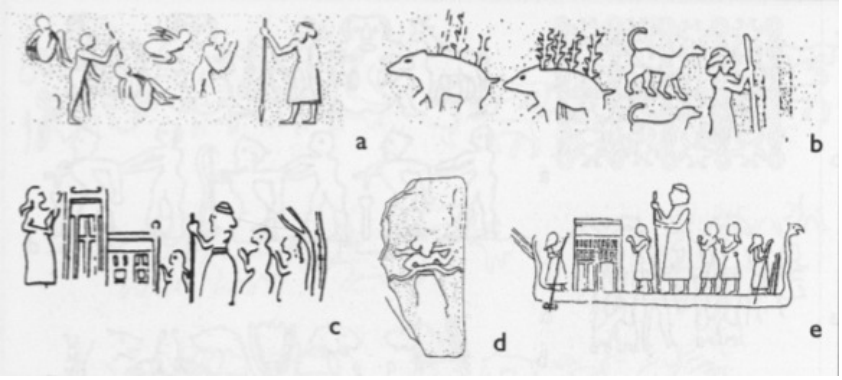

Figure 8.4: Uruk Seals with Depictions of the "Chief-King" (Nadali 2007: Figure 1)

Art historians associate the appearance in the Chalcolithic of hatted and bearded figures with living, specific men, probably elites (e.g. Amiet 1980; Schamndt-Besserat 1993; Collins 2000). The hat in particular is found in later art on ruler figures, both in Mesopotamia and in Anatolia. Scenes of this figure hunting lions is already known from a single example from Uruk, from the Hunt Stele, which shows a beaded man with a round hat, knee-length skirt, a spear in one scene, and a bow and arrow in the next, hunting lions (McMahon 2009). The famous Uruk vase depicts a ruler figure paying homage to a goddess, while lines of servants bring offerings, the earliest example of a scene similar to those found later in both Mesopotamia and Anatolia. Cylinder seals and sealing from this period depict the same bearded and be-hatted figure, shown feeding rams, sitting on a sledge and pouring liquid on the head of a smaller figure outside the walls of a city, slaying enemies with a bow or spear, or presiding over captured and bound prisoners with his spear at rest. The majority of these objects were found in Uruk; none are Anatolian. Whether the figure represents a king, chief, priest or god remains unknown and controversial (Schmandt-Besserat 1993: 201-207). The similarity between the appearance of the

figure and the depiction of named kings in later periods is striking.

The start of the Early Bronze Age in Mesopotamia saw an increase in iconographic depictions of warfare. The earliest known monument is the so-called Vulture Stele, depicting the victory of Lagash over the nearby Umma. The highly fragmented monument shows the ruler (*ensi*) of Lagash, named on the stele as Eanatum, larger than life, and with many of the same accouterments as were already present in Uruk. In one scene, he is sitting on a throne, though only a small portion of Eanatum was found intact. In another, he is depicted subjugating the enemy, holding them in a large net, taking bound and naked prisoners captive, and allowing his solders to decapitate the enemy, leaving their naked and headless bodies for the vultures, with a phalanx of spear-armed solders behind him (Nadali 2007: 351-353).

A far more complete record of war comes from the famous Standard of Ur, from the Royal Cemetery of Ur, excavated in Sir Leonard Woolley in 1927 (Woolley 1934). The two sides, called by art historians War and Peace, depict the two sides of the power of the ruler of Ur. The war side presents a war procession, with donkey drawn chariots, trampled enemy soldiers, a phalanx of armed soldiers, and lines of soldiers carrying spears and leading captured enemies. The top register shows the victorious ruler himself, not named on the object, overseeing the scene (Hamblin 2006: 49-50).

Only a small sample of Akkadian martial artwork has survived into the present day. The majority, such as the famous Naram-Sin Stele or the Sargon Stele, show various scenes of warfare and conquest, with Akkadian soldiers parading before their king (Foster 1985). Of all known Akkadian artwork, only a small number do not depict an Akkadian king and his soldiers victorious in battle. This includes a statue of Manishtusu, (the third king of the Akkadian empire), a statue of Naram-Sin from Susa (with only the feet surviving), a bronze head found at

Ninevah, likely depicting either Sargon or Naram-Sin, and a stone carved depiction of Naram-Sin from Diyabakır (McKeon 1970; Nigro 1998). All of these depict the king of Akkad, though not in battle. All other scenes known from this period are scenes of war.

One other fragment probably dates to the rule of Sargon, the so-called alabaster Nasiriyah stele, with two fragments in the Baghdad museum and one in the Boston Museum. Based on stylistic and material similarities all three fragments probably came from the same stele, and although the original context is unknown, it is widely assumed that the stele was originally found in the Nasiriyah region in southern Mesopotamia. No writing was found on the remaining fragments, so a more accurate date to the stele or the location of the scenes depicted remains impossible. The stele shows victorious Akkadian soldiers carrying pillaged goods, and escorting a line of bound and naked foreign prisoners, presumably taken captive in war. Fragment A of the stele reveals an Akkadian solder in a long skirt, carrying a leather belt with attached sheathed dagger in one hand, and a two-handled vessel in his other. McKeon suggests that the vessel was made of metal (McKeon 1970: 225-230).

Figure 8.5: Detail of the Nasiriyah Stele (McKeon 1970: figure 4)

A closer look at the vessel reveals it to be a *depas* jar, of the type best known from the western coast of Anatolia, and in particular from Troy or the Troad area in the Early Bronze III (Mellink 1963:106-108). This type of jar was widely traded and found throughout Anatolia, but was a distinct style of vessel that appears to have only been made in Anatolia, with no known similar forms made in Syria or northern Mesopotamia. This single scene is the best-known physical evidence of Akkadians in Anatolia, showing a solder of Sargon carrying an Anatolian vessel, perhaps pillage from a raid into the region.

Human or "Warrior" Iconography from Anatolia:

Wall Paintings

An overriding problem with the archaeology of Anatolia, and indeed, archaeology as a discipline, is the large amount of data lost to us through time, destruction, and undiscovered sites. Archaeology is like trying to understand a thousand-piece puzzle with only 50 pieces in the box. This is particularly true in the case of iconography. It is likely that the walls of numerous buildings in Chalcolithic and Early Bronze Age settlements would have been adorned with paintings, be they simple colors or lines of colors, geometric shapes, or representations of plants, animals and humans. Sadly, only a very small number of such paintings remain known to us through the archaeological record. Even sites famous for their paintings, such as Neolithic Çatal Höyük, were only known from a small number of buildings (Collon 1990).

In terms of Chalcolithic and Early Bronze Age Anatolian painted scenes, only a few buildings retained their painted interiors, due to factors such as the preservation of only a few courses of what was once a far taller wall, the crumbling of the plaster that once covered the wall or the wall being burnt in antiquity.

At the site of Arslantepe in southeastern Anatolia, a few examples of painted walls are known, in particular from the walls of Temple A (Building III) and Temple B (Building IV) and from Level VIA. These bipartite buildings, located at the center of the city, were built around a large *cella* at one end and a row of small rooms parallel to this sacred section. The temples were well built, with walls up to five to six meters in height, made of mudbrick and wooden beams. A large amount of smashed ceramics and small offering tables were found upon the floor of the temples. The temples may have been two stories tall originally, though Frangipane remains uncertain of this. The excavator believed the temples were used for both worship and as administrative centers (Frangipane 1997:53, 63).

In the small side rooms in both temples A and B, traces of painting were found upon the walls, leading to the *cella*, in red and black paint over white plaster. Paintings were also found in the Arslantepe Palace complex. These paintings depicted geometric shapes, two bulls pulling a sleigh, and two human-like figures, one depicted perhaps sitting on a throne-like chair (Frangipane 1997:64-65). All of the paintings were highly stylized, the human figures made of wavy lines. Poor preservation of the plaster further complicates the ability to understand the scenes shown. Similar scenes of seated figures and of bulls or cows pulling a sled are known from cylinder seals and sealings found at Arslantepe, as discussed in the next section. The depiction of an elite individual in charge of farming, threshing, and collection of goods is in keeping with Arslantepe's centralized control over the population in collecting and redistributing goods through the temples. The iconography of the site reflects the duties of the ruler at the center of this process.

Seals:

A review of all published seals dating from the Early Chalcolithic to the end of the Early Bronze Age in Anatolia reveals only a small number of scenes depicting humans as either rulers, warriors or hunters. A small number of sites studied in this dissertation had some seals published, be they stamp seals, cylinder seals, or seal impressions (cretulae). The majority was geometric, with a smaller number showing animals or plants. Only a very small minority showed human figures.

Figure 8.6: Seal with "Chief" figure from Arslantepe (Frangipane 2007, seal A206-001)

In the Early to Middle Chalcolithic, through the end of the Ubaid period, human figures were nearly nonexistent, with only a few known from seals at Domuztepe and Değirmentepe (Campbell et. al. 1999). Of these, the most common are single human figures, shown simply standing or perhaps dancing (Esin 1994:70-78). The excavators posit that perhaps one such figure is shown in a "position of worship," although none are depicted in any sort of fighting or defensive stance. Humans are shown in association with animals, either standing nearby or hunting, while human-animal hybrids, such as the "bird-men" from Değirmentepe, are also common, and may be indicative of a deity (Esin 1994: 70-79).

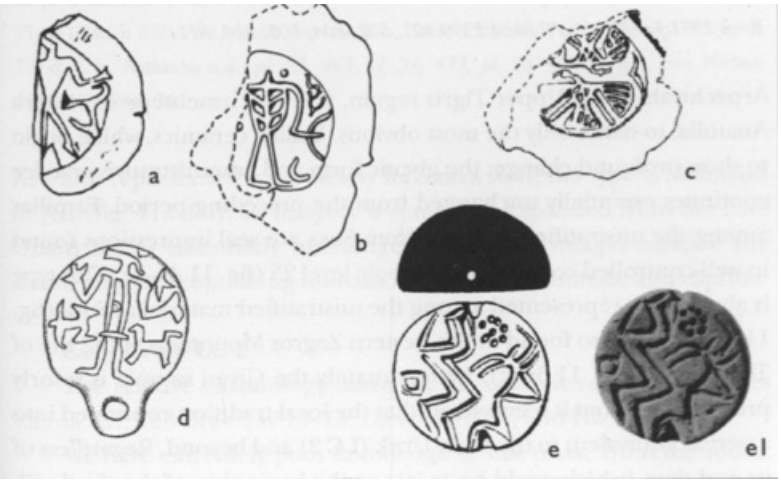

Figure 8.7*: Seals with depictions of human figures from Değirmentepe (Pittman 2001: figure 11.3)*

Painted Ceramics

One of the earlier images from Anatolia come from the Halaf levels at Domuztepe. A number of painted ceramic sherds revealed more than just the geometric shapes typical of the Halaf period. One sherd displayed two headless and seemingly naked human figures, laid upon the ground, with birds shown in association with the bodies. Below the bodies was a single detached head. Besides the fallen bodies was a leafy tree on one side and a standing human figure in a skirt on the other. This living figure is holding something, which unfortunately is broken off (Carter 2012:111-112). This scene is somewhat reminiscent of the famous vulture painting from Neolithic Çatal Höyük, with headless bodies associated with large birds, while dating many centuries earlier. No other Halaf period iconography shows headless figures as found at Domuztepe, though the sight of headless and naked bodies next to standing figures is common in later iconography as a sign of conquest and victory. It is not clear what this scene represents in this case, however, largely due to the fragmentary nature of the standing figure (Carter 2012: 113). Is this a scene of conquest? A burial rite? Excarnation of a corpse? Two

unrelated figures? It remains unknown, although this could represent a scene of warfare, not entirely unheard of with the contemporaneous Death Pit of Domuztepe.

Figure 8.8: Painted ceramic from Domuztepe depicting human figures (Carter 2012: Figure 9a)

Other human figures at Domuztepe featured dancing figures and a number of detached and bearded heads. It is unclear if these heads are meant to represent decapitation or are merely representing the heads of living figures. It was not uncommon in Halaf period burials for heads to be removed and buried alone, as at the Domuztepe Death Pit, so perhaps these detached heads have more meaning than just their appearance. Other pots show humans figures hunting bulls, leopards, and deer with bows and arrows, and nearby animals such as birds and snakes (Carter 2012: 115-119).

Summary of Iconographic Data

Iconographic data is the clearest evidence we have from ancient societies to inform us about the mindset and understanding of warfare, violence, social classes or costume. Unfortunately, very little iconographic material remains from prehistoric Anatolia, mainly in the form of cylinder seals, sealings and cretulae. Comparative iconography from contemporaneous

Mesopotamia and northern Syria help fill in the picture, giving us information on the appearance of king-like figures in those locations, though this does not prove the existence of central figures in central or southeastern Anatolia. The Nasiriyah Stele gives some concrete evidence of Akkadian presence in Anatolia, though this may be from raiding rather than conquest. Iconography of human figures from central Anatolia includes male and female figurines etched on daggers from Early Bronze II levels at İkiztepe, and from paintings, sealings, stamp seals and painted pottery from Arslantepe, Domuztepe, Hacınebi, and Değirmentepe. With the exception of Arslantepe, none of these figures are clear depictions of rulers or warriors. The figures are depicted hunting, next to animals, worshiping deity figures or floating in space. In the next chapter, evidence of trade and trade routes through both regions will be presented, in order to give further context to the rise in violence noted in chapters four through eight.

Chapter Nine : Trade Routes and Landscape

Introduction

In this chapter, the data on trade routes and the use of landscape within and around studied sites in central and southeastern Anatolia is considered and analyzed. The chapter will begin with a brief history of the study of Anatolian landscapes and travel routes, both from the archaeological and historical record, followed by the methodology employed in this dissertation to reconstruct these ancient routes. Next, an analysis of all the data collected is presented. The chapter is concluded with the landscape data, site by site, for each of the two regions as a whole, rather than by time period, as well as the location of each site along the proposed ancient travel and trade routes. All available information on landscapes from the all studied sites will be given, along with maps detailing reproductions of ancient travel routes, with the studied sites superimposed on the routes. A table of all data is available as Appendix Seven at the end of this dissertation.

Figure 9.1*: Map of Prehistoric Anatolia with key sites and projected travel routes in red (Adopted from Algaze 1993 and Sahoğlu 2005)*

Background, Definitions and Methodology

At first glance, landscape is not an obvious source of data on warfare, conflict or violence. Landscape and trade routes, while not direct evidence of violence in and of themselves, can give information on how various groups interact with each other. A major component of practice theory, as stated in Chapter One, is the relationship between trade and warfare; interaction and violence. Without the interaction and familiarity that derives from trade, future warfare between two polities is difficult, for how else do two groups first interact? In order to better understand how various sites interacted with the greater world of the ancient Near East, knowledge of their location on and use of the landscape is necessary, as well as their location in the larger trade routes of the ancient world.

Trade and trade routes are additionally important as data to compare to evidence of destruction levels, increases in weapons technologies, fortification systems, or movements of populations within a settlement or region. For example, the central Anatolian settlement of Mersin was the oldest settlement in Anatolia with evidence of both long distance trade as well as violent destruction of the settlement and well-made fortification systems. On their own, identifying the destruction levels, fortification systems and weapons of Mersin from the Early Chalcolithic onwards informs us that Mersin was both prepared for violence and that the settlement encountered it. If the trade route evidence is added, the picture becomes clearer: Mersin was a major trade hub from the Neolithic onwards, making it also a valuable city to attack for the goods kept and traded in the city. This will be further detailed in Chapter Ten.

The rationale used by ancient populations to decide where to locate settlements is often very difficult, if not impossible, to extract from the archaeological evidence alone. Trade routes are often an important aspect of why a site was chosen as a habitation site, along with other

important factors such as proximity to water, food supplies, and other natural resources such as metals, minerals or raw materials like obsidian or flint, as well as the defensibility of the site against invaders.

Trying to reconstruct ancient trade routes is a very difficult task. A possible interpretation of the Late Chalcolithic and Early Bronze trade route is presented in Figure 9.1, based on previously published on the trade in Anatolia (e.g. Algaze 1993; Yakar 1997; Saholğlu 2005, Zimmermann 2005; Efe 2007), the published evidence of imported materials from the sites themselves, the locations of more recent and modern trade routes, and the study of the Anatolia geography. This information is then presented to create a picture of how trade, trade routes and the use of the natural landscape add to the evidence of the archaeology of war.

The subject of trade within and outside of Anatolia is abundant in the archaeological literature, as Anatolia is often termed the "bridge" between Europe and Asia, though not everyone agrees this is a fair interpretation (e.g. Özdoğan 2007; Greaves 2007). As a result, the subject of trade in this region is a popular one. Indeed, to this day, the country of Turkey is still considered by many as the border between these two regions.

There is plenty of material evidence of trade between central Anatolia and other areas, and between southeastern Anatolia and outside areas. By the Neolithic, Anatolian obsidian appears in both the Levant and in Mesopotamia (Kelly-Buccellati 1990: 12), likely the result of settlement-to-settlement trade rather than through established long-distance trade routes. By the Early Bronze Age, trade was dramatically increased throughout Anatolia. Archaeological evidence of this increase includes western Anatolian *depas* jars, "Syrian bottles," wheel-made plates, and two-handed cups (Bachhuber 2013:506; Şaholu 2005: 345; Kelly-Buccellati 1990:117; Kontani 1995: 110-111). Other evidence includes the import and export of finished

metal objects such as clothing pins, weapons and jewelry from the Caucuses and Mesopotamia, the movement of raw materials such as copper, tin, silver and gold, the spread of tin bronze technology in the Early Bronze II and III, and the export of other technologies, such as wheel-made pottery and administrative technologies such as stamp and cylinder seals (Şahoğlu 2005:340).

The later Middle Bronze Age/Old Assyrian trade between the Anatoian site of Kültepe-Kaneş and Mesopotamian Assur is well attested both archaeologically and textually, in which Mesopotamian tin and textiles were traded for Anatolian gold, lead and silver. It has often been posited that perhaps a similar, if less organized, system was already in place between Mesopotamia and parts of central Anatolia by the later Early Bronze Age (e.g. Özgüç 1986; Muhly 1973; Yener 1980; Mellaart 1982; Kelly-Buccellati 1990; Efe 2002; Şahoğlu 2005). It remains hypothetical how established the trade between these two regions was in the Early Bronze Age. While evidence of contact between the two areas exists, it remains difficult to prove how organized that contact and trade was, so the existence of the "Great Caravan Route" in the Early Bronze Age as envisioned by Efe (2007) remains an unproven theory.

The study of the spread of such technologies is covered by other authors (e.g., Kelly-Buccellati 1990; Mellink 1986, 1998; Zimmerman 2005, Efe and İlyaslı 1997, etc.). As reported by Bachhuber, texts from the north Syrian site of Ebla report trade, likely in gold and silver, with central Anatolia, as well as with Carchemish for textiles, during the Early Bronze II and III periods (Bachhuber 2013:500). It is clear that the Akkadians made some inroads into central Anatolia, as is more thoroughly explained in Chapter Three.

The trade of luxury items is often linked to the rise of complex societies and hierarchical chiefdoms, as is further discussed in Chapter One (Kelly-Buccellati 1990; Kristiansen 1991;

Wattenmaker 1994; Earle 1997; Stanish 2004; Zimmermann 2005). Indeed, there is a clear increase in the complexity of southeastern Anatolian settlements with the rise of trade with Mesopotamia in the Late Chalcolithic, and the increase in the complexity of central Anatolia with the rise in trade with the Aegean and the Caucuses in the Early Bronze II and III periods, as further detailed in Chapters Two and Three.

In particular, central Anatolia traded frequently with western Anatolia, Cilicia and northern Mesopotamia, along what Şaholu calls the *Anatolian Trade Network* (Şagolu 2005: 344). This trade network was reconstructed through analysis of the large amount of metal objects that appeared throughout central and western Anatolia during Early Bronze II and III periods, while metals were scarcer and more precious in Mesopotamia during the same period. Likely, much of the metal found in the Mesopotamian region originated in Anatolia, through trade or conquest. Indeed, as Bachhuber points out, while Mesopotamian archaeology in the Akkadian and Ur III periods was known for a number of lavish sites, such as the Royal Burials at Ur, it was once posited that the origins of Anatolian metallurgical styles must have begun in Mesopotamia, with lavish Anatolian sites such as Alaca Höyük, Horoztepe, or Troy, merely local copies of the foreign courts. The rather large corpus of metals, jewelry, and weapons since recovered from Anatolia has since put that theory to rest. Rather, the innovations made in Anatolia, where metals are common, would have influenced art styles as well as materials exported to Syria, Mesopotamia, and the Aegean (Bachhuber 2011: 158-159).

The study of warfare and trade must be interlinked, as trade is the best measure of contact in the archaeological record of interaction between various regions. The presence of foreign objects proves at least some interaction between regions, without the necessary textual records to further confirm the connection. This dissertation covers only prehistoric Anatolia, so we lack the

concrete evidence of trade that is known from the Middle Bronze Age, as at Kültepe-Kaneş and the famous records of the donkey caravan trade routes between the karums and warbartums of central Anatolia and Assur in Mesopotamia (Kulakoğlu 2011). Without such texts, it is nearly impossible to know how trade was interregional was organized, as there are no methods to distinguish goods from individual sites, rather than from general regions. While the study of ceramic origins is now possible through methods such as Neutron Activation Analysis (Grave et. al. 2008; Buton and Simon 1996), the results only provide evidence at the regional level, rather than from particular sites, although serious attempts at fine-tuning this method are underway by various scholars.

A concrete example is the famous *depas* jar, previously discussed in Chapter Three of this dissertation. This diagnostic vessel is known to originate from the western coast of Anatolia, and is often associated with the site of Troy (Mellink 1989). It is not known, however, that every *depas* jar ever found came from Troy itself, or from the western coast in general. While the presence of *depas* jars in Tarsus, for example, does speak of the presence of trade between Cilicia and the Aegean, it does not prove a direct connection between Troy and Tarsus. The study of imported pottery, metals, ivories, jewelry, and other elite goods is quite useful to understand general trade between regions, but cannot in general give useful information on trade between individual sites.

Trade routes are another method for understanding trade between regions, though it gives no more direct information about individual sites than does the study of imports and exports. The study of all trade items at all sites would be outside the range of possibility, and this subject has been studied and debated further elsewhere (e.g. Mellink 1986, 1989; Kelly-Buccellati 1990; Yakar 1997; Şahoğlu 2005; Zimmermann 2005). Beyond the brief analysis in the trade in metals,

such as copper and tin and in certain styles of weapons in Chapter Five, this dissertation focuses primarily on the use of landscape and trade routes in and around settlements to attempt an understanding of trade in prehistoric central and southeastern Anatolia and to create the trade routes depicted in Figure 9.1.

The majority of sites covered in this dissertation were located along rivers or in valleys that would have been part of ancient trade routes, as these were areas of the easiest travel. The majority of projected trade routes created by various scholars used the locations of known sites as anchors for the locations, in a somewhat circular reasoning that the sites were located on trade routes, and therefore trade routes were located around settlements.

Sea trade also existed in the Early Bronze Age, with evidence of Early Bronze harbors at Troy, Liman Tepe, Panaztepe, and Tarsus (Yılmaz 2009:441-442). Sea trade was likely faster than overland routes to settlements along the western and southern coasts of Anatolia, and into the Syrian coast.

Tracing ancient trade routes relies upon comparisons to known trade routes from later historical periods, in particular the Hellenistic and Roman periods, when these routes were first made into paved roads rather than well-worn paths. The majority of publications that attempt to reconstruct ancient travel routes use these later road systems as a context (e.g. Burney 1958; Algaze 1993). This is by no means an unreasonable assumption, as travel paths from the later periods would almost certainly have followed the paths of least resistance used by their earlier forbearers. For example, there are only so many relatively easy passages through the Taurus Mountains that separate northern Syria from southeastern Anatolia, so it is relatively safe to assume that modern roads though mountainous regions are roughly in the same locations as ancient passes.

Very little is known about ancient travel routes from before the Hellenistic age (Algaze 1993) even with the advent of a writing system in Anatolia from the Middle Bronze Age on. Ancient texts are not maps, and will often only give information on, for example, how the King was traveling between one city and the next. This can give approximations on the relative locations of ancient cities, from which their locations may be deduced, though not the exact route traveled (Wall-Romana 1990).

Of course, roads may change over time, as rivers shift, land erodes and climate changes, so the exact routes used in the Chalcolithic and Early Bronze Age periods cannot be completely reconstructed, only estimated using the best available evidence. Recently, Ökse attempted to recreate trade routes in central Anatolia during the Chalcolithic to the Ottoman period, using survey evidence of 750 sites in the Kızılıkmak River Basin to track sites locations, and how the sites were being used (e.g. as trading outposts, fortified sites, etc.) in order to recreate ancient routes between central and eastern Anatolia, through the mountainous regions. Ökse studied the survey data from various time periods to create routes based on locations of sites and the length of time it took to walk from settlement to settlement. Many of the roads Ökse suggested follow modern highway routes (Ökse 2007).

Some attempts have been made to try and understand overland trade routes outside of later historical evidence by tracking movements of imported materials found at various sites, such as pottery and metals (e.g. Efe 2007b; Şahoğlu 2005). These studies focus less on the exact location of the trade routes and more on the existence of such trade routes, and at which sites the materials would have been traded.

In particular, southeastern Anatolia settlements tend to be located along the Tigris or Euphrates rivers. According to Algaze, since the Uruk, settlements were primarily located along

rivers, as well as along an eastern-western orientation that would have lined up with the trade route between Mesopotamia and into northern Syria and southeastern Anatolia (Algaze 1993:42).

Accumulated Landscape and Travel Routes Data from Central and Southeastern Anatolia:

Central Anatolia

In central Anatolia, the major trade routes through the region focused along certain tracks. Travel routes would have moved east to west, from the Taurus Mountains, through the Central Plateau and into the western coast and the Aegean. Other routes traveled from the Black Sea, through the Pontic Mountains, down through the Central Plateau, into the Taurus Mountains, and into northern Syria and Mesopotamia. Finally, some smaller pathways connected various sites in the Central Plateau itself, and seemed to be more localized (See Figure 9.1).

Trade through the Konya plain was relatively simple, where travel routes were largely unrestricted due to the relatively easy terrain, as opposed to the more restricted access of the Taurus, Amanus and Pontic mountains.

Moving from north to south, some of the sites studied in this dissertation were located on the known ancient routes between the Black Sea, through the Pontic mountain range, and into the Central Plateau, particularly in the Eskişehir Plain. This route led from the Black Sea coast, through the Pontic Mountains, into central Anatolia and south to the Mediterranean. Moving north to south, sites along this route would have included İkiztepe, Salur, Resuloğlu, Alaca Höyük, Acemhöyük, Güvercinkayası, Gelveri-Güzelyurt, Kösk Höyük, Mersin and Tarsus. A second, more central route began near İkiztepe and moved south through Oymaağac, Büyük Güllücek, Kalınkaya, Alaca Höyük, Boğazköy, Camlıbel Tarlaşı, Çadır Höyük, Alişar Höyük, and Kültepe-Kaneş.

In the Central Plateau, other sites were located along routes that would have led from passes through the Taurus mountains, through the Central Plateau, and through to the western coast and the Aegean. Moving east to west, this includes Tarsus, Mersin, Can Hasan, Çatal Höyük, Suberde, Bademağacı, and Beycesultan, and onwards towards the western coast.

Other Central Plateau sites were located upon the rocky outgrowths known in this region, located therefore near trade routes as well as being well-protected by these natural formations, as seen most famously at Boğazköy.

In the southern portion of central Anatolia, sites were located nearby passes through the Taurus mountains, linking central Anatolia with southeastern Anatolia and into the Mesopotamian sphere, or from central Anatolia to Lycia and the Aegean in central and west central Anatolia. Bagemağacı was strategically located near the Çubuk Pass through the Taurus Mountains.

Other travel routes moved between south-central Anatolia from Lycia to modern day Adana, moving north through the Taurus and Amanus mountains, to the Central Plateau or into Northern Syria. Bağası and Elmalı-Karataş were located near a major pass through the Taurus Mountains in the Elmalı Plain; Can Hasan was located along the Sertavul Pass; and Güvercinkayası and Köşk Höyük were located in a pass through the Amanus mountains. Convenient river crossings were also a popular location for sites, such as at Beycesultan.

Southeastern Anatolia

The southeastern Anatolia region is smaller than the area studied for central Anatolia. The main trade routes through this region would have led from Mesopotamia and northern Syria through the Amanus Mountains, and from the Mediterranean coast through the Amanus

Mountains. Sites were often located along the shores of the Euphrates and Tigris rivers, usually in locations that were strategic for crossing the river or in places where it would have been ideal to control the flow of trade up and down the rivers.

Arslantepe and Gedikli were conveniently located near passes through the Amanus Mountains. Other sites were located along passes through the Taurus Mountains leading into the Central Plateau and into the trade route outlined above, such as at Domuztepe, Gedikli or Tilmen Höyük.

The vast majority of the sites studied in this dissertation from southeastern Anatolia were located along the banks of the Euphrates River. From south to north, these include Tell Al-'Abr, Tell Amarna, Tell Shiyukh Tahtani, Jerublus Tahtani, Tell Shiukh Fauqani Carchemish, Gre Virike, Yarım Höyük, Zeytinlihahçe Höyük, Fıstıklı Höyük, Birecik, Tilbes Höyük, Hacınebi, Kurban Höyük, Titriş Höyük, Samsat, Gritille, Lidar Höyük, Hassek Höyük, Arslantepe and Değirmentepe.

Sites located along the Tigris River, from south to north are: Kenan Tepe and Hirbemerdon Tepe and Girikhaciyan, connecting then to Korucutepe, Norşuntepe, Kuruçay Höyük, Tülintepe, Tepecik, Pulur and Kalaycık.

Other routes traveled away from the rivers, moving either east or west along the foothills of the Taurus mountains, such as at Değirmentepe, Norşüntepe, Pulur, Tepecik and Tülintepe, located on an old road between modern Elazığ and Bingöl, Girikihaciyan, in the northern Syrian Plain, Kalaycık Tepe in the Keban Valley, Kalaycık Tepe in the Harran Plain, and Oylum Höyük in the Kilis Plain.

Summary of Trade Routes and Landscape Data

Trade routes are not direct evidence of violence, but the study of ancient trade helps round out the cultural background necessary to understand the trends created through the study of burial, weapons, fortification, destruction and iconographic data of violence, as the trade of goods can be used as a proxy for motives outside forces may have had to attack a settlement. The increase of trade and contact between southeastern Anatolia in the Late Chalcolithic with Mesopotamia is highly correlated with the evidence of violence and preparation for violence. Similarly, the increase in trade and outside contact in central Anatolia with the Aegean and the Caucuses is highly correlated with the evidence of violence and preparation for violence in the Early Bronze II/III. This chapter presents an interpretation of ancient trade routes in use in Chalcolithic and Early Bronze Age Anatolia based on previous studies, Hellenistic travel routes, modern roads, natural geography and site locations.

Trade Routes and Landscape Data from Central Anatolia

Acemhöyük

Acemhöyük lies along the ancient road that led from Konya to Kayseri, a route that remains in place to this day, placing Acemhöyük is a highly strategic spot for trade from its first foundation (Özgüç 1966: 30-31).

Ahlatlıbel

Located 14 km southwest of Ankara (Barcan 2012:21-23).

Alaca Höyük

The earliest habitation was settled upon a natural hill. The site is fed by numerous springs, tributaries of the nearby Kızılırmak River, and the land around it is highly fertile. To the

north are the mountains of the Pontic ranges, and the land around the site is high in granite rocks as well as rock salt, making for plentiful amounts of natural resources around Alaca Höyük. The site is within a travel route between the Black Sea region and the Central Plateau, within the Eskişehir Plain (Gursan-Salzmann 1992: 1).

Alişar Höyük

Alişar Höyük is located approximately 85 kilometers from the Hittite capital city of Boğazköy and 200 kilometers east of the modern capital city of Ankara. The site lies in the Kanak Su Basin, in some of the most fertile land in central Anatolia, located between the Sumerin Sivrissi and the Çomak Dağ. There are a very large number of sites in this region, especially dating to the Late Bronze Age Hittite Empire period. From the Middle Bronze Age onwards, the site was in the middle of the trade routes between Central Anatolia and Mesopotamia, and was located between Boğazköy and Kültepe-Kaneş, along the trade route between Kaneş and Aşşur, making the location of the site both idea for farming and for trade (Gorny 1990: 1-2; Branting 1996:146-149).

Bademağacı Höyük/Kızılkaya Höyük

Bademağacı Höyük is located near the historical boarder of Pamphylia, and 51 km from the modern city of Antalya. The site is only 5 km from the Çubuk Pass, one of the better passes through the Taurus Mountains, and now part of the Antalya-Burdur highway, placing it in a great position for trade through the mountains. Bademağacı itself is located in a flat valley at the foot of the Taurus Mountains, in a good area for agriculture (Duru 2001: 48-51).

Bağbası

The site of Bağbası is located nearby the site of Elmalı-Karataş, 7 km. northeast in the Emalı Plain. The site is not large and lies in the relatively flat Elmalı valley, nearby the foothills

of the Taurus Mountains. It sits on a natural rise, 1157 meters above sea level, not much higher than the surrounding valley. A small stream flows along the northern edge of the site, proving a good source of water for the site. The site was located on a major trade route through the Taurus Mountains (Eslick 1992: 11).

Beycesultan

Large multi-period mound located along "an ancient highway" (Lloyd and Mellaart 1962: 7). The site is located five kilometers from the city of Çivril, and along the banks of what was once a small tributary of the Meander River, in "a wide cultivated valley, bordered on both sides by low hills" and nearby the Carian mountains (*Ibid:* 8-9), and located along an ancient roadway between the Aegean coast and the Anatolian plateau. The excavators further hypothesized that the site was originally placed along a natural river crossing (*Ibid*; 17).

Boğazköy-Büyükkaya/Yarıkkaya

The sites of Büyükkaya and Yarıkkaya are a portion of the larger site of Boğazköy, the capital city of the Hittites in the Late Bronze Age. Büyükkaya is located upon a very steep and large rocky outgrowth, thus the name, located along the lower part of Boğazköy. Yarıkkaya is two kilometers north of Büyükkaya, a small rocky outcrop and plateau briefly in 1967 and 1968 as part of the larger excavations at Boğazköy. The site is located in the Budaközü valley, near the modern town of Boğazkale in the Province of Çorum. Immediately to the south of Büyükkaya lie two different passes through the nearby mountains that lead to the Yozgat and to Büyüknefes valleys, making this site right in the middle of an important trade route between Central Anatolia and the Black Sea coast (Schoop 2005:15-16).

Büyük Güllücek / Kaletepe

The site of Büyük Güllücek (sometimes referred to as Kaletepe) is located between Alaca

Höyük and Boğazköy in the Çorum Province, approximately 15 km north of Alaca Höyük, located in an open rocky field, nearby small rolling hills (Koşay and Akok 1957: 25-28).

Çadır Höyük

Çadır Höyük is located upon small terrace. The site is located 10 kilometers southeast from the Phrygian site of Kerkenes Dağ and 13 kilometers northwest from the site of Alişar Höyük, and sits at the junction between the Kanak Su and Eğri Su rivers, in the flat Kanak Su basin, with small rolling hills in the near distance and a number of small streams, which have since been flooded into a sizable lake. It may have been originally situated upon a small natural hill. The valley itself was likely located along a trade route through Central Anatolia since antiquity, and remained in an important location, even up to the Byzantine era. In the Late Bronze Age, Çadır Höyük was likely a smaller satellite village to Alişar Höyük (Gorny 1995:68)

Can Hasan

The mounds of Can Hasan lay in a flat plain, with the foothills of the Taurus mountains visible in the near distance (French 1998: 3). French mentions that the site is located not far from a pass through the Taurus mountains, leading from the Mediterranean, up northwest to the modern city of Mut, along the Sertavul Pass, making Can Hasan possibly located near a major trade route and one of the easier passes through the mountains to the Mediterranean in the Göksu valley (*Ibid*: 6-7).

Çatal Höyük West

The mounds of Çatal Höyük lie in a large flat plain, located near the city of Çumra, about 12 km. away, in the Konya Plain. The area is within sight of the Taurus Mountains, and like Can Hasan, may have been in the path of the trade route from the south through the Taurus mountains to the west (Mellaart 1965: 136).

Demircihöyük/ Sarıket

The site of Demircihöyük is located near the edge of the Eskişehir plain and the start of rolling foothills near the Sea of Marmara. Demircihöyük lies approximately 25 km from the modern city of Eskişehir, and is directly on the major road that leads from the Anatolian plateau to the western coast of Anatolia (Korfman 1986; 242-244).

Elmalı-Karataş (Semayük)

Elmalı-Karataş is located in the Emalı Plain in the modern day region of Lycia. The plain is within the travel route through the Taurus Mountains from the Mediterranean up through the north to the Anatolian Plateau. The mound is located two km. west of the village of Semayük (now known as Bozüyük), and 70 km. from the city of Antalya as the crow flies. The only way in and out of the valley is though a number of small passes though these mountains, leading south to the Mediterranean and north to the Central Anatolian Plateau (Warner 1994; 1). Or, as written in the final publication on Karataş, "Elmalı... is only slightly over 70 kilometers from Antalya as the crow flies, but 120 kilometers by winding mountain road" (*Ibid*; 1).

Gâvur Evi Tepesi

Gâvur Evi Tepesi is a small, 1.9 hectare site, located in the western edge of the Burdur plain, at the foot of the hills that limit the plain (Vandam 2013:244-248).

Gözlü Kule/Tarsus

The site of Gözlü Kule/Tarsus lies in Cilicia, near the modern town of Tarsus. The site lies in a coastal plain, nearby where the Mediterranean meet the Amanus mountains, placing the site at a ideal spot for trade between Northern Syria and Anatolia as well as later maritime trade. In fact, the modern city of Tarsus remains an important trade city to this day. Tarsus was likely a major site for trade since the Neolithic. As mentioned above, it is in an ideal spot for trade, both

over land and by water. From its earliest levels, while the materials from the site, as well as the architecture, were Anatolian in nature, connections were also visible from as far away as coastal Lebanon, with obsidian trade being the likely link. By the Chalcolithic, Tarsus was in contact with North Syria and North Mesopotamia, with links to the Halaf, Ubaid and the Uruk cultures present, more than at other Central Anatolian sites in the area. By the Late Uruk period, Tarsus began to shift its focus from Mesopotamia towards Central Anatolia and the trade increased through the Taurus Mountains (Mellink 1989: 319).

Güvercinkayası

The site of Güvercinkayası is located in the Mamasun dam lake area, near where the Cilician Gates pass (or Gülek Pass) through the Amanus mountains meets the Melendiz River, and 29 km northwest of the modern city of Aksaray. The site itself is located on a small valley area surrounded by high cliffs on three sides and the spot where the Karasu River meets the Melendiz river on the fourth, and is located 1106.08 meter above sea level (Gülçur and Fırat 2005: 41). It is the largest mound in the region, with very nice natural fortifications while being on a major trade route. In Roman times, it was located along the "Pilgrim's Road" and was called the "Migration Road" until the area was inundated under the waters of the Mamasun dam. Güvercinkayası itself was placed in an interesting location, high on a rocky cliff, while most other sides in the region were placed in the valleys along the rivers. The mound itself is quite flat, using the natural cliff top and creating a terrace, making nice use of the natural environment (Gülçur 2000; 80-83).

Hacılar

Hacılar lies in the northern part of the Lycian plain, approximately 26 km. south from the modern town of Burdur, and 1.5 km. from the modern village of Hacılar. The site lies near the

western shores of the Koca Çay river, and is nearby Burdur Lake. It is within an intermontane valley, at a high elevation of 940 meter above sea level and nearly 100 meters above the water level of Burdur Lake. The Hacılar spring flows near the site, likely the reason for its initial occupation. The site lies right at the edge of a valley, and at the foot of low limestone hills. The mound sits on a natural terrace, with the nearby extramural cemetery found within the valley itself (Mellaart 1970; xii-xiii).

Horoztepe

Horoztepe, a cemetery site, is located in the province of Takat, near the modern village of Erbaa, 330 km north of Ankara. The cemetery site is located near a small stream, the Inbat, and is located in a flat, woody area with nearby rolling hills. The site is also a modern cemetery, allowing for only a small area of excavation around the modern tombs. It is located in the Yeşilirmak valley, on a small slope, and has few stones (Özgüç 1957: 38-39).

İkiztepe

İkiztepe is located in the north-central region of Anatolia, approximately 7 km. northwest of the modern city of Bafra, and near where the Halys (Kızılırmak) River river meets the Black Sea. It lies in the Bafra plain, and with its original location on both the bank of the Kızılırmak river (now 1.5 kilometers west of the site) and the Black Sea (which has since moved 6-7 kilometers to the north of the site in the present day), would have been in a very favorable position for trade routes along the river and up to the lake, making it useful for both land and sea trading, as well as being in a fertile area for farming. (Dönmex 2006: 90).

Kalınkaya-Toptaştepe

Kalınkaya is located three km north of the site of Alaca Höyük (Yakar 1985: 202).

Köşk Höyük

Köşk Höyük lies on a rocky outcrop on the eastern edge of the Bor-Ereğli plain, and is in a very visible position within the plain. To the west of the site are the Karacadağ Mountains and to the north are the Masandağ and Melediz mountains. At the foot of the mount lies an ancient spring, still active today, was the source of water for the site (Öztan 2008: 87). The site lies within a travel corridor through the nearby mountains and was likely originally occupied for its great water resources (Öztan 2008: 83).

Küllüoba

The site of Küllüoba is in the Seyitgazi district in the province of Eskişehir, approximately 35 kilometers southeast of the modern city of Eskişehir. It lies in a large plain, north of the Phrygian Highalnds, and lies on the northern edge of an ancient streambed than has since dried out (Efe and Fidan 2008: 67).

Kültepe-Kaneş

Kültepe-Kaneş is located in the Kayseri plain, near the foot of the Erciyes Dağı, one of the highest mountains in the Central Anatolian Plateau. The mountain is rather imposing in the distance, from the mound of Kültepe. The site lies along the Sarımsaklı steam, a tributary of the Kızıl Irmak river, which both waters the site and makes the area around the site highly fertile. The site is located on an excellent area for trade, and indeed, is known as one of the most important trade routes in Middle Bronze Age Anatolia, and likely, it was a major trade location already in the Early Bronze Age as well. The site is located on an open plain, near the Yayhalı-Develi, Zamantı-Gezbeli-Sirkeli and Tufanbeyli-Ceyhan passes through the Taurus Mountains, putting the settlement in a great area for trade between Northern Syria and the rest of Central Anatolia (Kulakoğlu 2011: 1012).

Kuruçay Höyük

The site of Kuruçay Höyük is located approximately 16 km from the modern city of Burdur. Kuruçay sit atop a hill, around 4 km from the shores of Lake Burdur. It sits at 960 meter above sea level, and 110 meter above the lake surface. The site itself rests upon a natural rise within the lower slopes of a set of hills (Duru 1994: 95).

Maşat Höyük

The site of Maşat Höyük rises up to 29 meters above the surrounding plain. The site is 20 kilometers south of the modern city of Zile in the Tokat province (Yakar 1985: 204-205).

Orman Fidanlığı

The site of Orman Fidanlığı lies six km. from the modern city of Eskişehir, in the Eskişehir Plain, 150 meter north from the bank of the Porsuk river. The area around the mound is hilly, near the Karakayırlar hills. According the the excavator "the distance and configuration must have been somewhat different in antiquity; we can, however, estimate that at the time of settlement the level of the riverbed must have been at least 20 meter lower than at present" (Efe 2001; 1).

Resuloğlu

This cemetery site was located on a high ridge, which overlooks three small Early Bronze Age settlements contemporary to the cemetery, to the southeast, north and northeast of the cemetery ridge. A spring was located to the west of the cemetery, and was likely the main source of water for the settlements. The settlements are in important location in the Delice River valley, near where the Delice river meets the Kızılırmak river (Yıldırım 2006: 1-2).

Salur North

The site of Salur North is located in the Orta region, approximately 45 kilometers west of

the modern town of Çankırı. The site is in a valley region, with large hills with high amounts of flint outcrops located to the south of the site, while to the north, the remains of volcanic activity have left large bands of obsidian deposits, both of which are comparatively uncommon raw materials for north-central Anatolia, probably adding to the importance of the site (Matthews 2004: 57).

Yumuktepe/Mersin

Yumuktepe lies within the modern city of Mersin, located in the plain created between the Jeihan and Seihan rivers in southcentral Anatolia. The site of Yumuktepe itself lies along the Efrenk river, near the Mediterranean coast. Nearby to the north are the Taurus Mountains. The site lays in the Calycadnos valley on the coastal plain of Mersin, which leads through one of the easiest passages through the Taurus Mountains, the Cilician Gates. The site thus lies in a very important area for trade, near both the outlets of rivers as well as along the Mediterranean, being in the middle of the trade route between Northern Syria and western Anatolia. The site lies in a fertile, rich zone, ideal for agriculture and for the raising of animals. The location of the site on the banks of a river and near the shores of the Mediterranean, as both shifted quite a bit between the first occupation of the site and the modern day, something of great concern to the modern excavators. For example, the Efrenk River, which currently flows along the western edge of the mound, likely was located on the eastern edge of the mound prior to the 13th century AD (Caneva 2010; 10-13).

Travel Route and Landscape Data from Southeast Anatolia

Arslantepe (Malatya)

Arslantepe lies 6 km north of the modern city of Malatya, in the Malatya plain, with the Amanus Mountains visible from the site (Di Nocera 2008: 635).

Birecik

This cemetery site is located in the Euphrates River Valley, south of the Taurus mountains, and 800 meters southwest of the Birecik Dam itself, the fourth dam constructed by Turkey along the Euphrates It is only 10 kilometers away from the site of Hacınebi Tepesi and 25 kilometers north of Carchemish, with similar styles of burials previously excavated from the Early Bronze Age from those sites. The dam is 45 kilometers east of the modern city of Gaziantep. The site sits approximately 350-500 meters above sea level, and is 30 meters from the western bank of the Euphrates River. It lies in the river valley, on a limestone plateau that was seasonally flooded, leaving clay luvial fill (Sertok and Ergeç 1999: 88).

Carchemish and the Carchemish Valley

The site of Carchemish was originally founded upon a small naturally occurring rocky outcrop along the shores of the Euphrates River. The location of the site is very strategic for trade along the river and between Northern Syria and Anatolia (Falsone and Sconzo 2007: 73).

Değirmentepe

Değirmentepe was located 22 km east of the modern city of Elazığ, along the road between Elazığ and Bingöl, before it was destroyed in the flooding of the valley. Değirmentepe was located at the northern edge of the Altınova plain, nearby where the Murat Su River exits the plain (Duru 1979:65-68). It was easily mistaken for a natural formation, as it lies along a series of natural ridges surrounding the Murat Su (Balkan-Atlı 2003: 373).

Domuztepe

The site is located in the Kahramanmaraş region of southeastern Anatolia, in the northwestern edge of the Fertile Crescent, which continues down into Syria and Iraq, forming the ancient area of Mesopotamia. Domuztepe is at the edge of this, near where the Fertile Crescent

ends as it meets the Taurus Mountains and into the Anatolian Plateau. The site sits upon the passage between Mesopotamia and the Anatolian Plateau through one of the most important passes through the Taurus Mountains. The site itself is set along the edge of a large alluvial plain with a range of low, rolling hills to the west. The plain itself is flat and often flooding, making for fertile if problematic farmland. The settlement was likely surrounded by oak and pistachio forests and was likely a swampy area up until around 4000 BCE, when the area changed over to oak forests, as are still present today (Campbell et. al. 1999: 397; Gearey 2011:478-479).

Fıstıklı Höyük

The site of Fıstıklı Höyük is located along the eastern edge of the Euphrates river floodplain, near the limestone bluffs that mark the edge of the plain, and approximately 4 km south of the modern city of Birecik and 25 km from the site of Carchemish (Bernbeck et. al. 2000: 25).

Gedikli/Karahöyük

The site of Gedikli is located in the western edge of the Sakcagözı plain, in a marshy area. The site is 23 kilometers from the modern city of Islahiye (Alkım and Alkım 1966: 27-29).

Gre Virike

The site of Vre Virike is located along the eastern bank of the Euphrates River, 10 km north of the site of Carchemish, and 15 km south of the Birecik cemetery. The site was built upon a natural terrace upon the bank of the river, with a small built mudbrick rectangular terrace, measuring 35 by 50 meters (Heinrich 1982: 90-91).

Girikihaciyan

Girikihaciyan was 175 meter in diameter with a height of three meter above the surrounding plain, and was situated nearby the village of Ekinciyan (Watson and LeBlanc 1990:

1-5). The site likely was fed through some small local springs, but was never a large site and was only occupied in this single period. The site lies at the northeastern edge of the valley between the modern areas of Ergani and Diyabakır, then through into the northern Syrian plain. Northeast of the site are a range of low hills (Watson and LeBlank 1990: 5).

Gritille

The site of Gritille is located along the right bank of the Euphrates River in southeastern Turkey, within the Euphrates flood plain, near a series of rolling hills to the north of the site. Gritille is near the boundary between the Adıyaman and Urfa provinces, where the Euphrates creates a natural boundary between these region. The site itself lies along two natural springs, providing fresh water for the inhabitants. The larger site of Lidar is located directly across the river, and the two sites were often inhabited contemporaneously. Between the two sites are a number of small islands in the river, which would have been present in ancient times as well, which allow an area for river crossing. The excavators of Lidar Gritille postulated that the two sites were situated in order to create a controlled area for crossing the river, as no other easy crossings are within a nearby distance. Perhaps the two sites were in fact controlled through a single government (Voigt and Ellis 1981:87-90).

Hacınebi

Hacınebi is located in the Euphrates River valley, settled on limestone bluffs above the east bank of the river, 5 kilometers north of the modern town of Birecik, in the Şanlıurfa province. The location of Hacınebi places it on the trade route between southern Mesopotamia and eastern Anatolia, as well as along the major crossing point of the river, from the Roman times until the present. The site sits upon limestone buffs and along the Euphrates River, also placed it in an easily defended location (Stein et. al. 1998:147-148).

Hassek Höyük

Hassek Höyük lies along the eastern bank of the Euphrates River in the Keban region, along a large bend in the Euphrates, near a common crossing point of the river. The site sits on a ridge over the river, in the river valley with rolling hills in the near distance, 10 km north of the modern city of Samsat (Helwing 1999: 94; Helwing 2002: 2).

Hirbemerdon Tepe

The site of Hirbemerdon Tepe is located along the west bank of the Tigris river in Southeastern Anatolia, near where the Batman Su and Tigris River meet, approximately 30 kilometers of the modern town of Bismil. The site is made up of a High Mound (Area A), an Outer Town (Area B), which lies to the south of the High Mound, on a natural rock formation, and a Lower Town (Area C), which lies northwest of the mound, separate from the rest of the site by a natural rock formation (Laneri 2006:69).

Kalaycık Tepe

Kalaycık was located on the eastern shoer of the Karasu River, near where it joins the Murat River in the Keban valley. The mound was built upon a natural rise (Yakar 1986).

Kazane Höyük

Kazane is located three kilometers south modern city of Şanlıurfa, in the northern edge of the Harran plain (McCarty 2013: 225).

Kenan Tepe

Kenan Tepe is located along the northern bank of the Tigris River, in the Ilısu dam region, approximately 15 kilometers west of where the Tigris River meets the Batman river in Diyabakır Province. The site sits upon a natural terrace above the river (Foster 2009:151-153).

Korucutepe

The Korcutepe mound was located 30 km east of the modern town of Elâzığ in eastern Anatolia. The site was located in the Altinova valley, a riverine valley near the Murat River, and close to where the Murat River meets the Euphrates. The area surrounding the site is relatively flat, with good agricultural land, and a series of low mountains to the north. This site would have been within a good trade route, between Northern Syria and eastern Anatolia (van Loon 1978: 5).

Kurban Höyük

Kurban was located along the southern bank of the Euphrates river, near where river meets the Anti-Taurus Mountains, in the Bozova district of the Urfa province. It lies approximately 60 km northwest of the modern city of Urfa. Nearby at the rolling hills of the Urfa-Gaziantep plateau, with the site in the travel route between northern Syria and Central Anatolia, though the site is far more connected to the northern Syria area than to the Anatolian highlands. Numerous small springs can be found around the site of Kurban Höyük, likely one of the original reasons the site was inhabited (Wilkinson 1990: 7-29). The Euphrates River was approximately half a kilometer away from the site at the time of excavations (Algaze 1990: 5-7).

Norşuntepe

Norşuntepe was located 26 km from the modern city of Elazığ (Schmidt 2002: 1).

Oylum Höyük

Oylum Höyük is located along the bed of the Akpınar Suyu, a small seasonal stream in the Kilis Plain. The Resul Osman Dağları Mountains are to the north of the site. The mound would have been quite imposing in the prehistoric landscape, and was well located as a trading post between Syria and Southeastern Anatolia, near where the plains meet the mountains (Özgen and Helwig 2003: 61,76).

Pulur (Sakyol)

The site of Pulur was located 45 km from the modern town of Elazığ. It was placed on a natural rise, near the source of a small stream, and was not easily visible from the surrounding landscape (Koşay 1976: 117-119).

Samsat

This large mound was located along the western shore of the Euphrates River, near a traditional location for crossing the river in the region (Özten 1984:267).

Tepecik/Makaraz Tepe

Tepecik was located in the Keban dam area, approximately 31 km east of the modern town of Elazığ in the plain of Altınova. The site was in a well watered area, there being a number of natural springs in the vicinity. The mound itself is in a very flat plain (Esin 2001: 102-107).

Tilbes Höyük and Surtepe

The site of Tilbes Höyük was located along the Euphrates river, north of the modern Birecik area, 22 km north of the modern city of Birecik, and along the Euphrates were the river narrows, forming a small *cul-de-sac* that slows the river, making this an ideal place for crossing the river (Fuensanta and Mısır 2000: 180).

Tilbeshar

The site of Tilbeshar is located along the Euphrates in Southeast Turkey, in the middle of the Sajur plain, in a small depression surrounded by nearby small hills. The site is approximately 20 kilometers southeast of the modern city of Gaziantep. Tilbeshar was located particularly strategically, being close to the Euphrates and the Sajour rivers, and nearby the Quoeiq valley to the south and the Afrin and Amuq valleys to the west, with connections through the Kweik river and the Afrin river, placing it in an excellent position for trade. To the north and west are the Taurus Mountains, while to the south are the large plains that extend into modern day Syria. The

site itself was located in the Sajur river basin, allowing for very fertile and well watered land. The frequent flooding of the Sajour River, however, did make preservation at the site quite poor (Kepinski and Ergeç 2000: 134).

Tilmen Höyük

Tilmen is located within a plain, with numerous large hills nearby, and with a large amount of basalt stone, 10 kilometers east of the modern town of Islahiye (Duru 2003: 49-51).

Tishrin Dam Sites

Shiukh Fawqani/Siyuh Fauqani

The site of Tell Shioukh Fauqani is located along the Euphrates River, five kilometers from the modern city of Djerablous (Bachelot 1999:143).

Jerablus Tahtani/Garablus Tahtani

Jerablus Tahtani lies 5 kilometers south, along the Euphrates River, of the site of Carchemish (Peltenburg 1999: 97)

Tell Shiyukh Tahtani/Siyuh Tahtani

The site of Tell Shiyukh Tahtani lies on the left bank of the Euphrates, across the river from Tell Amarna (Falsone 1998: 22-25).

Tell Amarna/ʿAmarna

The site of Tell Amarna is located 13 kilometers south of the site of Carchemish, along the Euphrates River, and is surrounded to the west and north by the wadi Amarna (Tunca 1999: 129-130).

Tell Al-'Abr/ʿAbr

The site of Tell Al'-Abr is located along the eastern bank of the upper Euphrates river, 15 kilometers south of the modern boarder city of Jerablus, at the confluence of the Sejour tributary

and the Euphrates (Hammade and Koike 1992:109-110). This site is the southern most site to be considered in detail for the purposes of this dissertation.

Titriş Höyük

Titriş Höyük lies 45 kilometers north of the modern city of Şanlıurfa, in a small plain, flanked by small limestone hills and the Tavuk Çay river, a small seasonal tributary of the Euphrates (Algaze and Matney 2011: 995-996).

Tülintepe

The site of Tülintepe was located in the Altınova valley, and lay on the ancient road between Elazığ and Bingöl, which was the major travel route in the area until it was flooded in 1974. Tülintepe was also in an area rich in springs and irrigation (Esin 1979: 112). The site was located approximately 21 km east from the modern city of Elazığ, and approximately 4 km from the mound of Tepecik (Esin and Arsebük 1974: 149).

Yarım Höyük

The site of Yarım Höyük is located along the western bank of the Euphrates River, approximately 5 kilometers south of the modern town of Birecik in the Gaziantep Province (Rothman et. al. 1998:65-66, 74, 78).

Zeytinlibahçe Höyük

The site of Zeytinlibahçe Höyük is located in the Urfa province, approximately two km from the modern city of Birecik, and lying along the left bank of the Euphrates River. The site lies in the Euphrates river valley, with the foothills of the Taurus Mountains not far away (Frangipane 2007: 126).

Chapter Ten : Comparative Pathways and Integration of Data

Introduction

This dissertation is a comprehensive account of published materials from central and southeastern Anatolia from the Early Chalcolithic to the end of the Early Bronze Age. Despite investigating a total of 73 sites in the course of this research, much vital data remain missing. Numerous sites, in particular from older excavations, lack adequately published information on all artifacts recovered during excavations. For example, the weapon counts as accumulated in this dissertation creates an indication of the types and relative rarity or abundance of various weapons technologies throughout the time periods studied, though not all excavation reports analyzed give total numbers of weapons or descriptions of weapon forms.

Other excavations have well published accounts of all excavated artifacts, but the human remains recovered were too deteriorated, the burials looted, or the human remains were not curated at the end of excavations. For many settlements, only a small number of burials were discovered during the course of excavation, or the cemetery associated with a settlement remains lost. Analysis of trauma on the general population was not possible at most sites. Further, not all sites had enough horizontal exposure to adequately ascertain if the settlement was fortified or open, and the same applies to obtaining an adequate picture of destruction levels. Iconography is only rarely found from Anatolia, and the majority of iconographic information from this time period originates from contemporaneous but foreign contexts.

As the old saying goes, the absence of evidence is not necessarily evidence of absence. It is unfortunate that often little information remains in the archaeological record that can inform us on the place of societally sanctioned violence within a culture, nor can we know what is missing. The compilation and interpretation of the data collected within this dissertation only reflects

what is possible to discern from published and accessible data. This is not to say, however, that interpretation of the data is impossible, or not meaningful; only that the reader should be aware of the limitation of this dissertation. Future exploration and excavation can only further the goals of this dissertation.

This chapter begins with an accumulation of the data presented in chapters four though nine into a general picture of the place of warfare and violence from Early to Middle Chalcolithic central and southeastern Anatolia. This section looks at both the larger picture and general patterns in each area in each time period, as well as the pattern from specific, key sites where these was ample evidence of violence and warfare from the excavations, before all the accumulated data is fit into the Practice Theory Model outlined in Chapter One, as well as thoughts for future research, in Chapter Eleven.

Evidence of Socially Sanctioned Violence, Categorized From Each Time Period and Region

Early to Middle Chalcolithic Central Anatolia

Sites of Particular Importance: Can Hasan, Güvercinkayası, Hacılar, Mersin

From the Early to Middle Chalcolithic period in central Anatolia, only a small number of sites revealed notable signs of violence in the archaeological record. Of these, the most data comes from Can Hasan, Güvercinkayası, Hacılar, and Mersin.

From this time period, burial data is scarce, and only at Hacılar was there indication of violence from the human remains. It is unfortunate that no further anthropological study was undertaken of the remains; the published data only reported that human remains were recovered from the ruins of the Level IB destruction level, and that these individuals likely died in the conflagration. No other analyzed human remains from this time period were found with indications of trauma.

Few weapons were recovered from excavations from this time period. The most common weapons were clay or stone sling balls, with small numbers of stone maceheads, a single copper macehead, and stone and copper flat axes, known from Can Hasan, Çatal Höyük West, Tarsus, Güvercinkayası, Hacılar, and Mersin. Of these weapons, only one, the copper macehead from Can Hasan, was found in a burial context.

Fortifications were known only from three sites from this time period: Hacılar Level I, Mersin, and Güvercinkayası. These were well-fortified sites, with walls that were likely built for defensive purposes, though they may also have served to help shore up the edges of settlements. Destruction levels were only known from Can Hasan, Hacılar and Kuruçay Höyük. All three sites were destroyed by fire, which may have been caused by violent activity. Hacılar was rebuilt in a new style after the IIb destruction, and Kuruçay Höyük was abandoned after the Level 7 destruction, while Can Hasan was rebuilt each time it was destroyed. No iconography of note dates from this time period.

Key Sites

Hacılar was the only site that showed any signs of violence in the human remains, while also having some number of sling balls and maceheads. This combination may possibly indicate some amount of violence against this city, though not in the long term. The site itself remained unfortified until after the Level IIa destruction, at which point the entire settlement was fortified. The entire settlement was burnt and destroyed numerous times throughout its existence, with excavations of the final destruction layer in Period IB revealing the remains of some of the inhabitants of the site killed in the conflagration. Weapons were recovered, both stone sling balls and stone maceheads, perhaps indicative of some degree of preparation for invaders. The site

was fortified, having a well-built stone and mudbrick wall with towers and a large, gated entrance into the settlement. This site had nearly all indications of violence and preparation for violence: trauma on the human remains, weapons, fortifications and destruction. The inhabitants of Hacılar were at least somewhat prepared for violence, and there was some evidence of long distance trade from materials at the site. It is unfortunate nothing further is known about the burials at Hacılar, as it would be useful to know if adults were buried with weapons, so as to understand if individuals were associated with their ability to fight. It would seem that the populations at Hacılar were in danger of violence, if not constantly.

Excavations at **Can Hasan** revealed evidence of destruction, as well as a small number of weapons. A single adult male was buried with a copper macehead, the earliest-known such weapon in the world. The fact that this individual was buried with a presumably valuable artifact shows that, to some extent, this individual was being honored through this mortuary item. The site was not fortified, and further burial information was not recovered. The evidence at Can Hasan reveals some concept of private ownership of weapons, though the site itself was not built with protection in mind, though the site was located along a possible trade route.

Güvercinkayası was quite unique, with clay sling balls recovered from the settlement, a well-built fortification system that made use of the natural landscape for greater protection, and a final destruction layer in the middle of the Middle Chalcolithic, after which, the site was abandoned. The settlement gives some indication of preparation for violence, and use of the natural landscape for defense.

Finally at **Mersin**, clay sling balls and copper axes were recovered, with additional evidence of a large fortification system, though without signs of widespread destruction. Perhaps the lack of destruction levels shows the successful nature of the weapons and fortifications.

Mersin had the largest fortification system from central Anatolia in this time period, and was also a major trade hub from the Neolithic onwards. The inhabitants of Mersin traded widely, and, likely not coincidently, were prepared for violence.

Interpretation of Collected Data

By this time period, weapons created for human interpersonal violence were available, though rare. Nor were they associated with particular individual interments, with the exception of a single adult male at Can Hasan. As described in Chapter Two, the political structure of settlements from this time period was primarily based around egalitarian farming villages. There was little indication of an elite class in the architecture or burial sites, and elite goods were nearly unknown. While there was some indication of long distance trade, such as evidence of obsidian or copper, and particularly at Mersin, there was not a large amount of such goods.

It can therefore be stated with a relative degree of confidence that, in this time period in general, widespread, politically sanctioned violence was not a significant aspect of culture. Violence was not unknown, as evidenced from the burnt bodies of Hacılar, the fortifications of Hacılar, Mersin, and Güvercinkayası, the burnt levels of Hacılar, Can Hasan, Güvercinkaysı and Kuruçay Höyük, and the sling ball, maceheads and axes known from a small number of sites. This does indicate some amount of violence within settlements, or at least some preparation for violence. In particular, Mersin, a well-established trading center already in the Late Neolithic, was the most prepared for violent attack. Other sites, such as Hacılar and Can Hasan, were possibly attacked, but when rebuilt, were not fortified. Although long distance trade was present in small amounts, complex political structures were unlikely. Violence was only sporadic and rare, consisting most likely of raiding parties from other nearby settlements rather than organized

violence from distant enemies.

Late Chalcolithic to Early Bronze I Central Anatolia

Sites of Particular Importance: Beycesultan, Büyük Güllücek, Elamlı-Karataş, Tarsus, Kuruçay, Mersin

Evidence for ingrained societal violence increased, though not dramatically, in the Late Chalcolithic and the Early Bronze I period. The political structure of settlements, however, did not undergo as severe a change as in contemporaneous southeastern Anatolia. Of the twenty-three sites studied from this time period, six revealed evidence of violence from more than one category of archaeological evidence: Beycesultan, Büyük Güllücek, Elamlı-Karataş, Tarsus, Kuruçay, and Mersin.

Burials were excavated and published from this time period, though the sample remained small. Trauma remained relatively rare in the archaeological record of this time period. The "warrior burial" from Büyük Güllücek, an adult male buried within the city limits, died with perimortem cranial trauma, likely caused by a blow from a macehead, and was buried with a spearhead as a burial good. No other trauma was recorded from burials in this time period.

More burials were found with associated weapons as grave goods, though it was still a relatively rare occurrence. A small number of adults burials were excavated with associated weapons, including axes, maceheads, and daggers. Both male and female burials were found to contain weapons, though more males were found with weapons than females, especially from Büyük Güllücek and the Kalınkaya Early Bronze I cemetery.

The materials for weapons changed from primarily stone to copper and arsenical bronze. Stone and clay sling balls were still common, as were stone maceheads and axes. Copper

weapons in the shape of flat axes, arsenical bronze weapons such as flat axes, projectile points, daggers, knives, and a small number of both copper and arsenical bronze spearheads, were recovered, an increase from the previous period. This reflected a change in technological prowess, as well as a transition to weapons more often associated with warriors, such as the dagger and the spearhead. These weapons remained among the most common weapons of soldiers and warriors in the ancient Near East for millennia.

Of the sixteen sites with enough information to make a reasonable determination, nine were fortified, 62.5% of the total. These included Beycesultan, Boğazköy, Çadır Höyük, Demircihöyük, Elmalı-Karataş, Tarsus, Külluoba, Kuruçay Höyük, and Mersin. All the sites were likely surrounded by fortification systems, which ranged from simple, round walls, to the Anatolian Settlement Plan style from Değirmentepe, Küllüoba and Kuruçay Höyük, to casemate gates, to *kastenmauer* systems. The earliest large, nearly monumental gates, towers and glacis, were erected in this time period.

Six of the twenty-three sites were at least partially destroyed, including Beycesultan, Cadır Höyük, Elmalı-Karataş, İkiztepe, Kuruçay Höyük, and Mersin. Two of these, Çadır Höyük and Beycesultan, were only partially burnt, while for the remainder, the entire settlement was burnt, razed and destroyed. Some of the sites were immediately rebuilt in the same fashion as before, including destruction levels from Kuruçay Höyük and Mersin. Other sites were burnt then abandoned forever, including other levels from Mersin in the Late Chalcolithic and Elmalı-Karataş in the Early Bronze I. Some sites were burnt, then rebuilt by a new culture, based on architectural and material culture changes, such as at Kuruçay Höyük from the end of the Late Chalcolithic, into the Early Bronze I.

Key Sites

Beycesultan was a well-fortified settlement with a number of recovered weapons from the excavations. The site was protected by a 1.25 meter wide stone wall with wooden reinforcement that encircled the entire site, and possible towers. Weapons from the Late Chalcolithic and Early Bronze I included simple daggers and spearheads made of arsenical bronze. Unfortunately, no adult burials were recovered from Beycesultan; presumably the dead were interred in an unknown external cemetery, so we cannot know if the dead were buried with weapons, or if injuries were common in the population.

Büyük Güllücek excavations uncovered the intramural Early Bronze I warrior burial mentioned previously. The individual was buried with weapons and was presumably killed by a blow to the head from a macehead. Otherwise, little is known about the site of Büyük Güllücek. It was a small one hectare site, without any signs of fortifications or destruction levels. The warrior burial stands out from an otherwise open, unprotected settlement.

Elamlı-Karataş, a small mound in the Elmalı Plain, was known for its central palatial sector, surrounding lower town, and cemetery from the Early Bronze II period. While far more is known about this site and its population from later in the Early Bronze, the Early Bronze I palatial district was fortified by a simple mudbrick wall with glacis on the exterior, while the lower town village was not. The site was burnt and destroyed at the end of Period I and Period II, then rebuilt in the Early Bronze II period in a similar fashion. No weapons were known from the Early Bronze I period, and no burials were recovered from this time period. Elmalı-Karataş was one of the few sites from this time period to show evidence of differentiation of architecture and uneven patterns of protection within the settlement. Levels of trade at this settlement are not known, though the fortification system in place indicates some level of preparedness for violent incursions.

Tarsus was a large site located on the coast in Cilicia, and was a well-known trade hub along the Mediterranean. This remains an important site in the study of relations between southeastern Anatolia and central Anatolia. As mentioned in Chapter Two, Tarsus was a major trade site since the Neolithic period, and remained so throughout antiquity. In the Middle and Late Chalcolithic, the site frequently traded with Mesopotamian cities, as revealed through the presence of Mesopotamian Half and Ubaid materials. The peak of this was in the Ubaid period, when the greatest number of Ubaid or Ubaid-inspired pottery, goods, and architecture were found.

In the Late Chalcolithic, there was a noticeable drop-off of Mesopotamian goods. While southeastern Anatolia was very involved in the Uruk sphere of influence, Tarsus conspicuously was not, with nearly no Uruk pottery and no architectural styles present at the site. Trade shifted towards the western coast of Anatolia, the Aegean, and central Anatolia. Further, no destruction levels dated to the Late Chalcolithic period at Tarsus, while the site becomes fortified by at least the Early Bronze I period; A large gated entryway was built along the southern edge of the settlement. A small number of weapons, including a bronze arrowhead and a bronze dagger were recovered from this period, though this was only a small number of weapons. Unfortunately, no burials were recovered from this time period to better understand the presence of violence in the population itself. Signs of violence were not plentiful at Tarsus, though excavations of the layout did reveal a settlement not unprepared for violence.

Excavation at **Kuruçay Höyük** revealed a number of weapons, including copper knives and axes, and one of the earliest spearheads known from central Anatolia, dating to the Late Chalcolithic. The site was fortified in an Anatolian Settlement Plan construction with a sawtooth pattern created by the backs of megaron buildings. The settlement was not completely secure

however, as a small number of ungated openings were present in the wall. Kuruçay was reestablished in the Late Chalcolithic after being burnt and abandoned in the Early Chalcolithic. The site was burnt and destroyed a number of times in the Late Chalcolithic as well, with the population rebuilding the village each time, although each new settlement was smaller in size than the last. Unfortunately, only a small number of burials were excavated at Kuruçay, so little else is known of trauma on the population itself.

As in the previous Early and Middle Chalcolithic period, **Mersin** was an important site in the Late Chalcolithic and Early Bronze I period, and was similar in its importance to Tarsus, located nearby on the Cilician coast. As previously noted, this site was already fortified in the Late Neolithic, and was an important center of trade in the Mediterranean very early on, trading with both Mesopotamia and with western Anatolia, and remained important throughout the Bronze Age. Ubaid and Uruk materials, including pottery and architectural styles, were recovered from the site, unlike Tarsus, which had Ubaid materials, but far fewer Uruk materials. Mersin did not see significant trade with central and western Anatolia until the Early Bronze I period. It was, however, seemingly prepared for violence.

The site was strongly fortified throughout all the Chalcolithic and Early Bronze levels, and rows of identical houses around the walls in the Late Chalcolithic period were interpreted by the excavators as barracks for prisoners, though this remain a controversial interpretation. Recent excavations by Caneva (2010) refute these claims and interpret the buildings as simple domestic buildings. Some weapons were recovered from the Late Chalcolithic period, including clay sling balls and copper axes, with an increase in weapons in the Early Bronze I period. Early Bronze I weapons included numerous caches of clay sling balls, knives, daggers, and spearheads. Mersin was a settlement increasingly protected through its stores of weapons and its fortification

systems, as trade with the Mesopotamian and Mediterranean world increased.

Interpretation of Collected Data

The Late Chalcolithic and Early Bronze I period in central Anatolia was markedly different than the previous time period. As further outlined in Chapter Two, settlements were larger, fortifications were more common though by no means universal, burials moved to extramural cemeteries, and a split between domestic and public zones appeared in many of the settlements. Aspects of social inequality were visible, with the possibility of the emergence of the earliest chiefdoms. Cylinder seals or stamp seals were still largely unknown, as were elaborate burials. The opulence of an elite class that will be visible in the Early Bronze II and III periods was not yet present. Elite goods were not yet numerous. Central Anatolia was likely on the cusp of early political complexity, though even the most socially complex settlements were central Anatolia were not as complex as those found at contemporaneous settlements in southeastern Anatolia, such as Hacılar and Arslantepe.

Ingrained violence and the threat of violence was now a visible aspect of culture, especially at Beycesultan, Büyük Güllücek, Elamlı-Karataş, Tarsus, Kuruçay, and Mersin. It as not universal however, with many other settlements remaining unprotected. These larger settlements were part of long distance trade routes, and were more connected to the wider world of the ancient Near East than many of the other, smaller sites in central Anatolia. While there were very few weapons associated with burials, weapons and fortification systems were more common, as were destruction levels of great trauma. There was not the same breakdown in the Late Chalcolithic in central Anatolia as is seen in contemporaneous southeastern Anatolia, even at the sites that were closer to this sphere, as at Mersin and Tarsus. Chiefly, leaders and trade

were on the rise, as was violence in this time period, perhaps indicating a way by which the chiefly class could further their power through utilizing the fear of violence.

Early Bronze II and III Central Anatolia

Sites of Particular Importance: Alaca Höyük, Alişar, Demircihöyük, Elmalı-Karataş, Tarsus, İkiztepe

By the Early Bronze II and III periods in central Anatolia, settlements were set up as independent city-states run by chiefly leaders; Warfare and politically sanctioned violence were ingrained aspects of culture. By this period, extramural burials were the norm for all known settlements, with the exception of a small number of infant and child intramural burials. As a result, a larger number of cemetery sites were excavated from this time period, and far more burial data and trauma data is available. Out of twenty-nine sites studied in this time period, burial data was published from seventeen, eleven of which were from extramural cemeteries. Evidence of trauma on both adult and, in some rare cases, child remains was reported from Demircihöyük, Elmalı-Karataş, Harmanören, and İkiztepe. The majority of trauma from these sites came from cranial wounds, with some post-cranial trauma noted as well, in particular parry fractions and fractured clavicles. All four sites revealed evidence of severe but healed cranial and post-cranial fractures, as well as fatal perimortem cranial fractures.

Demircihöyük and İkiztepe had evidence of subadults with severe trauma, while İkiztepe revealed evidence of subadults with fatal cranial trauma. Trauma was widespread at İkiztepe, with 18.9% of the total studied population and 43% of the male adult population revealing evidence of moderate to sever trauma. Cranial injuries on the frontal, parietal and occipital bones revealed demarcations that were consistent with injuries from axes, maceheads, daggers,

spearheads, and swords; all common weapons from this time period. Only remains from these four sites were studied in detail, so it is not clear if the populations of other sites were also high in trauma, or if these four sites were unique for the time period.

Weapons were common grave goods in this time period, found in graves from all the cemetery sites with the exception of Gâvur Evi Tepesi. This cemetery was looted, so few burial goods were recovered from the excavated pithos burials. Weapons were associated with adult male burials in these contexts, as well as some of the female adult burials, but were unknown in child and infant burials. This may indicate individual ownership of weapons. Analysis of weapons recovered often showed signs of use, while other weapons bent and broken before being interred with an individual, a metaphorical death of the weapon along with its owner. Weapons were usually found near either the hips or head of an individual, or lined up along the sides of the grave.

Weapons were almost universally made of bronze, both arsenical and tin. A small number of obsidian projectile points were recovered from Demircihöyük, as well as bronze projectile points from the same site, along with clay "arrow straighteners." Otherwise, weapons known from this time period included bronze projectile points, copper and arsenical bronze maceheads, arsenical and tin bronze axes (flat, shaft-hole, and crescent), daggers, knives, spearheads, and swords; quite an increase in numbers and variety from the Early Bronze I period.

Of great interest was the rise of tin bronze as a material for weapons. As discussed in Chapter Five, tin was an expensive and relatively rare metal obtained through long distance trade. Tin bronze weapons were highly functional, dangerous and expensive to obtain. From evidence of trauma upon the bodies of both adult males and females, such weapons technology was obviously necessary.

All inhabited settlements site from this time period that had enough horizontal exposure to ascertain its construction with any certainty was fortified, a substantial increase from the 62% of sites in the previous era. The fortifications ranged from simple stone and mudbrick walls, Anatolian Settlement Plan sites, *kastenmauer* walls, to numerous examples of monumental gates, including one bent-axis gate from Demircihöyük, towers, and glacis. Walls were taller and thicker than in the previous period, and nearly all had towers, gates, or glacis built into the structures. These would have required a very large expenditure of time, energy, and materials to produce, and would likely only be possible in a chiefdom level settlement.

Destruction was not as wide spread as weapons and fortification systems in the Early Bronze II. Some of the destruction levels, such as at Level XIIIb Beycesultan and Level 6 Alaca Höyük, were conjectured to be from earthquakes rather than invaders. In the Early Bronze II period, Beycesultan, Alişar Höyük, and Tarsus were all destroyed, while only Alişar Höyük and Tarsus were rebuilt. At the end of the Early Bronze II period, Dimircihöyük was abandoned and never reestablished.

In the Early Bronze III, Alaca Höyük, Alişar Hoyük, Beycesultan, Tarsus, Kültepe-Kaneş, and Maşat Höyük were all destroyed, though all but Alaca Höyük were soon rebuilt. By the end of the Early Bronze III period, Alaca Höyük, Tarsus, and Elmalı-Karataş were abandoned for a period of time. Alaca Höyük, Tarsus, and Elmalı-Karataş were later reoccupied in the Middle Bronze period.

Key Sites

Alaca Höyük remains one of the most important sites from Early Bronze Age in central Anatolia, primarily because of the Royal Tombs. These tombs give more information about the

evolution of elite culture in central Anatolia than any other site from the site period, with similarities from the smaller cemetery at Horoztepe. The fourteen Royal Tombs, dating to the Early Bronze III, contained a large number of weapons. The weapons included eleven knives, eight maceheads, two bronze swords, one shaft-hole axe, seven daggers, and two flat axes. Half the adult females were buried with weapons, while all the males were buried with weapons. This indicates that some women were associated with weapons, at least in a ceremonial fashion. Unlike other weapons known from burials in this time period, most of the weapons recovered from Alaca Höyük's Royal Graves did not show evidence of use, and were likely ceremonial in nature. Only the bronze swords showed any evidence of use. One was intentionally broken before internment, symbolically killing the weapon. Whether the inhabitants would have used or owned these ceremonial weapons in life or if they were created for the purpose of burial remain unknown.

Unfortunately, excavations of the Early Bronze settlement at Alaca Höyük have not yet determined if the settlement was fortified, although Levels 5 and 6 were destroyed. Destruction at Level 6 may have been due to an earthquake rather than to external forces. The site was destroyed at the end of the Early Bronze III period and later reestablished in the Middle Bronze Age. The graves at Alaca Höyük remain one of the few known remnants of elite central Anatolian cultures from this period. Weapons were highly associated with these elite burials, indicating the importance of at least the appearance of warrior status in the elite classes.

From **Alişar Höyük**, little information on burials was published, and only a single weapon, an arsenical bronze shaft-hole axe, was reported from the Early Bronze III level. The inhabitants of Alişar built a rather impressive fortification system in the Early Bronze II period. The settlement was burnt and destroyed, and a second system with walls around both the central

citadel and the lower town was constructed, larger and stronger than before. In the Early Bronze III period, the site was again destroyed, with the fortifications later remodeled and strengthened. Excavations at Alişar reveal the population responding to continued violence by rebuilding and finding better ways to protect their settlement. The settlement was located along the trade route through central Anatolia, north to south. While there was danger associated with its location, as seen in the number of destruction levels, the people continued to live there through the Iron Age, finding better ways to protect their settlement against invaders.

Demircihöyük remains an important Early Bronze II central Anatolian settlement. Excavations at the well-preserved cemetery reveal demographic information while excavations of the settlement itself divulge information on the fortification systems and patterns of reaction to violence. Trauma was rare in the population at Demirichöyük, though a large number of adults were buried with weapons, including maceheads, crescent-shaped axes, shaft-hole axes, spearheads, and daggers. Adult males with healed and unhealed cranial fractures from weapons were analyzed from Demircihöyük, although these were not widespread in the population. The weapons from Demircihöyük were primarily tin bronzes, indications of its reliance on trade for its materials. The settlement was built in an Anatolian Settlement Plan, with saw-tooth construction, and the backs of domestic structures built together to form a wall around the entire settlement.

After destruction, a second wall was created to further protect the settlement, with a stone-lined rampart on the exterior. Demircihöyük was located on a major travel route, and the population prepared for violent actions against their home. Protective walls were built, then rebuilt and strengthened, and weapons were widespread in the population. In the final Phase P, the settlement was not destroyed, but was suddenly abandoned during the Early Bronze II period,

and not reestablished until the Middle Bronze period. The reasons for the sudden abandonment remain a mystery.

Excavations at **Elmalı-Karataş** revealed a large number of burials dating to the Early Bronze II and III period. The adult male population had high numbers of both healed and unhealed cranial and post-cranial trauma, with shapes that were consistent to injuries from maceheads, daggers, spears, and axes. The adult males were often buried with razors, knives, daggers, and maceheads, while adult females and subadults did not have weapons as associated burial goods. The central citadel section of the settlement was fortified from the earliest levels of settlement, while the larger, domestic lower town was never fortified. The central complex itself was burnt a number of times, with the walls around the district rebuilt and strengthened each time. The site was abandoned at the end of the Early Bronze III period, like Demircihöyük, without any signs of destruction.

The evidence suggests a population where the adult males took part in violent activity, with the central complex being in danger, while the lower town habitation area was less so. Likely, this indicates that the more precious objects of wealth were kept in the central district and so was the object of violence, rather than the violence being aimed at the general population itself. The site was located along a travel route through the Taurus Mountains, towards the Anatolian Plateau, in Lycia.

Tarsus continued its importance in the Early Bronze II and III periods and, unlike Mersin, was better understood from this time period. While no burials from this time period were published, weapons recovered from domestic contexts included shaft-hole and flat axes, maceheads, bronze knives, projectile points, daggers, spearheads, and clay sling balls. After the site was destroyed at the end of the Early Bronze I period, the entire settlement was flattened to

create a terrace for the rebuilt Early Bronze II settlement. A larger fortification wall was built around the city, in a sawtooth pattern and *kastenmauer* construction, with a bent-axis gate.

The settlement was in contact with Syria, central Anatolia, and the west, making the material recovered from Tarsus some of the most diverse known of any Anatolian site at the time. Mellink hypothesized that Tarsus contained a harbor in this time period, for trade with Cyprus. The site was burnt at the end of the Early Bronze II period and rebuilt in the Early Bronze III period, with a change towards more western Anatolian style architecture and material culture, though Syrian and central Anatolian materials were still present. The settlement was completely detroyed at the end of the Early Bronze III and rebuilt in a new style at the beginning of the Middle Bronze Age.

Excavations at **İkiztepe** have revealed one of the largest Early Bronze cemeteries from central Anatolia. Nearly 700 burials have been excavated from the Early Bronze III cemetery, and anthropological study of the remains reveals that the adult male population suffered high amounts of healed and unhealed cranial and post-cranial trauma: 47% of the entire adult male population had at least some form of healed or unhealed trauma, and a number died from their wounds. This trauma was consistent with wounds made from spearheads and axes. Weapons were found with many of the adult males as well as some of the adult females, including bronze spearheads, daggers, and axes, while subadults were never buried with weapons. İkiztepe was also unique in that three daggers recovered from the cemetery were engraved with human figures on the hilt: a female on one side, and a male on the other. Two of the figures wore skirts and one was naked, and do not appear to be warrior figures.

The weapons recovered from graves often showed signs of use, and thus were likely the personal property of the individuals. İkiztepe was located in a very useful location for trade

through the Pontic Mountains from the Black Sea to the Central Plateau. Unfortunately, little is known archaeologically from the Early Bronze settlement itself, so it is unknown how prepared the settlement was for warfare, as excavations have focused on Mound I and its Late Chalcolithic settlement and Early Bronze III settlement. A change in the Early Bronze II from Aegean and Balkan influences to more central Anatolian influences is reflected by the types of weapons found in graves from this time period, along with an increase in arsenical coppers and bronzes.

Interpretation of Collected Data

By the Early Bronze II and III, the larger settlements of central Anatolia had become small, independent city-states with fortified central settlements, which controlled the farming villages in the hinterland. The ruling elites were visible in the archaeological record through the intricate tombs of Alaca Höyük, Horoztepe, or Elmalı Karataş, elite goods found in graves and in the palatial and temple districts of settlements and elite housing, far larger and better constructed than the housing of the lower classes.

Many settlements contained central palatial or temple districts, some of which, as at Tarsus, had a second fortification system surrounding it for further protection. All habitation settlements were fortified by this time period, and were ruled by an elite class, with a chief-like ruler. The settlements were urbanized, catching up to the urbanization already in existence in southeastern Anatolia by the Late Chalcolithic.

Foreign and long-distance trade greatly increased, with evidence from the increase of pottery from western Anatolia, northern Syria and Mesopotamia, and likely, an increase in outside knowledge of Anatolian civilizations and their raw materials and finished goods. The increase in arsenical and tin bronzes further corroborates this theory, with tin likely coming from

Afghanistan, and possibly from some small mines inside central Anatolia. During this time period, central Anatolia opened up to the greater ancient Near Eastern world, along with the creation of complex societies, and a marked increase in evidence of violence. Indications of violent interactions include injuries on the male populations at such sites as İkiztepe and Elmai-Karataş, increases in the quality and quantity of weapons, an increase in the size and strength of fortification systems and a greater number of destruction levels. Unfortunately, iconographic data remains rare from central Anatolia, and so remains of little consequence to this discussion.

In general, sites were rebuilt after destruction, with city walls made stronger in an attempt to avoid further hostilities. The population was likely aware of the possibility of violence, as weapons as grave goods went from comparatively rare to common in the adult male population. Violence was embedded in the social order, and the cultures in central Anatolia responded by better protecting their settlements and training the population to fight. Violence and the threat of violence was highly ingrained in the settlements of Early Bronze II and III central Anatolia, with the populated prepared to defend themselves by an elite class that made sure the common populace was aware of the danger.

At the end of the Early Bronze III period, there were some signs of a downturn in these settlements, with large burn layers found at Alaca Höyük, Kültepe-Kaneş, Tarsus, and Elmalı-Karataş, while other sits such as Alişar Höyük, Beycesultan, Çadır Höyük, İkiztepe, and Mersin continued into the Middle Bronze Age without apparent any gaps in settlement.

Early to Middle Chalcolithic Southeastern Anatolia

Sites of Particular Importance: Domuztepe, Değirmentepe, Fıstıklı Höyük

The archaeological evidence from Early to Middle Chalcolithic southeastern Anatolia

revealed little evidence of socially integrated violence or threats of violence, even less than was visible in contemporaneous central Anatolia. More burials were published from this time period than in central Anatolia, with seven out of eighteen studied sites containing some published burial information, all from domestic contexts. One site, **Domuztepe**, revealed evidence of trauma upon the human remains recovered from the so-called Death Pit. No other trauma was noted from any of the burials, and no weapons were found associated with any of the burials as grave goods. The Domuztepe Death Pit was a special case, with evidence of violence on the human remains, though the context of the remains is still contested. Was the death pit a sacrificial context? The result of warfare? The meaning of the Death Pit remains unclear.

Weapons in this time period were similar to those known in central Anatolia, though slightly more abundant. Clay and stone sling balls, obsidian and flint projectile points, and small number of stone axes and daggers were recovered. Projectile points were not recovered from central Anatolia in this time period. No maceheads were reported from this time period, and no metal weapons were recovered.

Only one settlement from this time period, **Fıstıklı Höyük**, was fortified. A small earthen works was built partially around the settlement, but did not completely encompass it. Likely, the earthen works were built to help protect against flooding rather than being protective. This site, inhabited only during the Early Chalcolithic, was likely a seasonal nomadic camp for much of its existence, with Halaf-style tholoi architecture. Fıstıklı was likely a seasonal camp for nomadic populations, with connections to Mesopotamia.

More sites in southeastern Anatolia had some level of destruction than in contemporaneous central Anatolia. These sites included Değirmentepe, Girikihaciyan, Kenan Tepe, and Tell Al-'Abr. Only Değirmentepe, Kenan Tepe, and Tell Al-'Abr were burnt

completely at any point, and all there were immediately rebuilt. At the end of the Early Chalcolithic, Girikaciyan, Hallan Çemi, and Tell al-Amarna were abandoned forever. By the end of the Middle Chalcolithic, Domuztepe, Kazane Höyük, and Kenan Tepe were all abandoned, with both Kazan Höyük and Kenan Tepe later reestablished, while Domuztepe was abandoned forever.

Değirmentepe was among the most extensively excavated settlements from the Middle Chalcolithic/ Ubaid period in southeastern Anatolia. No adult burials were recovered from the site, although weapons, including stone and clay sling balls, stone flat and shaft-hole hammers, and obsidian and flint projectile points, were published. The site was burnt and destroyed at the end of Subphase 3, then rebuilt immediately. The settlement was unfortified and open, and the architecture consisted of Ubaid-style tripartite structures, built in an Anatolian-style agglutinative method, a mix of Mesopotamia and Anatolia. The site was in contact with the Mesopotamian world, with a native Anatolian culture. Evidence of preparation for violence at Değirmentepe was revealed in the numbers of weapons recovered, though all could also have been used for hunting.

Interpretation of Collected Data

Archaeological evidence from the Early to Middle Chalcolithic period in southeastern Anatolia revealed little sign of widespread violence, violent contact or preparations for violence. The weapons unearthed were simple, made of stone or clay, and possibly hunting related. Fortifications were unknown, and destruction levels few. The settlements of this time period had many connections to the Halaf and Ubaid spheres of Mesopotamia, primarily in the forms of pottery and architectural styles, showing there was contact between these two areas, unlike the

more isolated central Anatolian Early and Middle Chalcolithic cultures.

Unlike contemporaneous Mesopotamia, signs of social complexity were absent in southeastern Anatolia: no differentiation in domestic buildings, no temple or palatial districts, no extravagant burials, and few elite goods. Settlements were open, egalitarian farming villages, with signs of nomadic peoples, such as at Fıstıklı Höyük. Trade of obsidian between Mesopotamia and southeastern Anatolia was apparent, as was the spread of tholos architecture and hand-painted pottery of the Halaf, and painted pottery and tripartite architecture of the Ubaid.

By the end of the Middle Chalcolithic, the beginnings of a separation between public and private sphere were visible through some larger central buildings excavated at Değirmentepe. Sites grew larger throughout the Middle Chalcolithic relative to the Early Chalcolithic, with some evidence of site hierarchy, and the beginnings of administrative changes, in the presence of stamp seals and clay bullae, as seen at Değirmentepe. While it is possible some chiefdom-level societies were present by the end of the Middle Chalcolithic, the evidence is not substantial, and overall, the settlements themselves remained open, with only small amounts of spatial differentiation, and no signs of widespread violence or preparation for violence.

Late Chalcolithic to Early Bronze I Southeastern Anatolia

Sites of Particular Importance: Arslantepe, Hacınebi, Hassek Höyük, Kenan Tepe, Tilbeshar

Unlike contemporaneous central Anatolia, the Late Chalcolithic saw a marked increase in the archaeological evidence of socially embedded violence, along with an increase of evidence of social complexity. Burial methods in this time period changed dramatically. The internment of the dead remained primarily in an intramural context, as opposed to the emergence of extramural

cemeteries in central Anatolia. Intramural burials at Arslantepe, Hacınebi, Hassek Höyük, Kenentepe, Korucutepe, and Kurban Höyük contained both adult and subadult burials, while at the remaining four sites with published burial information (Oylum Höyük, Samsat, Yarim Tepe, and Zeytinlibahçe Höyük), only subadult burials were recovered. Extramural cemeteries were noted from Arslantepe, Hacınebi, Oylum Höyük, and Titriş Höyük, dating to the Early Bronze I. The Arslantepe and Titriş Höyük cemeteries were, unfortunately, both highly looted and were never systematically excavated by archaeologists. The remaining two cemeteries, from Hacınebi and Oylum Höyük, were excavated, though not extensively.

The earliest stone-lined cist tombs and larger, built chamber tombs date to this time period, as recovered from Arslantepe, Korucutepe, Oylum Höyük and Titriş Höyük. These types of tombs do not emerge in central Anatolia until the Early Bronze II period. A greater degree of differentiation of burials, and their associated burial goods developed in southeastern Anatolia than was found anywhere in central Anatolia during this time period.

Evidence of trauma in the archaeological record was not widespread, though anthropological studies of remains from this period remain rare. Trauma was recorded from human remains recovered from Arslantepe and Hacınebi, both cranial and postcranial. A single adult male from Hacınebi was found with a cranial fracture possibly caused by a macehead. The Royal Tomb of Arslantepe contained the remains of four adolescent women, all with fatal cranial trauma, although as at Domuztepe, this may be an indication of ritual killing rather than the result of external violence.

Weapons as grave goods were only recovered from the Royal Tomb of Arslantepe from this time period, so while there is greater evidence of weapons and weapons technology, there seems to be no connection between individuals and ownership of weapons. A wider array of

weapons types and metallic weapons were recovered from the Late Chalcolithic to Early Bronze I archaeological record. Arsenical bronze weapons were more abundant than copper, a marked difference from contemporaneous central Anatolia. Sling balls, clay or stone, were less common than the previous time period, as were obsidian and flint projectile points, though both were still present. Stone maceheads were uncommon, though a macehead from Koructepe remains the earliest known worked iron ore in Anatolia. Stone flat and shaft-hole axes were common, as were arsenical bronze shaft-hole axes, daggers, knives, and spearheads. Most interestingly, the oldest known swords in the world came from find spots at Arslantepe, from both the Late Chalcolithic and the Early Bronze I. Bronze weapons and "warrior" weapons were more abundant in southeastern Anatolia than from central Anatolia. Analysis of weapons found from southeastern Anatolia showed signs of use on the weapons recovered. All were found in public contexts with the exception of the Royal Burial at Arslantepe, further discussed below.

Percentages of fortified settlements in southeastern Anatolia were similar to those in contemporaneous central Anatolia: 69.2% of all known excavated settlements, as opposed to 62% in central Anatolia. Southeastern fortifications were different however, with niches and buttresses on the interior of walls in the Mesopotamian style, as opposed to the sawtooth or *kastenmauer* constructions of central Anatolia. Both regions employed simple mudbrick, stone, and casemate walls. Large gated entrances and towers were known from this time period, although unlike central Anatolia, glacis were not found. The walled fortification systems in this time period were no grander than those of central Anatolia, and open, unfortified sites were still fairly common.

Destruction was hardly widespread in this time period, although there was far more burning and abandonment at the end of the Late Chalcolithic than was present in central Anatolia

in this same time period. During the Late Chalcolithic, Arslantepe, Hassek Höyük, Kenan Tepe, Korucutepe, and Kurban Höyük were all destroyed and rebuilt immediately. At Arslantepe, the site was rebuilt in a new fashion, refashioning the central citadel section completely. The evidence suggests a new system of government rather than the arrival of a new population, as the remainder of the site was not significantly altered.

By the Late Chalcolithic period, Arslantepe, Hacınebi, Hassek Höyük, Hiberdon Tepe, Korucutepe, Kurban Höyük, Norşuntepe, Samsat, Tilbeshar, and Tell Al-'Abr were abandoned for a period of time, although in the Early Bronze I period, all but Hacınebi, Hiberdon Tepe, Korucutepe, Samsat and Tell Al-'Abr were reestablished. The mound at Hacınebi was later reused as a cemetery in the Early Bronze I period. Korucutepe was reestablished in the Early Bronze II period, Hiberdon Tepe in the Early Bronze III period, and Samsat only much later in the Hellenistic period. Tel Al-'Abr was never reestablished.

In the Early Bronze I period, sites in general were smaller than in the previous period, and destruction was less widespread. Destruction levels were present at Arslantepe, Değirmentepe, Kenan Tepe, Korucutepe, Tilbes Höyük, and Tilbeshar at various points during this time period. Tilbes Höyük was immediately rebuilt, while Arslantepe and Tibeshar were destroyed near the end of the Early Bronze I period and abandoned for a period of time before being reestablished in the Early Bronze II period, although far smaller than in the previous time period. Kenan Tepe was abandoned until the Middle Bronze Age. Zeytinlibahçe Höyük, on the other hand, showed no signs of destruction, and yet was abandoned at the end of the Early Bronze I period, and only reestablished in the Early Bronze III. This was likely due to the flooding of the site rather than by any violent occurrences.

Key Sites

Excavations at **Arslantepe** remain the most extensively from the Late Chalcolithic to the end of the Early Bronze Age in southeastern Anatolia. While the settlement reached the height of its influence in its interactions with Mesopotamia during the Late Chalcolithic and Early Bronze I, it remained important through the Early Bronze II and III. The number of burials published from Arslantepe was small, because although a contemporaneous cemetery was discovered, it remains unexcavated due to modern looting. A number of intramural inhumations and the Royal Tomb were published and analyzed, with only minimal trauma noted on the bones.

Numerous weapons were published from Arslantepe, from both the Hall of Weapons, located in the central Palace, and from the Royal Tomb, located on the edge of the settlement. Weapons included arsenical bronze spearheads, daggers and knives, and the oldest known swords in the world. No weapons were recovered from other domestic contexts and unfortunately, not enough adult burials were recovered from this time period to determine if the general population was buried with weapons or not.

The weapons recovered from the Hall of Weapons at Arslantepe indicated that a central authority owned these weapons, and were issued to individuals as needed. Bronze was still expensive and rare. Put together, the Arslantepe evidence suggests that perhaps full-time soldiers were not existent, but rather men were called upon as needed and given their weapons at that time.

The Royal Tomb of Arslantepe was filled with a large number of very well-crafted weapons, including spearheads and swords with signs of use, likely indicating that the leader thus entombed was associated with fighting and leadership in war, and so was buried with the symbols of his fighting ability. These weapons probably belonged to this individual, as opposed

to the common conscripted fighter, who was only loaned weapons.

The iconography from Arslantepe further strengthens this argument. Excavations at Arslantepe accumulated some of the few iconographic materials known from prehistoric Anatolia, including seals depicting a figure sitting on a dais; possibly a ruler-figure (See Figure 8.7), the only such representation from this time period in Anatolia. The figure was not portrayed holding a weapon however.

Arslantepe was first fortified in the Late Chalcolithic and remained fortified through the Early Bronze I period. Arslantepe was burnt and destroyed at the end of the Level VIA phase, and the fortifications rebuilt, larger and stronger than in the previous time period. Only the Upper Town was fortified, while the Lower Town remained open. The site of Arslantepe was divided between public and private space by the Late Chalcolithic, with a large Level VII tripartite palace at the center of the site interpreted as a redistribution center for the populace. Evidence suggests that resources and rule was centralized by the Late Chalcolithic period. The central administrative buildings were built in a local, rather than Mesopotamian, style. The one exception was the tripartite main temple, Temple C, the only tripartite building known from Level VII.

While Uruk materials were present at Arslantepe in the Late Chalcolithic by Level VIA, the Level VII settlement was purely native in culture and in government, with only minimal Mesopotamian style. The palatial district of Level VII was completely burnt and destroyed, and was rebuilt in Level VIA, with a new fortification system and a new style of temples and palaces on the citadel. The city again was destroyed at the end of Levels VIA and VIB, and was briefly abandoned at the end of the Late Chalcolithic. The site was slowly reestablished through the Early Bronze I period, at first by nomads, then gradually as a permanent residence.

Excavations of Late Chalcolithic Arslantepe reveal the best evidence of complex chiefdoms and goods redistribution from southeastern Anatolia. The site was located along a major trade route from Mesopotamia into Anatolia, and had a very high amount of interaction with the Uruk world while still maintaining its native culture alongside adopted Uruk styles. Violence was present at Arslantepe, with evidence from trauma in the human remains, numerous burn levels, and a highly advanced use of weapons technologies, centrally owned and allocated to the fighting population. Local elites benefited from the threat of violence, as method to consolidate and increase the power of the ruling class, with evidence from the weapons stored in the Royal Tomb and iconographic depictions of a ruler. Arslantepe was prepared for the threat of violence, and the settlement itself was highly affected by violence.

Hacınebi was an important Late Chalcolithic settlement, though by the Early Bronze I, the settlement was abandoned and the mound used as a cemetery. The settlement was fortified by the later part of the Late Chalcolithic, though the earliest settlement at Hacınebi was open. The fortifications were a monumental stone wall, with niches and buttresses, and a large city gate, large enough to be a protective fortification system. The site was located upon limestone bluffs overlooking the Euphrates River, which further added to the protection of the site. Burn layers were not found during excavations, and no weapons were published from the settlement.

The population of Hacınebi was intimately connected to the Mesopotamian world. A small Uruk enclave was built within a small section of the site, with evidence of immigrant Uruk peoples living in a distinctly different style than the local native population. The Uruk was likely present at Hacınebi to facilitate trade between southeastern Anatolia and Mesopotamia. The government at Hacınebi was complex, with signs of administrative control such as bullae and a central palatial district set apart from the domestic space in the main settlement. Despite the

presence of trade, however, signs of violence were virtually nonexistent at Hacınebi, and only minimal signs of preparation of violence in the form of the fortification system. Hacınebi was apparently a peaceful site, despite the presence of foreign immigrants. Evidence of the use of violence by the elite of Hacınebi to consolidate power is not available, although it was likely that trade and elite goods remained important factors.

By the Early Bronze, the site was abandoned and used as an extramural cemetery. Excavations of the cemetery were not vast, and little was published regarding human remains, though some evidence of trauma was revealed. One adult male had a possibly fatal perimortem cranial fracture, while other individuals showed some postcranial trauma. Nothing further is known about Early Bronze I Hacınebi, including where the associated domestic settlement was located.

The settlement at **Hassek Höyük** was at its height during the Late Chalcolithic and Early Bronze I, and was abandoned by the Early Bronze II. Hassek Höyük was almost certainly an Uruk colony, like the small Uruk enclave of Hacınebi, but without signs of a large local population. A smaller local population may have been present, as not all the material culture was Mesopotamian in style. By the Late Chalcolithic, the city was fortified and the settlement was split between private and public sectors. Elite housing and a palace were excavated, indicating a centralized government with an elite class at the center. Evidence of Uruk immigrants included architecture and the pottery styles, and particularly styles of the elite houses. The settlement was destroyed twice by fire, and rebuilt both times. Hassek Höyük was destroyed completely at the end of the Late Chalcolithic, then reestablished in the Early Bronze I period. Few burials were dated to this time period, so nothing is known about the health of the local population.

The Early Bronze I settlement was a new population. The site was larger and a

fortification system was rebuilt around the entire settlement, while no recognizable elite housing was noted. The site was not as centralized as in the previous period, and was likely reinhabited by local Anatolians. An extramural cemetery was excavated from this time period, revealing adult males buried with weapons such as spearheads, daggers, axes, and maceheads, although the remains have not yet been examined for trauma.

Kenan Tepe was important for its lack of Uruk materials in the Late Chalcolithic period. Few burials dated to this time period, and no trauma was recorded on the remains analyzed. The site was fortified by the Late Chalcolithic, and burnt and rebuilt twice. The site was not abandoned at the end of the Late Chalcolithic. In fact, the city flourished, and grew into the Early Bronze I period. As Uruk material was nearly absent from Kenan Tepe, it stands to reason that the fall of the Uruk period, which was so detrimental to settlements such as Hassek Höyük, Hacınebi, and Arslantepe, did little to change life at Kenan Tepe. At the end of the Early Bronze I period, the site was abandoned, without any signs of destruction.

Interpretation of Collected Data

The Late Chalcolithic period was distinctly different in southeastern Anatolia than in central Anatolia. While there were distinct social and political changes from the Middle Chalcolithic to the Late Chalcolithic in central Anatolia, change is more substantial in southeastern Anatolia. Settlements grew in size, and while not all sites were fortified, most of the larger and some of the smaller settlements were, though in similar ratios to contemporaneous sites in central Anatolia. Weapons technologies greatly changed and increased, with larger numbers of metal weapons, particularly made of arsenical bronze, created. These included the first known swords, as well as maceheads, spearheads, and daggers; all weapons better created

for interpersonal violence than hunting.

While signs of early social complexity were by the end of the Middle Chalcolithic, many of the settlements of southeastern Anatolia were clearly chiefdom level societies by the Late Chalcolithic. Evidence of complex bureaucratic systems was available through the presence of cylinder seals and clay bullae at sites including Arslantepe, Hassek Höyük, and Hacınebi, as well as differentiated public and private spheres and the build up of centrally located palatial and temple districts. Central districts were separately fortified for the lower domestic sectors, either as the only area fortified, as at Hacınebi and Arslantepe, or with a wall surrounding the central district and a second wall around the domestic settlement, as at Hassek Höyük.

Signs of redistribution of staples through the political authorities were present, and clear elements of elite status, including elite goods, elite housing and elite grave styles, and trade of raw materials between Mesopotamia and southeastern Anatolia common. The vast majority of southeastern Anatolia settlements were under Uruk influence, from full Uruk colonial sites such as Hassek Höyük, integrated Uruk enclaves at Hacınebi, or emulation of Uruk style by elites at Arslantepe. These settlements for the most part were independent settlements with their own ruling parties and their own government. Mass-produced materials were known, including the Uruk style beveled rimmed bowls and wheel-made pottery.

The end of the Uruk period led to widespread disturbances in southeastern Anatolia, far more from central Anatolia. The sites of Arslantepe, Hacınebi, Hassek Höyük, Korucutepe, Norşuntepe, Tilbeshar, and Kurban Höyük were abandoned at the end of the Late Chalcolithic and left uninhabited for a period of time. Some, such as Hacınebi and Samsat, were never reinhabited; others, such as Arslantepe, Hassek Höyük, Kurban Höyük, Korucutepe, and Norşuntepe, were later reestablished in the Early Bronze I and II periods.

In general, sites were smaller in the Early Bronze I period: smaller in size, with fewer fortification systems, and fewer signs of complex societies. This was a period of rebuilding in southeastern Anatolia, as sites were recovering from the fall of the Uruk. By the Early Bronze II, southeastern Anatolia again underwent a significant change, as settlements largely abandoned their trading partners from Mesopotamia and began to look towards the west and central Anatolia.

Violence was an important aspect of these settlements. Fortification systems were built, weapons caches created, and materials to form well-crafted and expensive bronze weapons were assembled. The larger sites tended to be fortified, and there was a marked increase in violence and violent ends at the end of the Late Chalcolithic period, coinciding with the fall of the Uruk sphere. Most of the settlements in southeastern Anatolia were very much a part of the Uruk world, and were unable to continue, at least for a period of time, during the violence that ensued at the fall of Uruk. The exception of Kenan Tepe, where Uruk materials were rare and signs of violence at the end of the Late Chalcolithic completely missing, indicate that this violence was likely a result of the downfall of Uruk.

The elite of the Late Chalcolithic made use of the elite trappings made available through the Uruk influence, as well as the threat and reality of violence, as a method to codify their power, but lost control with the fall of the system, leading to the relatively smaller and less complex, but still occasionally violent, settlements of the Early Bronze I period.

Early Bronze II and III Southeastern Anatolia

Sites of Particular Importance: Arslantepe, Norşuntepe, Titriş Höyük

By the Early Bronze II to III, central and southeastern Anatolia once again displayed a

number of similarities in both their cultural and political structures. The settlements in both regions were independent city-states, with powerful elite leaders living in palatial districts at the center of settlements. Trade was ongoing between the two regions on a regular basis, while neither was as active in the Mesopotamian sphere. While trade with Mesopotamia was not completely absent, beginning in the Early Bronze I period and increasing in the Early Bronze II and III periods, southeastern Anatolia had more cultural connections with central Anatolia, western Anatolia, and the Aegean region than it did in previous eras. It was during this period that the rise of the first empire, the Akkadians, began, affecting both regions, if perhaps not quite as much as was once suspected.

Southeastern Anatolian burial practices were more diverse than central Anatolia burial customs. Central Anatolia burials were largely extramural, with small numbers of larger built tombs, the burials of southeastern Anatolia were both intramural and extramural, with a larger number of stone-built chamber tombs as well as monumental tombs, especially in sites closer to northern Syria. More burials and human remains were known from this time period than either of the previous two, and more anthropological data available.

Intramural burials of adults and subadults were published from eleven southeastern Anatolian sites, while extramural cemeteries were published from six sites, including Birecek, Gedikli, Hassek Höyük, Lidar Höyük, Jerablus Tahtani, and Titriş Höyük. Simple inhumations, jar and pithos burials, cist tombs, and chamber tombs were located, for all sexes and age groups, both intramurally and extramurally. At Jerablus Tahtani, Gre Virike and Tilbeshar, monumental tombs were built. The Tilbeshar tomb was a corbeled chamber tomb, sadly robbed in antiquity. Jerablus Tahtani was notable due to a monumental tomb, Tomb 302, dating to the Early Bronze III period. Like at Tilbeshar, it was a corbel-vaulted tomb, but larger, with two chambers instead

of one. While the tomb was robbed in antiquity, some of the remains of the original occupants still remained, as well the remains of weapons including daggers, shaft-hole axes, and spearheads, indicating that weapons were important in such a monumental tomb.

Gre Virike, a ceremonial non-domestic site, was quite unique with ten burials excavated dating to the Early Bronze III, including simple inhumations, one pithos grave, three jar graves, one mudbrick lined cist tomb, one stone lined cist tomb, one shaft tomb and one oval chamber tomb. The chamber tomb, K9, was similar to Tomb 302 at Jerablus Tahtani, a multiple-room tomb, containing large numbers of ceramic vessels, beads, a single bronze spear head and a bronze tanged triangular projectile point, though the remains associated with the tomb were very badly preserved. The presence of such tombs, Mesopotamian in style, reveals the continued connections with the Mesopotamian world, in particular in the style of elite symbols, if not in the life of the everyday citizens.

Evidence of trauma was far more common from burials than in previous time periods. Trauma was noted from Arslantepe, Birecek, and Titriş Höyük, the three sites with the best-preserved human remains. Trauma was both cranial and postcranial, with postcranial rib and parry fractures in both sexes and all age groups at Arslantepe and Titriş Höyük. Cranial trauma, on the frontal, parietal and occipital, was found primarily in the adult male population, with some adult females showing injury, but none from subadults. Both healed and fatal perimortem trauma were noted. Cranial injuries were consistent with wounds from maceheads, axes, daggers, and spears.

Grave goods, including weapons, were abundant in graves in this time period. Burials from Birecek, Carchemish, Gre Virike, Hassek Höyük, Tilbeşar, Jerablus Tahtani, and Titriş Höyük contained weapons as grave goods, including flat and shaft-hole axes, maceheads,

daggers, knives and spearheads. Weapons were found primarily in adult male graves, as well as a smaller number of adult female graves, but only from subadults at a single instance at Carchemish.

Weapons technology did not change as drastically from this period as between the previous two periods. The most dramatic innovation was the appearance of tin bronze. Clay sling balls were relatively rare, only recovered from Norşuntepe, while chert projectile points were still present in larger numbers, as were stone maceheads and axes. Arsenical and tin bronze weapons produced from this time period included flat, shaft-hole and crescent axes, daggers and spearheads. No swords were recovered from the Early Bronze II to III, which could either indicate they had gone out of use again, or perhaps were too valuable to leave in burial contexts. Nearly all recovered weapons were from burials, with only small weapons, such as projectile points and sling balls, recovered from domestic or public contexts.

This may indicate a shift from the previous time period. While in the Late Chalcolithic to Early Bronze I period, weapons were kept in a more central location, by the Early Bronze II to III, weapons were apparently associated with private individuals, and buried when they died; this is not limited to the more monumental graves. Although weapons were not universally found in adult male graves, they were far from uncommon, yet do not seem to correlate with grave types, perhaps signifying that weapons were personal property, part of the burials of soldiers or warriors. We cannot assume this indicates a full-time standing army, but simply men, and perhaps some women, who fought during the fallow farming season.

The settlements of Early Bronze II and III southeastern Anatolia were still economically reliant on farming, and settlements were likely not large enough to support a class of full time soldiers and warriors.

As in central Anatolia, fortification systems were nearly universal by the Early Bronze II and III periods. Only one site, Oylum Höyük, was found unfortified. This site was at least partially surrounded by a small basalt wall during this time period, though it was unclear if the wall went completely around the settlement or was protective in purpose. Mesopotamian-style niches and buttresses were still present in this time period, while simple, rounded mudbrick and stonewalls were far more common. Large, nearly monumental gates were common, as were towers and external glacis. Orthostats were noted at Kurban Hoyük, and a moat was built at Titriş Höyük by the Early Bronze III period. Only one site, Tepecik, had a casemate wall, and the wall at Norşuntepe was a sawtooth wall, as was more common in central Anatolia. The fortification systems of this time period were significantly larger and better constructed than in the previous time period, and would have taken more time and energy to built and maintain.

Finally, destruction was not prevalent in the Early Bronze II period, thought it was far more common in the Early Bronze III period. The sites of Arslantepe, Gedekli/Karahöyük, Gritille, Korucutepe, Kurban Höyük, Norşuntepe, Oylum Höyük, Pulur, Tilbes Höyük, Tilbeshar, Jerablus Tahtani, Tell Shiyukh Tahtani, and Titriş Höyük were all destroyed during the Early Bronze III period. Korucutepe, Norşuntepe, Pulur, Tilbeshar, Jerabls Tahtani, and Tell Shiyukh Tahtani were all immediately rebuilt after destruction. Arslantepe, Gedikli, Gritille, Kurban Höyük, Oylum Höyük, Jerabus Tahtani, and Titriş Höyük were all destroyed at the end of the Early Bronze III period and abandoned, and were only reestablished later.

Key Sites

While **Arslantepe** was at its height in terms of size, populations and diversity of architecture in the Late Chalcolithic and Early Bronze I periods, it remained an important

settlement to the end of the Early Bronze III period. The site was reestablished as a habitation site by the Early Bronze II period, though it remained small and gradually grew in size throughout the Early Bronze III period.

Analysis of the human remains recovered from the Early Bronze II Sepulcher 216 revealed healed and unhealed trauma, affecting both male and female adults. Four adolescents were found in one of the monumental Early Bronze I tombs, with fatal trauma to the crania, although these may have been human sacrifices and so are among the anomaly burials, such as at Domuztepe and Titriş Höyük. Healed and fatal perimortem trauma on the crania and postcranial regions of the skeletons was noted on both males and females, with trauma consistent with injuries due to maceheads or clubs, as well as from possible spearheads. Unfortunately, no weapons were recovered from the Early Bronze II and III periods, and no cemetery was excavated from this time period, so it remains unknown what kinds of weapons were made in this time period or who owned or kept them.

Early Bronze II and III Arslantepe was smaller in size than in the past, with smaller buildings and less differentiation in building sizes and quality. The architecture and material culture became more central Anatolian in style, rather than the Mesopotamian designs of the previous period. In this time, Arslantepe was a small independent site, with its own form of government, and increased trading ties with Anatolia and far fewer ties with Mesopotamia. The site was completely destroyed and abandoned at the end of the Early Bronze III, and was only reestablished later in the Middle Bronze Age.

Norşuntepe was abandoned at the end of the Late Chalcolithic period and reestablished at the very end of the Early Bronze I after a few centuries of abandonment. The settlement size expanded, with an extramural cemetery founded outside the city walls. Unfortunately, the

cemetery was looted prior to the start of excavations, and was not further investigated. Numerous weapons were recovered in Norşuntepe from the Late Chalcolithic and Early Bronze I periods, including stone axes, hammers, and maceheads, clay sling balls, and bronze projectile points, spearheads and flat axes. Metal weapons were more numerous from the Early Bronze II and III periods. Molds for flat and shaft-hold axes were also recovered, indicating a thriving metallurgical practice at the site.

The entire site was protected by a large wall with a sawtooth outer facade. The architecture, and pottery styles shifted from Mesopotamian influence to largely Trans-Caucasian and central Anatolian styles, a common occurrence in southeastern Anatolia. By the Early Bronze III period, a large palatial district was built at the center of the mound, which was burnt and rebuilt once. The site was burnt at the very end of the Early Bronze Age and abandoned for a period of time.

Titriş Höyük, along with Arslantepe, was one of the more extensively excavated Early Bronze Age sites in southeastern Anatolia, with a clear sequence of changes in the Early Bronze II and III periods. The site was a large but mostly unfortified settlement in the Early Bronze II period, with a number of surrounding settlements outside of the citadel of the central mound, including the Lower Town and the Outer Town, as well as surrounding suburbs. The central mound contained a large palatial district where the political center of the settlement was located. The majority of the common population lived in the edges of the region, while the elites lived in the center. At least two extramural cemeteries were in use during this time period, although only a small number of burials were excavated from these cemeteries, due to looting of the cemeteries. Analysis of the remains revealed a small number of healed and unhealed cranial traumas in the adult population.

By the Early Bronze III period, Titriş Höyük changed drastically. All of the outer villages and suburbs at Titriş were abandoned and never reinhabited; the central mound was fortified for the first time. The constructed wall was tall, with an external glacis, and the only known moat from this time period in southeastern Anatolia. The citadel of the mound remained the palatial district, but the population itself also moved onto the mound from the suburbs. Within the domestic sector, elite and non-elite domestic spaces were uncovered, revealing the presence of varied social classes at Titriş. The burials in this time period moved from extramural simple inhumations and cist tombs to intramural chamber tombs under the floors of houses, with entire families buried under the floors of their homes.

Signs of violent trauma were noted on some of the adult individuals from this time period, including healed and unhealed cranial trauma. Famously, the Plaster Burial dates to this time period, an anomalous feature that may represent the victims of external violence, the victims of sacrifice, or even possibly the victims of a fatal degree of corporal punishment.

Personal weapons as grave goods were abundant in this time period, including daggers and spearheads, although little has been published on these materials. No destruction levels were noted during this time period, but at the end of the Early Bronze III the entire settlement was abandoned, and only a portion of the central mound reestablished in the Middle Bronze period. Some of the smaller, formerly dependent farming villages later became independent villages.

Interpretation of Collected Data

By the Early Bronze II period, both central Anatolia and southeastern Anatolia were similar in terms of settlement size and political structure. Like central Anatolia, the larger settlements of southeastern Anatolia were now primarily small, independent city-states. Unlike

in the Late Chalcolithic period, the settlements of southeastern Anatolia traded more with central Anatolia, the Mediterranean, the Caucasus, and western Anatolia than in previous time periods. While evidence of Mesopotamian trade and influence was still present, such as the large tombs at Gre Virike, Tilbeshar and Jerablus Tahtani, the niche and buttress style of walls, and some ceramic styles, the architecture and ceramic styles were more similar to the west and Anatolia then to the south and Mesopotamia.

Settlements were built around a centralized palatial and temple district at the citadel of the mounds, with strong and complex fortification systems. The settlements were urbanized, with farming in the state-controlled hinterland, and a large variety of specialization in the population. Evidence of a standing army does not exist, although more and more of the male population was armed, as noted through the presence of weapons as grave goods for adult males and some females.

Public projects, such as the building and maintenance of temples, administrative centers, irrigation canals, granaries, and monumental fortification systems, speak to the power of the elites and their ability to focus the energy of the population into such large projects. Outside violence was likely an issue with the rise and fall of the Akkadian empire, although archaeologically there is no direct evidence of the Akkadians.

The elites of Early Bronze II and III southeastern Anatolia had strong control over their populations, with their settlements prepared for violence. The threat of violence was real, as evidenced through trauma on the human remains and an increasing numbers of destruction levels. The rulers of these settlements prepared their people for this violence, through increases in the numbers, quality and types of weapons, and large, intricate fortification systems, with the elites benefiting from these threats to consolidate and maintain their power over the populace.

At the end of the Early Bronze III period, the rise of city-states and centralized governments ended once more, as many of the largest settlements were destroyed or abandoned, including Arslantepe, Gedikli, Gritille, Kurban Höyük, Norşüntepe, Oylum Höuük, Tilbes Höyük, Tilbeshar, Titriş Höyük, Jerablus Tahtani, Tell Shiyukh Tahtani and Tell Al-'Abr.

Table 10.1: Evidence of Violence from the Archaeological Record

Time Period	Region	Evidence of Violence
Early/Middle Chalcolithic	Central	**Burial/Bioarchaeological***:* No trauma, single site (Hacılar) with some individuals perishing in a destruction level **Weapons**: Clay sling balls; stone maceheads, flat axes; copper macehead and axes; no weapons from burials **Fortifications**: Three fortified settlements; not necessarily defensive in nature **Destruction Levels:** Three settlements destroyed by fire, possibly due to violent activity **Iconography**: None published **Trade**: Mersin a major trade center, limited long distance trade of raw materials
	Southeastern	**Burial/Bioarchaeological:** Anomalous Domuztepe Death Pit with trauma from all remains **Weapons:** Clay sling balls; stone sling balls, projectile points, flat axes, daggers; no weapons from burials **Fortifications:** No protective fortifications published **Destruction Levels:** Four settlements with destruction, all immediately rebuilt **Iconography:** Human figures depicted on seals and pottery from Domuztepe **Trade:** Long distance trade of raw materials and cultural concepts from Mesopotamian Halaf and Ubaid cultures
Late Chalcolithic/ Early Bronze I	Central	**Burial/Bioarchaeological:** Trauma from a single adult male burial from Büyük Güllücek, "warrior" burial **Weapons:** Stone and clay sling balls; stone maceheads, flat axes, copper flat axes, projectile points,daggers, knives; arsenical bronze spearheads; no weapons from burials

Table 10.1: Evidence of Violence from the Archaeological Record Continued

		Fortifications: 62% of sites fortified, Anatolian Settlement Pattern, *kastenmauer,* towers, glacis, gates **Destruction Levels:** 6 settlements with destruction levels, two rebuilt, two abandoned, two reestablished with a new culture **Iconography:** None published **Trade:** Slight increase in trade of raw materials to western Anatolia and Caucuses
	Southeastern	**Burial/Bioarchaeological:** Small number of elite tombs; evidence of trauma on the adult populations at Arslantepe and Hacınebi **Weapons:** Clay sling balls; stone projectile points, flat and shaft-hole axes; arsenical bronze shaft-hole axes, daggers, axes, knives, spearheads, swords; elite tomb with weapons as grave goods **Fortifications:** 69.2% of settlements fortified: niched and buttressed interiors, casemates, towers, gates
Early Bronze II/III	Central	**Destruction Levels:** Late Chalcolithic destruction at five sites, decrease in settlement size in the Early Bronze I **Iconography:** Depictions of humans on seals from Değirmentepe, Arslantepe, and Hacınebi, wall paintings from Arslantepe **Trade:** Intensive trade with Mesopotamian Uruk, presence of Uruk immigrant enclaves and colonies **Burial/Bioarchaeological:** Small number of elite tombs; trauma found on adult male and female population from Demircihöyük, Elmalı-Karataş, Harmanören, and İkiztepe; cranial wounds matching macehead and spearhead shapes **Weapons:** Obsidian projectile points; arsenical and tin bronze projectile points, maceheads, flat, shaft-hole and crescent axes, daggers, knives, spearheads, swords; weapons common in adult burials **Fortifications:** All settlements fortified: Anatolian Settlement Pattern, *kastenmauer,* gates, glacis, towers, bent-axis gate **Destruction Levels:** Rare in Early Bronze II, more widely spread in Early Bronze III, six sites destroyed **Iconography:** Human figures on daggers from İkiztepe **Trade:** Increased trade to southeastern Anatolia, western Anatolia, the Caucuses, and Mesopotamia; raw and finished goods
	Southeastern	**Burial/Bioarchaeological:** Three sites with elite

Table 10.1: Evidence of Violence from the Archaeological Record Continued

	chamber tombs; moderate to high amounts of trauma found on the adult population from Arslantepe, Birecek, and Titriş Höyük **Weapons:** Clay sling balls, stone projectile points, maceheads, flat axes; arsenical and tin bronze flat, shaft-hole and crescent axes, daggers, knives, spearheads **Fortifications:** All large settlements fortified: niche and buttress, gates, towers, glacis, moats, orthostats **Destruction Levels:** Less in Early Bronze II, 13 settlements with destruction in the Early Bronze III **Iconography:** None published **Trade:** Intensive trade to central Anatolia, western Anatolia, the Caucuses, and Mesopotamia; raw and finished goods

Chapter Eleven : Theoretical Modeling of Warfare and Politically Sanctioned Violence in Prehistoric Anatolia

This dissertation is necessarily an incomplete account of how socially sanctioned violence became an embedded aspect of culture between the start of the Chalcolithic and the end of the Early Bronze Age. A total of 73 sites were analyzed in this dissertation, though archaeological excavations can only reveal so much of the ancient past. One site might expose trauma data from the population, with a large enough sample size be representative of the general community. Excavations of other reveal fortification systems, destruction levels or weapons technology data. No excavation of a single site can expose all the data one might wish from that settlement or culture; this is and will likely always be the limitations of archaeology.

This dissertation however, collects and compiles all possible information from the archaeological record on the presence of societally sanctioned violence. The accumulation of the data reveals broad patterns of violence, violent interactions and preparations for violence over the course of approximately 3500 years, from the start of the Early Chalcolithic to the end of the Early Bronze Age, in a macro interpretation of central and southeastern Anatolian regions, and micro interpretations of individual sites or regions over this long period of time. A similar study by Arkush and Tung (2013), collecting archaeological evidence of warfare through the Andes from the Final Formative (400 BCE) to the Late Intermediate Period (1400 CE), answers similar questions about the presence of warfare through various Andean cultures across a considerable period of time, while acknowledging the gaps in the archaeological record.

The data collected, while imperfect, can begin to answer such questions as: How prevalent is violence? How does a society treat violence and violent behavior? How does this change over time, as societies transform from egalitarian villages to complex chiefdoms and

beyond? What can the rise of violence and the embedding of violent behavior as a cultural norm reveal about ancient power structures? Not all questions will be possible to answer conclusively, but it is the author's hope that this thesis brings us closer to understanding the presence of the social acceptance of violence in individual sites, such as Hacılar, Tarsus and Mersin; Arslantepe, Hacınebi and Titriş Höyük, through time, as well as the general trends in the two larger regions. Both the micro and macro perspective is necessary to get the best view possible of this issue. Future excavations throughout Anatolia will add to the data collected in this dissertation, furthering the work begun here.

Through the analysis of the 73 sites from central and southeastern Anatolia, clear patterns arise from each of the three time periods studied, Early to Middle Chalcolithic, Late Chalcolithic to Early Bronze I, and the Early Bronze II to III. The explanation of the data in Chapter Ten outlines these patterns.

Next, this dissertation attempts to fit these patterns into the practice theory model as outlined in Chapter One. The thesis is not an attempt to understand the "causes" of warfare and violence in society. Such positivist lines of inquiry have generally proven difficult, if not impossible. For example, the models previously attached to the rise of warfare in the ancient Near East attribute warfare pressure on village due to higher populations (e.g.) Carniero's circumscription theory (1990), and similar theories by Chagnon (1990) and McCauley (1990), show the connection between the rise of violence and the rise of chiefdoms. While there are valid points to circumscription theory, the reductive nature of the model, where the rise of violence equals the rise of chiefdoms, is ultimately too simplistic and deterministic.

Instead, this dissertation investigates the evidence for violence and its correlates in the archaeological record. How and when does violence become an engrained, entrenched aspect of

society? By studying the physical evidence for violence, such as skeletal trauma, weapons and weapons technologies, fortification systems, destruction levels, and iconography, and studying any patterns made visible through the accumulation of this data, we can better understand this question, without the textual references that would make this task simpler. This thesis is also interested in the interaction between the rise of complex societies and the rise of violence. Rather than a model that would encompass every area, the particular examples of central and southeastern Anatolia and specific sites within those two regions are examined. By focusing on how violence becomes an entrenched aspect of culture, it is hoped to understand the rise of violence without creating reductive models.

Warfare, as outlined in Chapter One, is a process, not an event. The archaeological evidence studied here cannot, for the most part, give information on single violent events, with the possible exceptions of the Death Pit at Domuztepe or the Plaster Burial of Titriş Höyük, each of which may be the direct result of singular violent events. Neither of these events can be conclusively linked to inter-societal violence as opposed to violent ritual or perhaps even punishment of members of society for unknown infractions. Beyond these two possible anomalies, the evidence studied here can only inform about how the possibility of violence affected daily life in settlements. How were people changed by, or preparing for, this possibility? Were they stockpiling weapons? Were they buildings great walls? Were they making leaders of their most capable warriors, or were the elites adopting the trappings of warriors in order to maintain respect and power? Were the populations living with healed violent trauma? Were settlements burnt? How did these societies react to destruction? By rebuilding a stronger and thicker wall? By moving away? These are the questions that can be answered through the study of the archaeology of violence.

We cannot know who is fighting. This dissertation does not answer once and for all the question of when the Indo-European populations first entered Anatolia, or if indeed, they ever had to enter the area at all. Rather than studying the movement of peoples through the landscape, this dissertation sought to recognize how settlements changed through time as a result of violence. The archaeology of violence, to paraphrase Wileman, can only study the effects of warfare through the few clues left to us in the archaeological record (Wileman 2009: 2). The political conditions of central and southeastern Anatolia were rather similar, if not completely the same, during the Early and Middle Chalcolithic periods. Settlements in central Anatolia had minimal amounts of outside influence through the presence of long distance trade or perhaps populations moving through the region. In southeastern Anatolia, there was a higher amount of outside influence, as seen through the presence of both Halaf and Ubaid material culture and architecture. Yet evidence of violence was minimal in both regions in this period. With the exception of Domuztepe, violence was not noted on the few human remains during this time. Weapons during both periods consist of items possibly used for hunting, such as sling balls and projectile points, with some smaller amount of objects made with the clear intent of inter-human violence, in this case, the stone and copper maceheads recovered from both regions. Fortifications were quite rare, with outliers from both regions, such as Mersin, Hacılar and Güvercinkayası, and possibly Fıstıklı Höyük, though this "wall" was likely not built for defensive purposes.

Mersin and Güvercinkayası were the exceptions that prove the rule. As the only well fortified sites known in Anatolia from this time period, both were also already important trade hubs. By the Late Neolithic, Mersin was one of the most important trade centers in the ancient Near East. The town was prepared for violence, and violence was visited upon it.

The only other fortified site from the time period, the Middle Chalcolithic settlement at Güvercinkayası, was located along an important and ancient land trade route, and was built with very strong defenses that also employed the natural landscape for this purpose. While only sling balls were recovered from the site as weapons, the site was likely an important trade hub, and was utterly destroyed during the Middle Chalcolithic, never to be reestablished. These two sites were earlier versions of what is later seen in the Late Chalcolithic in southeastern Anatolia, and across both regions in the Early Bronze II and III. While the general trend for this early time period was relative peace and egalitarian open societies, where trade was important, violence, the threat of violence, and destruction follow. It was also likely not a coincidence that these two sites had evidence of a more complex political system in place, with well laid out districts, and evidence of centralized bureaucracy and urbanism, where few other sites are little more than large farming villages. Both sites had a different trajectory than the rest of contemporaneous Anatolia, reacting to violence with increased preparedness, with evidence of social complexity as part of the package.

In the Late Chalcolithic and Early Bronze I period, central and southeastern Anatolia were no longer similar in their trajectory. The settlements of southeastern Anatolia were now largely complex chiefdoms, with clear evidence of elite classes, larger settlements, increased trade and influence from Mesopotamia, including colonies and enclaves of Uruk peoples, as at Hacınebi and Hassek Höyük, and emulation of Uruk style by elites in native settlements, as seen from Arslantepe. More rarely, as at Kenan Tepe and Mersin, some settlements refused to take part in the Uruk world, and were able to stem the tide of violence that resulted with the downfall of the Uruk at the end of the Late Chalcolithic. There was a wide range of settlement types and ways in which these settlements appropriated the Uruk package. While many sites had ample

evidence of preparedness of violence, with weapons stockpiles and monumental fortification systems, as well as actual violence in the form of widespread destruction, abandonment and trauma, other sites remained simple settlements, lacking fortification systems or the many trappings of the Mesopotamian world, and with less trade, and therefore, less violence. While there was a general trend towards political complexity, and the embedding of violence into society, it was by no means universal, depending on the choices made by individual settlements.

In Late Chalcolithic and Early Bronze I central Anatolia, however, while there was some sign of political complexity, with palatial districts found at Kalınkaya, Beycesultan, Elmalı-Karataş, Tarsus, and Mersin, larger numbers of other sites remained open, egalitarian farming settlements. There was evidence of trade in this time period, mostly with the Aegean and western Anatolia, as well as the Caucuses, but the elite structures and materials recovered from central Anatolia were not as well-made or as rare as those found in southeastern Anatolia. Violence was definitely a part of these societies. In terms of preparedness, there was the advent of arsenical bronze weaponry and large fortification systems, in particular the rise of the Anatolian Settlement Plan, as seen at Demircihöyük, Küllüoba and Beycesultan. There was actual violence as well, as seen in the destruction levels and the rare trauma seen in the human remains. There did not seem to be as large an incursion of foreign peoples in central Anatolia as was found in southeastern Anatolia. The sites with the largest amount of apparent trade, and the larger elite classes, were once again the sites with the more apparent signs of violence and embedding of violent behavior in the archaeological record.

By the Early Bronze II and III periods, southeastern and central Anatolia once again became far more similar in their political and social alignments. Significant settlements in both regions were large, urbanized, and fortified independent city-states, with a centralized

administrative system overseen by a class of elites who also controlled the surrounding farming hinterland. Trade was very important in this time period, with all major sites now located along major travel routes, high numbers of elite goods present, as well as the expansion of metallurgy and the advent of tin bronzes for weapons and personal adornment. Central and southeastern Anatolia traded with each other far more in this period, and the architecture and material culture reflect this greater similarity. While the southeast did not completely forsake its trade with Mesopotamia, Mesopotamian influence in the region decreased.

By this time period, violence was embedded into society. Settlements were built to defend themselves, with very large monumental fortification building projects that would have required a large investment of energy, time, and resources to build and maintain. The male population, from all classes apparently, owned person weapons, and was buried with these items, which were often symbolically 'killed' when their owner died, by being bent or broken before being placed in the tomb. The richer burials were given more weapons, showing their relative importance to status, a high status individual, usually male but occasionally female, was highly associated with the number of weapons he or she controlled. The threat of violence was real, with settlements destroyed, and adults injured or killed in combat. The elites of both regions made use of the threat of violence, as an aspect of constructing and maintaining their power, as will be further explained in the next, and final, section.

Violence in Prehistoric Anatolia Through the Lens of Practice Theory

In the Practice Theory model, the purpose is not to create a predictive model based on positivist variables, such as over population, environmental stress, or decreasing resources, but instead to allow for a holistic view of the many variables possible that could contribute to the rise

in violence, and then to understand, both on a case by case basis, as well as on a regional level, how various agents react to these issues. Not all cultures in a single region are going to react in the same fashion, even under the same conditions.

What is visible in the patterns outlined above is how central and southeastern Anatolia changed in their interactions among settlements in the regions and between these regions and the larger world of the ancient Near East. As mentioned in Chapter One, interaction between polities oscillates between periods of peaceful cooperation and warfare, between trade and violence. This oscillation is visible in the archaeological records from both areas, in the presence of trade goods, in the presence of changes in architecture, in the way that most of the settlements in each area are purposefully placed along major trade routes. Being located along a trade route was very useful in facilitating trade, but this also increased the chance of violence by outside groups. Therefore, in order to counter this threat, fortification systems were built and the citizens of the settlement were trained to fight.

In response to the need or the desire for trade items, societies take on the added risk associated with trade, and thus allow for violence to become a part of their society. In central Anatolia in particular, the change from more isolated settlements to ones fully interacting in the social sphere by the end of the Early Bronze was clear, and occurred over the millennia between the Early Chalcolithic and the end of the Early Bronze Age. The variables noted by Carniero in his circumscription model, namely increased population, increased competition for resources, and deceased numbers of resources, were present, although the societies involved were able to chose or reject taking part in this world.

For example, Mersin originally traded almost entirely with the Mesopotamian world from the Late Neolithic onwards. This settlement was one of the earliest known fortified settlements,

with evidence of destruction as well as evidence of weapons caches. This was a settlement perfectly poised to be part of long distance trade, as it was a harbor city located in Cilicia, and was able to take both land and sea travel routes. As the Uruk period continued and trade drastically increased throughout the rest of southeastern Anatolia, the populace of Mersin chose to remain out of the fray, and changed to their trade partners to the west: the Aegean, and western Anatolia. If Carniero is to be believed, there is little space for such individual agency of a settlement, while Practice Theory allows for single instances, such as Mersin, to change the story and be less involved in lucrative trade if they did not deem the consequences worth the trouble. The individual agents of Mersin reacted to the political stimulus as they saw best, not in a prescribed manner.

A second site of note is Titriş Höyük. At Titriş, much of the population in the Early Bronze II period lived originally in the Lower Town, Outer Town, and suburbs around the city. In the Early Bronze III, the population moved into the city center itself, within the large walls of Titriş Höyük, as evidence of violence increased in the area around Titriş. At the same time, the male population at Titriş showed far more evidence of trauma from fighting. There was a visible change over time at Titriş as people changes their residence locations in order to be better prepared for the threat of violence. Perhaps in the end this was unsuccessful, as the settlement was abandoned at the end of the Early Bronze III period.

Practice Theory can be used to understand the trajectories visible both at singular sites, such as in Mersin and Titriş Höyük, as well as in the various regions as a whole. In general, from the Chalcolithic to the Early Bronze Age, in both regions there was a shift from egalitarian to complex chiefdom societies. Along with this transformation came various new technological advances, in particular the change from copper to arsenical or tin bronzes. The highly valuable

tin bronzes would only have been possible through trade of tin, a rare commodity.

Groups will trade peacefully at times for good they desire, and will turn to violence when the goods are not forthcoming or when the goods are not abundant enough. The Akkadians, according to their own texts, were interested in Anatolia for its natural resources, such as the timber and silver they brought to Akkad. There was little evidence anywhere in this time period in Anatolia of the presence of standing troops. Weapons appeared to transform, through the Late Chalcolithic and Early Bronze I period, from being owned by central authorities and handed out in times of need, to being personal objects, as seen in the presence of weapons as grave goods in both periods in the Early Bronze II and III periods. The population of either region was probably insufficient to support standing troops, nor was there a clear reason to do so. The Akkadians were likely the first civilization to have full time soldiers, which required a high amount of bureaucratic oversight in order to keep this population feed and equipped. A standing army allowed the Akkadians to have direct control over the lands adjacent to Akkad itself, but as noted in Chapter Three, they almost certainly were unable to control the lands beyond, and were almost certainly only sending seasonal raiding parties into Anatolia.

Warfare in Anatolia at this time was probably centered on small skirmishes and raids. The evidence of violence is present: the increase in fortifications, adult males with healed trauma consistent with fighting, and adult males and females with fatal trauma consistent with fighting. Burnt destruction layers at many sites support this evidence. There were no signs of direct control of one polity over another. After destruction of sites, most were rebuilt in a similar fashion, with the exceptions of abandonment and rebuilding, as at Late Chalcolithic Hassek Höyük, or Early Bronze Arslantepe. In these cases, the old population of a settlement abandoned it, only to have a new population take over what was likely a highly advantageous position.

The evidence of violence, then, indicated periodic attacks on settlements that were then rebuilt, often with stronger walls, as seen at settlements such as Norşuntepe, Pulur, Jerablus Tahtani, Alaca Höyük, Alişar Höyük, and Tarsus. The settlements continued as before, with the exceptions of breakdowns in societies at the end of the Late Chalcolithic in southeastern Anatolia, though not in central Anatolia, and at the end of the Early Bronze III in both regions.

Warfare in this time period became a tool for achieving set goals, such as acquiring goods, and possibly women and children, and for creating and strengthening the power of the elites in other ways. As the rise of an elite group of rulers continued in the Late Chalcolithic in southeastern Anatolia, and in the Early Bronze II and III in central Anatolia, the need for elites goods, such as tin as well as other materials, would have increased as a method of commoditizing status and helping elites maintain their place in society through the further accumulation of wealth. As trade increased, so did violence and warfare, as warfare was used by the elites as a method of acquiring their desired materials, of keeping the materials they already own, and of creating a stronger sense of identity within their communities. By fighting outside peoples, they created the "Us versus Them" mentality necessary to keep the population under their control and believing in their power. By creating the concept of the ruler as the ultimate warrior, as seen in such evidence at the Royal Tomb at Arslantepe or the contemporaneous iconography from Mesopotamia, and by codifying violence as important part of society, the threat of violence was used to further the agenda of the ruling elite and to help solidify it.

In the case of weapons, there was a change from weapons as something owned by a central authority, to personal items of great importance. The graves of the most important people, from Arslantepe, Alaca Höyük, Horozetepe, Tilbeshar, Jerablus Tahtani and Gre Virike, contained more weapons than those of the non-elites. It is very unfortunate that there is so little

iconographic material from this time period, as it could tell us more about how warriors were imagined and perceived. Nonetheless, there was an increase in the value of weapons in society, as they become better made and more useful.

Fortification systems also served an important purpose. They were created to protect a settlement from outside violence. They required a large amount of planning to create, to assemble the manpower necessary to build the walls in the first place, and then continuously to keep the walls in good repair. The elite rulers would be in charge of planning and implementing these projects. At the same time, as noted in Chapter Six, walls are also symbolically charged. The walls mark what is and what is not part of a settlement, and better helps delineate Us from Them. It furthers the goal of creating an independent identity in a culture and settlement, separate from other nearby settlements. By the Early Bronze III, all large habitation settlements in both central and southeastern Anatolia were fortified. While evidence indicates an increase in violence in this time period, there was also a change to independent city-state social structures. The fortification systems would help further the identification of the peoples into these individual cultural identities, as well as making these divisions more apparent to visitors to the region, be they there for trade or for less peaceful reasons. Fortifications were a visible aspect of the creation of independent polities by the Early Bronze III period.

This study of the evidence of politically sanctioned violence in central and southeastern Anatolia, then, accomplishes a number of goals. All available data from both southeastern and central Anatolia, from the Early Chalcolithic to the end of the Early Bronze Age, is collected here into one study. This allows a study of how warfare and violence were present in the archaeological record, and of what is missing for future studies in these two regions. The increase of violence in society is traced against the increase in social complexity over time. The

increase in violence was used and encouraged by elites as a way to further their own power, and to increase wealth in their own communities. This does not answer the "whys" of how warfare first began, but does show how warfare and violence was used as a tool, and wielded as necessary, by the elites of central and southeastern Anatolia.

Appendix 1 : Central Anatolian Settlements Excavation Histories and Site Information

Acemhöyük

The mound of Acemhöyük is ovular in shape, measuring 70 by 600 meters, and rises up to 20 meters above the level of the surrounding plain. The settlement includes a lower city that was only partially investigated, due to the presence of a modern village upon the remains. The site was excavated since 1962, with excavations ongoing. The site was directed between 1962 until1988 by Nimet Özgüç through the University of Ankara (Özgüç 1966: 30-31). From 1989 until today, the site has been under the direction of A. Öztan, through the University of Ankara.

The site was originally chosen for excavation due to its large settlement dating to the Middle Bronze Age and the existence of a karum (trading settlement) at the site. The lower city was only inhabited during the Middle Bronze Age/Karum period. Acemhöyük has habitation levels from the Chalcolithic to the Islamic period, with the main occupations during the Middle Bronze Age, and only small and sporadic late occupations in the Hellenistic and Roman periods (Özgüç 1066: 32).

Ahlatlıbel

Ahlatlıbel is located 14 km southwest of Ankara, and was occupied during the Early Bronze II and III periods (Barcan 2012:21-23).

Alaca Höyük

Alaca Höyük site originally measured 310 by 277 meters and was 16 meters high above the surrounding plain, and the earliest habitation was settled upon a natural hill. Alaca Höyük was first recorded in 1835 by William Hamilton, as part of his travels around Asia Minor (Hamilton 1842), and was first noticed due to the visible rock sculptures on the surface of the

mound. The site was visited by various explorers and travelers, but was not excavated until 1908 by Hugo Winkler and Makridi Bey, as an offshoot of their excavations at nearby Boğazköy (Gursan-Salzman 1992: 3). The first excavation of the site was completed in 1926 by Hans van der Osten through the University of Chicago, and as part of the excavations of the nearby Alişar Höyuk, (van der Osten 1933), creating enough interest in the site for future excavations.

The site was first systematically excavated in 1935 to 1939, with a break during World War II, then again from 1940 to 1948, and finally in 1963 until 1978. The excavations of Alaca Höyük were led by Hamit Koşay and Remzi Arık, through the Turkish Historical Society. Excavations were specifically suggested by Turkish president Mustafa Kemâl Atatürk, as part of a plan for Turkish archaeologists to control a major Anatolian excavation (Koşay and Akok 1973). Alaca Höyük was reopened under Aykut Çınaroğlu in 1994, and work continues to this day.

The site was inhabited for a long period of time. Most famously perhaps were the Late Bronze Age levels, and their associated monumental stone structures and palaces. The site was first inhabited during the Chalcolithic period (Building Levels 15-10), with continuous habitation through the Early Bronze I/Late Chalcolithic (Level 9), Early Bronze II (Level 8), Early Bronze III (7-6), a destruction level in the transition from Early Bronze III to Middle Bronze I (5), Middle Bronze (4), to Late Bronze and Iron Age (1-3). Virgin soil was reached in multiple areas of the site (Koşoy and Akok 1963).

The site was and remains open as an archaeological park for visitors, and so while much of the site was excavated, many of the Iron Age and Late Bronze Age structures, such as the Sphynx Gate and many of the palaces and temples, were left intact. This severely limited how much horizontal exposure could be completed of the earlier levels, so that a plan of the Early

Bronze Age and Chalcolithic levels at Alaca Höyük remains largely unknown, or even how large these settlements were. Areas from both periods were excavated (Gürsan-Salzmann 1992: 49-50).

The Late Chalcolithic and Early Bronze I levels, Levels 12-9, were not extensively excavated. The settlement size for these remains unknown, but it seems to have not been a planned settlement. The architecture was constructed with thick stone foundations and mudbrick walls with some timber reinforcements. The domestic spaces were rectangular two-room houses, with open courtyards in front of the house with work space and outdoor hearths. The earliest buildings in Levels 11 and 12 were built of wattle and daub rather than mudbrick, with small irregular stones as foundation stones or even mudbrick foundation. In all periods, the walls were plastered, and the rooms paved with mudbricks (Gürsan-Salzmann 1992: 58-61). The site was likely home to between 25 to 50 families, in an open community based on agriculture and domesticated animal breeding with some hunting (*Ibid*: 281).

The Early Bronze Age II and III levels, Levels 8 to 5, were largely focused on the cemetery region of the site, with far less information on the remainder of the site in this period. The best known architectural levels are from the Early Bronze III period, Levels 5 and 6, mostly in the areas around the cemetery rather than in the center of the site. The Early Bronze III site was not a planed settlement as was found in the later Middle Bronze Age settlement. The excavators revealed a number of small building complexes from this time period, generally a series of rectangular rooms, from 5 by 10 to 7.5 by 10 meters in size, built somewhat irregularly with walls not built at right angles to one another, and open air courtyards in-between the rooms. These rooms did not appear to be domestic, but were more likely for storage or for public use, with materials such as storage jars, personal ornaments and maceheads found inside. One

domestic structure, Building G, was excavated, with three to four rooms and a hearth in one of the rooms, and a separate shed for animals. The architecture of the Early Bronze Age was made with stone foundations, often made with cut stones and mudbrick walls and wooden support beams (Gürsan-Salzmann 1992: 55-58).

Alişar Höyük

Alişar Höyük is a medium-large site for this region. The mound itself measured 245 by 145 meters, rising 30 meters above the surrounding plain, with an additional terrace that measured 520 by 350 meters, rising between 5 to 8 meters above the surrounding plain, for a total of approximately 18 hectares total of both the mound and the terrace.

The site of Alişar Höyük was first recorded during surveys of the central Anatolian Plateau led by H.H. Von der Osten in 1926 as part of the Explorations in Central Anatolia Project through the Oriental Institute of the University of Chicago (van der Osten 1931: 77-79). The site was primarily excavated under the direction of H. H. von der Osten through the Oriental Institute between 1927 and 1932 (van der Osten and Schmidt 1930, 1932; Schmidt 1932, 1933; von der Osten 1937, 1938, 1939). Excavations at Alişar Höyük were ended prematurely, due to budget issues, and excavations were meant to be resumed at some point in the future. The site was briefly excavated for a single season in 1993, but due to various difficulties, the excavations were not continued, and the nearby site of Çadır Höyük was more extensively excavated (Gorny 1994; Branting 1996).

Alişar Höyük was inhabited between the Chalcolithic and the Iron Age, with a Late Roman to Byzantine cemetery also present on the mound, though there did not seem to be a habitation in this later period. The best known periods at the site are the Early Bronze levels, and the Late Bronze Levels, when the site was a major Hittite empire city called Ankuwa.

Excavations under van der Osten concentrated on the mound summit, called the "citadel" or (M) region by the excavations, and around the base of the mound in the "terrace" area or (T) region. While there is some controversy over the exact dating of the site, Alişar Höyük Level 0 (Mound Levels 19-15) dates to the Late Chalcolithic, Level I (Mound Levels 14-12) to the Early Bronze I, Level II (Mound Levels 11-7, Terrace Level 14) to the Early Bronze II, and Level III (Mound Levels, Terrace Level 13) to the Early Bronze IIIA and IIIB.

Alişar Höyük has presented itself as a rather confusing site, with an unclear stratigraphy and multiple interpretations of its meanings. lişar remained one of the first large sites to be more fully excavated in central Anatolia, and was only the third Hittite settlement discovered, after Alaca Höyük and the Hittite capital city of Boğazköy. Alişar Höyük remains to this day one of the most important sites for comparative ceramic chronologies. It was the first large stratigraphic excavation in central Anatolia, and while well excavated for the time, more modern excavations of nearby sites are looking to better fill out this picture. While the Middle Bronze and Late Bronze levels were reinterpreted by Ron Gorny (Gorny 1990), the Early Bronze levels remain to be completed, so the more exact dating of the site remains somewhat unclear.

In the Early Bronze II period, the site expanded outwards and the terrace portion of the settlement was inhabited fort the first time. On the mound, three buildings were excavated in Level 11, all of which were burnt at the end of the level. After, the settlement was rebuilt, and a new fortification wall was built around the settlement on the mound, and a second fortification wall was built around the terrace (Gorny 1990).

In the Early Bronze III period, little was found in the terrace portion of the mound. A large mudbrick fortification wall with stone foundations was found surrounding the mound portion. At the end of Level 6, the entire system was burnt and destroyed, with a new stronger

and thicker wall built in the Level 5 immediately afterwards, made of stone four meters wide (Gorny 1990).

Bademağacı Höyük/Kızılkaya Höyük

The site was originally called Kızılkaya Höyük in the literature, but is now known as Bademağacı. The site was first excavated in 1993, and excavations continue to this day. The excavations are lead by Reik Duru through the University of Istanbul (Duru 2001: 48-51). The site is ovoid in shape, and measures 200 x 100 meters in size and is rises 7 meters above the current surrounding plain, but has approximately 10 meters of cultural material (Duru 2001: 48-51).

The site has habitation levels from the Early Neolithic to the Early Bronze II period, with gaps between the Early and Late Neolithic, and the Early Chalcolithic and the Early Bronze II period, and later occupation in the Middle Bronze Age. A small amount of Early Christian habitation was also found at the top of the site, but badly preserved.

The Early Bronze Age was represented in 5 levels at the site (5-1), and took up the entire mound. The buildings of the Early Bronze Age were roughly square in shape and had well made, thickly laid out stone foundations under mudbrick walls for the Early Bronze I. In theEarly Bronze II, this changes. The houses become longer, now rectangular shaped with thinner stone foundations under mudbrick architecture. The houses of theEarly Bronze II were megaron in layout, with the entrance to the houses on the short side of the house. The houses were placed side by side, with all the entrances facing inwards towards the center of the mound, a defensible position (Duru 2001: 48-51).

Bağbası

The site of Bağbası has deposits from the Late Chalcolithic to the Iron Age, though the

site is primarily a Late Chalcolithic site with small scatterings of materials from the Early and Middle Bronze Ages and the Iron Age (Eslick 1992: 11).

Excavations of Bağbaşı were carried out between 1967 and 1969 by Bryn Mawr, under the direction of Machteld Mellink, as part of the Elmalı-Karataş excavations, focusing primarily on the Late Chalcolithic periods at the site. In total, 1035 square meters in of excavation trenches were opened at Bağbası, revealing a total of six Late Chalcolithic houses. Beneath the Late Chalcolithic levels was bedrock or virgin soil, though a small amount of Middle Chalcolithic pottery speaks of a likely Middle Chalcolithic habitation, though no architectural evidence was found of this level. Likely, the habitation of this site was short; the cultural deposits were at their thickest only a meter deep, and as shallow as 20 cm. Likely, the habitation at the site was only for a few decades. Despite it small size and short period of habitation, it does appear that the village at Bağbaşı did take part in trade with its neighbors, as seen in the presence of non-local greenstone, copper, obsidian, shells and likely pottery in the archaeological record, and, though nothing remains, likely perishable goods as well (*Ibid*: 88). The site was located on a major trade route, and so these connections seem like a large part of village life at Bağbaşı.

The architecture found here was made of timber with chaff-tempered mud "which served as walling, mortar, packing and plaster" (*Ibid*: 5). No complete houses were found, and, due to the rather shallow placement of the remains, were found in only fragmentary condition. Not enough the of the architecture was found to learn about how the settlement was arranged or the types of buildings it contained, nor about any possible fortifications or walls. The majority of the architecture found was burnt, but this is also because unburnt timber would not have preserved and so left no trace in the archaeological record (*Ibid*: 2-5).

The architecture is a bit different in the Elamı plain than other areas of Anatolia, as the

vast amount of wood allowed for timber architecture, as opposed to the stone or mudbrick often found in other areas of central Anatolia. Some of the buildings (e.g. in Trench 110) did have well made stone foundations supporting the timber walls with mud finishing and compacted earthen floors. The natural bedrock was also at times modified to act as foundation for buildings as well. The best preserved houses also contained indoor built hearths, which the excavators hypothesized were the cause of the many fires found in the architectural remains. The houses were free standing, roughly rectangular in shape, with no overarching orientation. Some houses were only one room, some were a number of rooms, and all seemed to have been one story. Given the site of the mound and the trenches done on various parts, the site was "densely settled... suggesting an area of some 60 by 100 meter fr the area of the Late Chalcolithic village" (*Ibid*: 11-16).

Unfortunately, the various houses found were in different trenches and could not be linked stratigraphically, and so it remains unknown how the houses relate to each other temporally (*Ibid*: 16). This is the only yet known Late Chalcolithic site in the Emalı plain to produce excavated architecture (*Ibid*: 76). The site was abandoned at an unknown time, and, though some time did elapse, soon, the nearby site of Elmalı-Karataş was founded, only 700 meters away.

Beycesultan

Beycesultan is a large multi-period mound, totaling approximately 40 acres in area, and standing as high as 35 meters above the surrounding plain. The mound is long and ovular in shape, with two summits, creating a saddle-like shape to the mound (Yakar 1985: 161). The site was inhabited from the Late Chalcolithic to the Iron Age, along with a smaller Byzantine occupation and cemetery. The site was recorded from Levels I to XL, with Levels XL-XX dating

to the Late Chalcolithic, XIX-XVII to the Early Bronze Age "First Phase," XVI-XIII to the Early Bronze Age "Second Phase," and XII-VI to the Early Bronze Age "Third Phase." Levels V to I range from the Middle Bronze to the Phrygian Iron Age, and will not be further addressed in this dissertation. The three Byzantine building levels were not assigned level numbers, and appear to not have been published (*Ibid*: 9).

The mound was first recorded in 1952, during Mellaart's surveys of southern Anatolia (Mellaart 1954). The site was excavated between 1954 to 1959, under the directorship of Seton Lloyd through the British Institute of Archaeology at Ankara. The site was originally excavated in order to give information on the gap between the known sites of Troy in the west and Boğazköy in the east, as the site was quite large and therefore likely a "capital" city (Mellaart and Murray 1995: Preface).

Beycesultan was published in a series of annual reports in *Anatolian Studies*, and in the final publication, published in three volumes between 1962 and 1998 (Lloyd and Mellaart 1962; 1965; Lloyd 1972 and Mellaart and Murray 1995).

Below Level XXL virgin soil was found. The earliest levels were found only in a single deep sounding, "SX" in the western sector of the mound. The Late Chalcolithic levels did not contain any complete buildings due to the necessarily small size of the sounding, though a small number of complete rooms were found. While a good number of buildings were found dating to the Chalcolithic, only a small area could be excavated in the sounding, and so nothing of the type or size of the settlement in this period is known. The buildings excavated appear to be largely domestic in nature. The architecture found was made of plastered mudbrick, with a number different buildings found, most likely a number of houses or storage areas, found with hearths and storage bins built into the rooms. The houses in the Chalcolithic were small, with earth

floors, and mudbrick walls built at 90 degree angles and no niching or buttressing. The final Chalcolithic level, XXIV, contained part of a small dwelling, which the excavator likened to a *megaron* in shape, the earliest at the site, though unfortunately not well preserved (Lloyd and Mellaart 1962: 18-26).

The Early Bronze Age I levels (XIX-XVII) were somewhat larger in size than the Chalcolithic, but still not a substantial area, measuring only 17 x 13 meters. After Level XVIII, the settlement again increases (*Ibid*: 29).

From Level XVIII onwards, the sounding revealed a religious shrine, located likely right next to the city wall. The shrine, or later, shrines, were rectangular in shape with a single portico entrance and smaller rooms to the east designated as the "priest's room." In the sanctuary portion is a built alter and receptacles for offerings, as well as clay bins for grain, hearths, baking ovens and clay benches along the walls (*Ibid*: 29). At the time of excavation, no other comparable shrines had been excavated in Anatolia.

TheEarly Bronze II was comprised of Levels XVI-XIII. In the SX trench, later iterations of the shrine first found in Level XVIII were excavated, becoming larger and with more rooms. In Level XVI, there are twin sanctuaries. The shrines are mudbrick walls. In Level XV, Shrine A was destroyed by fire, as was Level XIV Shrines A and B. After the fire, in Level XII, the area was rebuilt, but seemingly not as a religious area. The buildings found in this level contained hearths and storage pithos, and no evidence of roofing, so the area may have been work and storage space. In Sublevel XIIIb, the area was burnt, perhaps due to an earthquake, along with evidence of possible "earthquake cracks." In the rebuilding, the walls were slightly changed in orientation and then in XVIIIa, the whole area leveled and flattened after another fire. After this phase, the style of material culture, pottery and architecture change, leading the excavators to

conclude “the introduction of a new ethnic element amoung the occupants of the mound could unmistakably be detected” (*Ibid*: 36-56). It would seem then at the end of theEarly Bronze II, some sort of event happened at the site, causing major changes in the material culture.

In theEarly Bronze III period, Levels XII-VI, much changed at the site. It is unclear from the reports if there was a period of desertion and reoccupation at the site after the destruction of theEarly Bronze II buildings. The orientation of the site changed somewhat in Level XII, as well as a new color of mudbrick, and thicker walls with undressed stone foundations for the first time on excavated buildings than in the earlier phases. By Level VII, the building style changes to the *megaron* style of architecture seem briefly in Level XXIV. The *megaron* style of architecture continues at Beycesultan until the end of the Late Bronze Age. Three *megara* were were found in Levels VII, IX, and X, being built then reused in all three levels, though in Level IX, Megaron B burns down and is not later rebuilt in Level X. The abundance of material left in the building indicates the fire was unexpected and quick to destroy the house. These buildings did not appear to be cultic in nature, instead they seem to have been public space of some sort, perhaps work space for Megaron A, and domestic space for Megaron B. (*Ibid:*58-62). In Levels VII and VI, new buildings were constructed, though not in the *megaron* shape. These were simpler rectangular-shaped buildings, with less preserved of them than the earlier buildings, likely used as private residences with the kitchens found during excavation (*Ibid:* 63-64).

Boğazköy-Büyükkaya/Yarıkkaya

The sites of Büyükkaya and Yarıkkaya are a portion of the larger site of Boğazköy, the capital city of the Hittites in the Late Bronze Age. Yarıkkaya is two kilometers north of Büyükkaya, a small rocky outcrop and plateau briefly excavated in 1967 and 1968 as part of the larger excavations at Boğazköy (Schoop 2005:15-16).

The site of Boğazköy was first recorded in 1834 by C. Texier, an architect who made drawing and plans of the above surface features, who thought the site was to be Pteria, a Persian period site mentioned by Herodotus, or Tavium, a Roman site, mentioned by Stravo. In 1860, Perrot drew pictures of Yazilikaya, though got many details wrong. The site was first excavated first in 1906 by Winkler, thought to be related to Hama inscription, a Luwian inscribed stone found in a market in Hama. The first excavations of Büyükkala were by Chantre, in order to find tablets Akkadian and Hittite. Winkler and Makridi finally begun excavations in 1906, through the Germany Archaeological Institute, and continue to this day, only with breaks for the two World Wars. Excavations at Büyükkale were only periodic, and the discovery of prehistoric materials in the area were not discovered until the 1950s, and were even then largely ignored for the Late Bronze Age materials until a more concentrated effort was made to understand this level in 1994 to 1998 under the direction of Jürgen Seeher (Schoop 2005: 19)

The Prehistoric Early Chalcolithic settlement at Büyükkaya was placed upon a natural, large and flat platform two meters in height, near where a small stream passes through. This location allowed for both water and protection from the often strong winds of the surrounding valley. The inhabitants further leveled the area through bringing in fill made of burnt pisé likely taken from an older encampment that is not yet known. The houses themselves built at the site were not preserved, and so were likely made of timber, without stone foundations, but with clay floors and indoor hearths. Around the settlement were placed storage pits, and ditches were dug around the slopes to help with drainage. Likely, the settlement was not long lived (Schoop 2005: 16-19).

Büyük Güllücek / Kaletepe

The site of Büyük Güllücek (sometimes referred to as Kaletepe) is a small, less than one

hectare site. The site was first recorded during excavations of Alaca Höyük by Koşay and Akok. The site was excavated from 1947 to 1949, and only a small portion of the site was unearthed. The site contained habitation levels from the Late Chalcolithic and the Phrygian Iron Age. The Chalcolithic architecture was a number of rectangular, stone foundation rooms, though little material beyond pottery was recovered (Koşay and Akok 1957:25-28).

Çadır Höyük

Çadır Höyük is a small but very steep site, measuring 260 by 200 metes in size and rising 32 meters above the plain. A small terrace, dating entirely to the Byzantine period, is found along the northeastern edge of the mound, extending for another 200 meters beyond the mound itself (Gorny 1995:68).

The site of Çadır Höyük was first recorded as part of the Alişar Höyük Regional Survey project, led by Ron Gorny, in 1992 and 1993. Excavations at Çadır Höyük first began in 1994, and continue to this day. The site was under the direction of Ron Gorny of the University of Chicago from 1994 until 2010, when Dr. Gorny retired. Excavations at Çadır Höyük resumed in 2012 under the leadership of Gregory McMahon and the University of New Hampshire and Sharon Steadman of the SUNY Courtland. Çadır Höyük was originally excavated as a salvage project and site project of the renewed Alişar Höyük excavations. Çadır Höyük was scheduled to be inundated under the waters of the Gelingüllü dam sometime in the late 1990s (Gorny 1995: 65-66). The first season in 1994 was a quick deep sounding to understand the chronology of the site. The waters never reached the site itself, and excavations continued and grew into horizontal exposure of the site, once the site was found to be a fruitful location for excavation.

Çadır Höyük was inhabited more or less continuously from the Middle Chalcolithic until the Iron Age. The site was then abandoned for a long period of time, before being re-inhabited in

the Byzantine period as a small villa and farmstead. Virgin soil was never reached at the site, due to the high water table, and it is possible the site was first inhabited in either the Early Chalcolithic or Late Neolithic, though this remains to be proven.

The Chalcolithic settlement has been excavated largely at the southern edge of the mound, with around 500 square meters of horizontal exposure excavated. Çadır Höyük is a fortunate site for prehistoric excavations, especially considering the high amount of later settlements contained at the site. The earlier levels are easily found along the southern edge of the site, and can be excavated without having to go through many meters of later stratigraphy, allowing for the excavation of numerous periods in the same season at different parts of the mound. By the Late Chalcolithic, the size and materials found at the site seem to indicate the site was a regional center. As stated by Steadman "this implies that Çadır was proportionately bigger than surrounding communities, and that it may have functioned in some fashion as a type of economic center, perhaps a regional market or a nodal distribution center for long range trade goods" (Steadman 2007: 389-390).

A number of buildings with stone foundations and mudbrick walls have been found, including two domestic buildings. The largest building found so far is the so-called "Burnt Building," a large rectangular stone building with a plaster floor and attached open courtyard, that was burnt down, likely due to a fire from the large hearth located in the southeast corner of the courtyard. A large variety of material was found in the remains of the Burnt Building, including jewelry, textile production materials, stone tool production materials, and fine ware ceramics, as well as a good amount of animal bones and lithics. A number of open air workshops for pottery making, stone tool production and food production have been found surrounding the buildings. Domestic, workshop and perhaps even ritual space were found in the Chalcolithic

levels (Steadman 2007).

In the Early Bronze Age period, middle horizontal exposure has yet been completed. A large section of a fortification wall has been excavated, a later reuse of the wall from the Late Chalcolithic periods. The wall was wide, around two to three meters, without a stone foundation, and made of mudbrick. There does seem to be a large gated opening into the city, dealing into a paved courtyard, with a number of open air workspaces found both immediately inside and outside of the wall, including large industrial ovens for manufacturing purposes, as well as hearths for food preparation. None of the central portion of the Early Bronze city has yet been excavated. The wall found in the Late Chalcolithic and Early Bronze periods was rebuilt and continued to be used at until the end of the Late Bronze Age settlement, becoming large in size through time, eventually with a large stone casemate structure by the Late Bronze Hittite period (Personal excavations of the author, to be published in 2014-2015).

Can Hasan

The site of Can Hasan was excavated between 1961 and 1967, by a British team led by David French, and first located by James Mellaart in his survey of central Anatolia in 1951 and 1952 (Mellaart 1954). The site of Can Hasan was published in a series of seven annual preliminary reports (French 1962; 1963; 1964; 1965; 1966; 1967; 1968) and two final publications (French 1998; 2005). The site of Can Hasan is made up of three mounds, named Can Hasan I, II and III by the excavators, though, when surveyed by Mellaart in the 1960s, Can Hasan III was, somewhat confusingly, referred to as Can Hasan II (Mellaart 1963: 209). In this dissertation, the names used by the French team will be maintained.

Mound I is by far the largest of the mounds, located to the north of the other two mounds; the next largest is mound III, and the smallest is mound II. Can Hasan II is located between

mounds I and III, with a kilometer between mounds I and III. While some excavations of mounds II and III were undertaken, the majority of the excavations were of mound I, largely at the top of the mound.

Can Hasan was inhabited from the Neolithic until the Late Chalcolithic, with a small amount of non-architectural remains from the Iron Age to the Byzantine**.** The site was originally excavated as a comparison to nearby Çatal Höyük West, which also dated to the Early Chalcolithic. Can Hasan was a bridge between the Neolithic as excavated at Çatal Höyük, and the Chalcolithic, in order to make a better sequence of this period in the Konya Plain (French 1962: 29). The site was seen to be ideal for this, as no later settlements covered the Chalcolithic, allowing for broad exposures of this as of yet under explored period. Also of interest were a number of "Halaf-type" painted pottery fragments discovered during Mellaart's initial survey of mound I (*Ibid:* 31). Only a portion of the top of mound I was excavated, and so the size of the habitation areas for any of the periods remains unknown, unfortunately.

The site was split into seven total levels, 1 to 7. The main emphasis was on Levels 1 and 2, with a subdivision of 2A and 2B, which dated to the transition between Early to Middle Chalcolithic in Level 2, and the Late Chalcolithic in Level 1. The Level 2 subdivision is a re-occupation of the same architectural features. Level 3 dates to the Early Chalcolithic, and Levels 4 to 7 to the Neolithic. A few small sherds found on the surface date to the Iron Age, Classical, Hellenistic, Roman and Byzantine, though only in the Iron Age and Byzantine were any remains more than sherds found, in this case, pits (French 1998).

The earlier Neolithic levels in 7-4 were only found through small test trenches, and, due to depth and the water levels, virgin soil was not reached, so that the earliest levels of Can Hasan remain unknown. Small mudbrick structures were found from Levels 4-7, and seemed, even if

only partially explored, to share the same orientation as buildings excavated from Level 2B. The buildings did not have stone foundations in these levels (French 1998: 20).

The Level 2 and 1 buildings were also of mudbrick. Level 2B buildings, the best preserved level found in excavations at Can Hasan, were free-standing mold-made mudbrick without stone foundations, a total of ten "houses," sometimes preserved up to three meters in height. The houses were very regular in size and shape, and strengthened through buttressing into the house. The houses seemed to have been two stories high. All buildings in this phases were destroyed in a fire (French 1998: 27-33), then rebuilt in Level 2A with a terracing over the older deposits, though with less regularity than found in the earlier level (*Ibid*: 43, 49-50). As fewer buildings were found in Level 2A, but Middle Chalcolithic pottery was found around the site, the excavators surmised that perhaps the 2A residents of Can Hasan moved elsewhere on the mound, in an unexcavated area. The excavators were unsure how long of a time elapsed between Level 2B and 2A, but surmised that likely, it was not immediate, due to deposits between the layers (French 1998: 65-66).

The Level 1 buildings were even smaller and less well built than 2A, with smaller molded mudbricks and no stone foundations. Buildings were more often rebuilt and strengthened in this period, with larger courtyards containing ovens and work spaces. The Level 1 architecture contained more open spaces and a more open layout (French 1998: 50). It seems that Level 2A was abandoned at some point for unknown reasons, then, later, Level 1 was built on top after being leveled. After the abandonment of Level 1, the site was never again inhabited, with some small amount of pitting from later peoples, from the Iron Age to the Byzantines.

Çatal Höyük West

The site of Çatal Höyük West lies directly next to it's more famous sibling, Çatal Höyük

East. The eastern mound has been extensively excavated, from 1961 until 1964 by James Mellaart (Mellaart 1967), then reopened in 1993 with ongoing excavation led by Ian Hodder (Hodder 1996). The eastern mound, as mentioned in Chapter Two, dates to the Neolithic and remain one of the most important and most famous central Anatolian Neolithic sites. The western mound has been far less studied. The mound dates to the Chalcolithic, with no earlier Neolithic levels, and is "Roughly circular in size, with a diameter of *c.* 400 meter, it still rises to a height of 7.5 meter above the surrounding fields" (Mellaart 1965: 135). The site dates from the Early to the Middle Chalcolithic, with similar pottery to that found at nearby Can Hasan Levels 2 and 3 (French 1998: 3). It was previously believed that the site was occupied after the eastern mound was abandoned, though more recent work on the western mound now shows dates as early as 6000 BCE, at which time the eastern mound was still occupied. The current theory maintains the gradual transition from habitation on the eastern mound to the western mound, rather than a hiatus between occupations (Marciniak and Czerniak 2007: 123). No later occupations are found over the Chalcolithic remains. Due to the high water table, virgin soil was never discovered on the mound.

Mellaart first excavated the western mound in two small soundings in 1961, a small amount of architecture, Chalcolithic "Çatal Höyük west pottery" and "a few fragmentary clay figurines, human and animal, of small size and crude workmanship, a poor blade industry in obsidian, a few axes and adzes in greenstone, clay sling balls and bone awls and polishers with blunt ends, a spatula and a few ovoid templates cut out of potsherds (Mellaart 1965: 136). The architecture found resembled closely that of Can Hasan 2B, with mudbrick walls with inward buttressing (*Ibid:* 140).

Mellaart recorded two levels in his excavation, Levels 1 and 2, which corresponded to

two different pottery types, 1 and 2, rather than any architectural or spatial differences. A radiocarbon sample dated start of Level 2 at *c.* 5700 BCE, and Mellaart conjectured that the site was abandoned at towards the end of the Middle Chalcolithic (*Ibid:* 135).

In the new excavation of the western mound, a number of domestic buildings have been excavated. The houses were free standing, with irregularly shaped multiple rooms inside a rectangular shaped mudbrick building. The rooms were formed by internal walls and thus each house was divided slightly differently than the other nearby houses, with some houses having extra spaces later added onto the original rectangular structure. Some of the houses show evidence of internal buttressing, as was also found contemporaneously at Can Hasan I (Marciniak and Czerniak 2007: 123).

Demircihöyük/ Sarıket-

The site of Demircihöyük was excavated between 1975 and 1978 under the direction of Manfred Korfmann and the Deutsches Archäologisches Institut. The site was first recorded in the explorations of Kurt Bittel in 1937, with some small amount of exploratory excavations through the German Archaeological Institute. The original mound was far larger in size that the mound excavated in 1975, due to a stream located along the western edge of the mound eroding away a large amount of the cultural remnants, measuring 80 meters in diameter, and 5 meters in height above the surrounding plain. The mound was at most eleven meters thick of cultural deposit, with virgin soil reached during excavation, though it was found under the modern water table. The mound currently stands four to five meters above the surrounding plain with four to six meters of deposit below the current level of the surrounding plain (Seeher 2000).

While there are signs of a Neolithic phase at the site, notably through remains of Neolithic pottery sherds, the mound itself dated almost entirely to the Early Bronze Age, with a

total of 17 building phases recognized (named as Phases D, E1, E2, F1, F2, F3, G, H, I, K1, K2, L, M, N, O and P), all dating to the Early Bronze I and II periods, with only one short likely interruption in the phases. Destruction levels were present in phases E1, E2, H and L. There were also Middle Bronze and Hellenistic and Roman levels at the site, but all were far less well preserved and were found only in small areas of the mound (*Ibid)*.

While no levels dating to the Neolithic were excavated, a small amount of the Early Chalcolithic settlement was found in two deep soundings from the eastern side of the mound, dating to phases B and C. Only a small amount of material from this period was uncovered however, including a mudbrick wall, likely from a building. A small amount of Late Chalcolithic pottery was recovered however, allowing for comparisons to other contemporary sites in Anatolia, notably Ilipinar and Barcın Höyük and to better date the Late Chalcolithic settlement. Little could be learnt about the Late Chalcolithic of Demircihöyük from these scanty finds, and no further horizontal exposure was possible due to safety concerns and the high ground water level which made excavations nearly impossible at this level (Jurgen 2012: 118).

The Early Bronze city (Phases F and H) had a very unique set up of architecture and fortification, from Phase D onwards, and was split into three sections: Section I was phases D through F2, Section II was phases F3 through K2 and Section III was phases L-P. The buildings of Demircihöyük had stone foundations with mudbrick walls. The building were long and rectangular in shape, with a single story and flat roofs. The roofs themselves were used as additional workspace. The buildings were often two-roomed, sometimes up to three, with a central hearth, making these megaron buildings. The entrance to the buildings all faced towards the center of the site, and the buildings were placed directly next to one another, often, but not always, with party walls between them. The inhabitants could walk from building to building

across the roofs. With this, the back of the buildings formed together a wall around the settlement, as the buildings were built into a circle, with four different gated entranceways into the settlement. The backs of the buildings were often built in front or behind each other, creating a saw-toothed pattern rather than a smooth wall. The houses flanking the city gates were likely special function buildings rather than common domestic structures. These were larger in size than the other buildings, with three rooms instead of two and with more solidly built stone walls. The excavators supposed that each of the four blocks created by the four gates would have been a structural unit. (Korfman 1986: 242-244).

In the middle of the settlement was open communal space, with no buildings, but rather a series of workshop space and storage bins. In the excavations, approximately a half of the entire village was excavated. The settlement was around 70 meters in diameter, with a estimated population of around 130 inhabitants at any given time. It appeared the inhabitants regularly rebuilt and maintained their houses, with repair of one house likely resulting in the necessary repair of all houses in the communal unit, though each house did seem an autonomous unit from the remaining houses, with no doorways between houses and often a storage bin for each each house in the central open area. The settlement was abruptly abandoned at the end of phase P, with no previous signs of a decline in the settlement or any large destruction level, making the end of the settlement somewhat mysterious. This style of architecture, amazingly consistent and conservative throughout the entire Early Bronze Age period at the site in building practices as well as in material culture, has come to be known as the Anatolian Settlement Plan (Korfman 1986: 242-248).

Elmalı-Karataş (Semayük)

Excavated from 1963 until 1975 by Bryn Mawr College under the direction of Machteld

Mellink. The original purpose of the excavation was to excavate a prehistoric site in the Lycian area of Anatolia, as little was known of this period, with most of the emphasis being placed on Classical sites.

The site was first recorded in Mellaart's land survey of southern Turkey in 1951-1952, though he mistakingly believed at first that the region only contained Iron Age occupation and later (Mellaart 1954). This is also largely due to the types of building materials used in the Lycian region, mostly timber, stone or wattle and daub, leaving less visible traces than the large höyüks found in most of Anatolia. The first excavation of the Elmalı Plain was the excavations at Elmalı-Karataş.

The excavations at Elmalı-Karataş were primarily focused on the Early Bronze Age deposits and associated cemetery, with a central palatial structure and surrounding supporting village. Elmalı-Karataş itself is a smaller mound, around 100 meters in diameter and up to four meters high, than some of the other mounds in the area, but was chosen for excavation due to the limited amount of later occupation over the Early Bronze deposits, unlike, for example, the far larger nearby mound of Semayük (Warner 1994: 3), with deposits beginning in the Late Chalcolithic, a large Early Bronze Age area, and some smaller deposits from the Middle Bronze Age and Iron Age, as well as a scattering of Roman artifacts (Eslick 1992: iii). The site is split into six levels, ranging from the Early Bronze I (I-III), Early Bronze II (IV-V) and ending at Early Bronze III (VI). Under the Level I was bedrock or virgin soil. Publication of the site is ongoing, with a six volume final publication planned, as well as a number of annual reports published in the *American Journal of Archaeology, Türk Arkeoloji Dergisis* and *Kazı Sonuçları Toplantısı*.

Enough of the settlement at Elmalı-Karataş was excavated (a total of 14,625 square

meters) to trace out the layout of the site. At the center was a large central palatial structure with its own fortification system, surrounded by a supporting village of megaron-style domestic houses. Outside of the city was a large external cemetery made primarily of pithos burials, where the inhabitants of the settlement were laid to rest (Warner 1994: 3-5). The site plan gives much information of the layout, habitation and subsistence patterns of an Early Bronze Age settlement in this part of central Anatolia. Due to the shallowness of the site, while stratigraphy of each period was visible, often the periods were very thin with little between each level. The houses were visible from phase to phase, but with few intact floor or even only a single level of habitation present (*Ibid*: 8). Overall, the total habitation of the site likely is no more than 500 years (*Ibid*: 9).

The houses of Karataş from the surrounding village were generally made of timber, as is typical in this area of Anatolia for the time. The wooden walls were usually further bolstered by mud *pisé*, similar to buildings found at the earlier Bağbaşı. Also like that site, only houses that were burnt were preserved enough to be found in the remaining archaeological record. The houses had stone foundations, but not as would be found in mudbrick houses, but rather lines of stones as anchors for the timbers, as well as dug postholes. The houses were free-standing buildings, generally 6.25 to 13.55 meter in length and 3.5 to 8.2 meter in width, with an average of one to two rooms. The houses were either typical megaron or apsidal in shape, adding to the number of known megaron houses from Troy and Beycesultan. The megaron houses generally contained an interior central hearth, a main room for sleeping, eating and indoor workspace, a back storeroom, and an entrance porch. The apsidal houses were similar to the megaron style houses, with a main room, rear storage room, but only a small number contained the entrance porch area (*Ibid*: 135-141). The excavators estimate the size of the population of the site to be

around 650 people or so in Period V, not including anyone living in the central complex (*Ibid*: 177).

TheEarly Bronze III Period VI level was nearly completely eroded over time, and so little was able to be excavated from that period, though the settlement did appear to continue at roughly the same size into that time. As a result, the reasons for the eventual abandonment of the site are not known and no archaeological evidence from that period remains (*Ibid*: 7-8). There are no final destruction levels, nor does the village seem to decrease in size or affluency in the final period, as the excavators report "on the contrary, the houses of the last phase are among the best constructed at the site" (*Ibid*: 189).

Gâvur Evi Tepesi-

The site of Gâvur Evi Tepesi was excavated as part of the Sagalassos Archaeological Research Project, begun in 2010 and completed in 2012, as part of a larger project to survey the Burdur Plain to understand better the density of settlements in this area between the late Neolithic to the end of the Early Bronze Age. The site of Gâvur Evi Tepesi itself was first recorded during the excavations of Hacılar by Lloyd and Mellaart (Lloyd and Mellaart 1962).

Gâvur Evi Tepesi is a small, 1.9 hectare site. The site itself has not been excavated, but only more throughly surveyed, showing a habitation at the site from the Early Bronze II, as well as the Middle Bronze, Hellenistic, Romand the Ottoman periods. The main focus of this site was on the Early Bronze cemetery (Vandam 2013:244-248).

Gözlü Kule/Tarsus

The site of Gözlü Kule/Tarsus (hereafter referred to as Gözlü Kule) lies in Cilicia, near the modern town of Tarsus. The site was originally excavated in 1939 and 1947-1949 under the directorship of Hetty Goldman through Princeton University. New excavations were begun in the

mid-1990s and continue to this day. This is a rather large site, approximately three hundred meters in length and 25 meter in height, though the actual height of the cultural layers is in fact even larger than this, going far below the modern surface level surrounding the site. The site is saddle shaped, with two different peaks and a low point in between them. The site was occupied from the Neolithic until the Islamic period, with various breaks in the occupation. Virgin soil was not reached during excavations, and extended far below the water level, making it difficult to find (Goldman 1956: 5-20).

Tarsus was likely a major site for trade since the Neolithic. As mentioned above, it is in an ideal spot for trade, both over land and by water. From its earliest levels, while the materials from the site, as well as the architecture, were Anatolian in nature, connections were also visible from as far away as coastal Lebanon, with obsidian trade being the likely link. By the Chalcolithic, Tarsus was in contact with North Syria and North Mesopotamia, with links to the Halaf, Ubaid and the Uruk cultures present, more than at other central Anatolian sites in the area. By the Late Uruk period, Tarsus began to shift its focus from Mesopotamia towards central Anatolia and the trade increased through the Taurus mountains (Mellink 1989: 319).

The Goldman excavations of the Chalcolithic levels were only found in a deep sounding 3.5 x 4.5 meters in size, so little information is known from these excavations about the architecture or layout of the town (Goldman 1956: 7-8). A very small amount of Halaf pottery was found at the site, pointing to a small amount of Halaf influence at the site. In the Ubaid period, there is a far larger amount of Ubaid-influenced locally made pottery, with far less elaborate painted decorations found on the pottery than at other Ubaid-period sites (Goldman 1956: 80). By the Uruk period, the pottery style at Gözlü Kale becomes far more western Anatolian in influence, showing a shift from Mesopotamian influence to that of central Anatolia

(Steadman 1996: 150-151).

In the Early Bronze I period excavations, some small amount of architecture, with stone foundations and mudbrick structures were found, but not enough horizontal area was excavated to understand the layout of the settlement (Mellink 1989: 320). At the end of the Early Bronze I levels, the area excavated was flattened and terraced to make a level surface for a new architectural phase (Goldman 1956: 9-11). The site does appear to become larger by the end of the Early Bronze I period, with the possibility of a religious quarter and larger public buildings. It is also at this time that a sharp change from Mesopotamian style ceramics as luxury items, changes over to ceramics from central Anatolia, as ceramics from Cilicia start showing up in central Anatolian assemblages as well (Steadman 1996: 151-152).

More is known about the Early Bronze II levels at Tarsus. The settlement grew larger, and now rose 20 meters above the level of the surrounding plain, as the site increased in the southern portion of the site, the older Early Bronze Age I level was flattened and leveled (Mellink 1989: 320). Trade with both Syria and Anatolia continued, with imports found from both areas, as well as from Cyprus, making Tarsus far more diverse in its materials than other contemporary central Anatolian sites. Mellink even hypotheses the presence of a harbor by this period, for trade with the seafaring Cypriots (Mellink 1989: 323-324).

A number of small structures were excavated. The structures were made with stone foundations under mudbrick walls. The buildings were rectangular in shape, usually with multiple rooms and party walls between buildings. Most were likely domestic spaces, containing grain storage bins and hearths. Between houses were hard-packed streets and small open spaces, likely courtyards for workspaces or to keep animals. At some point, a large fire burnt down all the structures excavated. After the destruction, the structures were rebuilt (Goldman 1956: 20-

32).

In the Early Bronze III period, the construction style changed, to a type similar to that found in Western Anatolia, and the pottery also changes to more of a Western Anatolian style, with some central Anatolian as well as Syrian styles remaining throughout the period. A stamp seal imported from the Levant was also recovered from this period. Though the earliest Early Bronze III era buildings were small and not well build, soon the settlement began to prosper again. The buildings are a bit larger, with a stronger stone foundation, and were build with individual walls rather than the party walls found in the earlier periods, Megaron-like buildings appeared for the first time in Tarsus in this period, showing more connections to western Anatolia (Mellink 1989:324-326). Goldman concluded an invasion by the peoples of western Anatolia at the end of the Early Bronze II (Goldman 1956: 32-39).

Güvercinkayası

Güvercinkayası was first noted during a visit to from the excavators of the nearby Aksarau, Nevşehir, Niğde survey in 1994, when locals were asked about possible locations of prehistoric settlements in the Gökçe area. The excavators were very intrigued by the remnants of a site found at the Güvercinkayası/Porsuklukaya site, and excavations were underway by 1996 (Gülçur 1999: 111). The site did indeed turn out to be a fruitful place, and work continues to this day. The site is under the leadership of Sevil Gülçur, through the University of Istanbul (Gülçur 2004: 142).

A total of four architectural levels have been found at Güvercinkayası, all dating to the Chalcolithic and found to be all from a single, continuous culture that lasted approximately 400 years. The site dates, according to C14 dating, from around 5210-4810 BCE. The earliest habitation level found did not have any remains of architecture other than a series of post holes

dug into the virgin soil, a rather unusual habitation style in central Anatolia. The excavators speculated these to be the remains of a series of permanent or semi-permanent wattle and daub houses (Gülçur 2004:143).

The architecture from the next three levels was made up of multi-roomed houses with shared party-walls between them, with stone foundations and either mud pisé or stone walls with mud bonding material. Güvercinkayası is also unique in that it is the only known settlement from Chalcolithic central Anatolia that did not employ mudbrick in its architecture (Gülçur and Fırat 2005: 42). The settlement appears to have been a well planned and laid out site, built to fit the size of the available settlement area, as allowed by the cliff faces around the site. The houses were all built by roughly carving the fieldstones found abundantly around the site, and building upon the natural stone of the site itself as a foundation. Nearly all houses were rectangular in shape, with a large central room and a smaller attached room for storage. The central room had a central hearth, the rooms were nicely and continuous re-plastered with mud, as were the floors. The houses found were surprisingly similar to each other, down to similar placement of even mobile equipment, such as horseshoe-shaped fireplace near the central oven, or semi-circular storage bins alone the walls. The center of the site contained all the silos and the administrative areas, a very defensible position. The village was small, and relied upon rain-fed agriculture and herding animals for its existence, and large storage areas for harvests were found in the best protected part of the site, within the southern cliffs, showing the great importance of the food storage to the inhabitants. In fact, animal skulls were found in various places throughout the homes, buried under the floors, next to the fireplaces, etc., and the representation of animals on pottery and carved into grinding stones indicating some sort of cultic use and meaning to the animal remains (Gülçur 2000: 80-83; Gülçur 2004: 143-144).

Hacılar

The site of Hacılar measures 150 yards in diameter and was up to 5 meters in height, though likely some of the original mound top was removed though plow work over the years, as the mound was included in farm land (Mellaart 1970: xii-xiii). Hacılar was excavated from 1957 until 1960 by the British Institute of Archaeology at Ankara, under the direction of James Mellaart. The site was briefly re-excavated in 1985 and 1986 by Refik Duru, with a total of 28 small soundings in the northern and eastern edges of the tell, for the purposes of better understanding the stratigraphy and size of the site, as well as to investigate the site and the cemetery in light of the known pillaging of the settlement and cemetery. Due to the nature of these later excavations, no substantial architectural information was uncovered, though a better sense of the time frame at the site was accomplished (Duru 1989:105; Cutting 2005: 95).

The site has not been re-excavated since then, though Refik Ruru more recently has undertaken a new look at the Hacılar pottery in light of modern recent scholarship on the Lycian region (Duru 2010). The site was first recorded in 1956, after a local history teacher, Bay Ibrahim Şadi Balaban, brought a pair of painted pots to the attention of James Mellaart, who had been previously working in the area, leading to excavations beginning at the site by the following year. At the time, Hacılar was unique in its excavations, being the oldest yet site excavated in the Anatolian plateau, though much has changed in the scholarship of that region since Mellaart's initial excavations. The site was ideal as well, due to having no later occupations over the Chalcolithic levels, allowing for more horizontal exposure of these early levels (Mellaart 1970: 1).

The site dates from the Early Neolithic to the Early Chalcolithic, though the aceramic levels were only excavated in a deep sounding and the soundings in 1985 and 1986 revealed

pottery that dated to this period (Duru 1989:103). Below the earliest levels, virgin soil was reached, and due to the placement of the mound upon a natural stone terrace, ground water never reached any of the occupation levels. More extensive excavations of the Late Neolithic and Early Chalcolithic levels were undertaken. The Late Neolithic levels were Levels IX-VI, and the Early Chalcolithic were V-I, with Level I split into numerous sublevels, and containing the so-called "Fortress" (*Ibid*: 1-24).

The final level of Late Neolithic Hacılar was completely destroyed by a fire, and was then rebuilt in Level VI, resettling new areas of the site and only using much of the burnt areas as open space. In the Late Chalcolithic, a number of houses were excavated, built of either mudbrick with wooden supports and roofs or wooden posts with pisé and plaster. The nearby mountains would have provided ample timber for wooden construction. Hacılar II and I was the most throughly excavated levels, and measured 36 x 57 meters, or 2000 square meters in living space. Mellaart believed this to have been the entire settlement for this era, as he found no other signs of this level elsewhere in his excavations and no structures were found outside of this area. The site was divided in different quarters: the western area was residential, an eastern residential area with kitchens, a well and a shrine; the central was workshops, largely for pottery manufacture. The winds would have come from the north and west, explaining the placement of the kitchen quarter.

The domestic structures were largely built of mudbrick and were rectangular in shape, with a main room with a hearth and an anteroom, often with an oven. Most of the houses contain platforms of various types. They are similar to, but not yet quite megaron style houses. Some of the houses appeared to have a second level. The houses back onto the outer wall, built directly against it. Buildings showed signs of long reuse, with patched and sagging walls. The village was

nearly completely destroyed at the end of IIa, but was rebuilt in nearly the exact same manner in Level IIb, with only some minor differences in the eastern quarter and a smaller size village. Mellaart estimated a population of around 150 people in this small settlement, with houses for around 18 to 20 families, and each house with enough space for at least five or six people, with a smaller population after the fire of Level IIa (*ibid:* 75-87; Eslick 1988: 18).

Level I was a rebirth of the site, seemingly by a new population, though there were some areas of continuity, so perhaps it was not a completely new population, but a mix. The new population began by completely leveling the older village, creating a large platform on the top of the mound on which to build, even cutting into earlier levels to create a flat top and more squared sides. The new occupation seemed well planned, using limestone foundations, and a small retaining wall at the edge of the mound. Mellaart thought this building to be "not a village of individual houses sheltering behind a defensive wall, but probably the fortress of a ruler who had command of considerable human resources" (*ibid*: 77). The center of the area was an open courtyard, with blocks of rooms surrounding it on all sides, and smaller courts leading into each block. Unlike in Hacılar II, there was less visible specialization in this level, with no clear granaries, shrines, or workshops, though some areas were more likely domestic spaces. Mellaart conjectured a total of around 65 habitation rooms in the fortress, allowing for a population estimate of between 300 to 500 people living in this area, though later work by Duru suggests the site may have been larger in the Chalcolithic period than Mellaart reasoned (Duru 1989).

The fortress burned very throughly at the end of IB. After the fire, parts of the fortress were re-inhabited, but the population was much smaller, and the attempts at rebuilding were somewhat feeble, with only small, thin walls built over older, thicker wall, though later farming disturbances might have also obscured further signs of these later phases. Eventually, the

settlement was abandoned completely (*ibid*: 75-87).

Hacılar Büyük Höyük

The mound of Hacılar Büyük Höyük is located 400 meters to the north of the Hacılar site excavated by James Mellaart. This mound measures 280 by 240 meters in size, and for reasons he never explained, this largest mound was never excavated by Mellaart. Excavations of this site began in 2011 and continue to this day, and so information on this site is still preliminary. The site is under the direction of G. Umurtak and R. Duru through the University of Istanbul. Early Bronze I and II levels are all that have been unearthed so far (Umurtak and Duru 2012:21-22).

In the Early Bronze I level, a number of rooms, with shared side walls have been excavated. These buildings appeared to have been domestic in nature, with hearths inside the rooms and packed earth floors (Umurtak and Duru 2012: 22-23).

In the Early Bronze II level, a small number of rooms made with stone foundations and mudbrick walls were excavated (Umurtak and Duru 2012: 23-25).

Horoztepe-

Horoztepe, a cemetery site, was first discovered during the digging of modern tombs in the Deremahallesi cemetery, and a number of artifacts were found and brought to the attention of the General Directorate of Antiquities and Museums in Ankara. In 1956, Tahsin Özgüç and Mahmut Akok traveled to the area to investigate the origins of the items, which were published in 1957 (Özgüç 1957: 37). The site is also a modern cemetery, allowing for only a small area of excavation around the modern tombs. If the site had not been accidentally discovered and then reported to the correct authorities, it seems likely the cemetery may have never have been found through survey or excavated (*Ibid*: 38-39).

İkiztepe-

The site of İkiztepe was excavated starting in 1974, by the Turkish Historical Society under the direction of U. Bahadır Alkım, with excavations continuing to this day. The site was first recorded in 1941 during surveys of the Samsun area and excavations of nearby Dündarteoe by Tahsin Özgüç, Nimet Özgüç and İsmail Kılıç Kökten, and reexamined in 1971 during new survey of the region (Alkım 1973b). During this second survey, İkiztepe was chosen for further excavations due to the high numbers of Early Bronze Age pottery sherds found upon the surface of the mound. İkiztepe was seen as a promising site to further study the Early Bronze Age and Early Bronze Age to Middle Bronze Age transitional period in the Black Sea region, as well as being the largest site found during the surveys of the region (Alkım et. al., 1988: 143-145). Excavations continued after the tragic death of its original excavator, U. Bahadır Alkım, under the direction of Önder Bilgi, and continue until this day.

The site of İkiztepe is in fact made up of four separate mounds, mounds I, II, III and IV. Of these, only mound I, the largest mound, and mound II were excavated in any major fashion, as survey suggested these would be the most fruitful, though some smaller sondages were excavated of both mounds III and IV in 1977. The total area of the four mounds or tepes, as designated in the publications, is 350 by 250 meters in area. For the most part, these four mounds are built upon natural elevated tepes, formed by earth deposits from the flooding of the nearby Kızılırmak river, though years of habitation and settlement significantly increased the size of these natural rises (Alkım et. al. 1988: 147).

İkiztepe I measured 180 by 130 meters, and was 22.54 meters high above the modern plain. İkiztepe II was 115 by 90 meters, and rose 22.54 meters above the surrounding plain. İkiztepe II lies approximately 45 meters north of İkiztepe I (Dönmex 2006: 90).

İkiztepe was first settled in the Late Chalcolithic period, with continuous or nearly

continuous settlement until the Middle Bronze Are, sometimes referred to as the Old Hittite or Early Hittite phase in the publications. All of the İkiztepe mounds were then abandoned, before the start of the Late Bronze Age, with parts of the site later resettled until the Hellenistic period (Alkım et. al. 1988: 152-153). Level I was the Early Bronze III and Middle Bronze I Transitional, found on mounds I and III, Level II was Early Bronze II and I, found on all excavated mounds, and Level III was the Late Chalcolithic, found only on Mound II (Alkım et. al. 2003: XXIII). Virgin soil was found throughout the site, indicating the earliest habitation in the region was during the Late Chalcolithic (Dönmex 2006: 90).

Mound I was first occupied in the Late Chalcolithic, and used as a habitation site until the Early Bronze II period. During the Early Bronze III period, it was primarily used as an extramural cemetery, with habitation moving elsewhere, primarily to Mound II. In the earlier phases of the settlement, the Late Chalcolithic andEarly Bronze I, much of the pottery styles and small finds indicate a greater Aegean and Balkan influence on the culture of İkiztepe, though this changes in theEarly Bronze II and to the end of the settlement, where the styles change to be far more central Anatolian in style, along with an increase in the use of arsenical coppers, while less bone, horn, stone and flint was being used in small finds materials (Bilgi 2005:15-17). According to recent C14 data, the site was first occupied at around 4500-4700 BCE.

The architecture of İkiztepe was largely made of foundation-less wooden structures, constructed with wooden posts and horizontal wooden beams and pisé fill, with wooden floors with a plaster covering, and thatch roofs. The presence of plenty of timber made for a unique style of architecture in the Black Sea region. The architecture was generally long and rectangular, with plaster on the outside to keep the structures wind-proof. Some of the structures would have been two storied.(Bilgi 2005:15-17).

Kalınkaya-Toptaştepe-

The site of Kalınkaya-Toptaştepe was excavated between 1971 and 1974 by Raci Temizer, the former director of the Museum of Anatolian Civilizations in Ankara. The site was settled between the Chalcolithic through the Early Bronze Age, and had a necropolis (Yakar 1985: 202).

Köşk Höyük:

The site of Köşk Höyük, sometimes also called Köşk Pınar, is 80 meter in diameter and 15 meter in height. When the site of Köşk Höyük was first inhabited, the Late Neolithic peoples began by leveling the living stone of the area, creating three terraces for building their houses upon, the reusing the removed rock as foundations and floors for the first buildings (Öztan 2008: 87).

The site was first occupied in the Late Neolithic period (Level II-V) with continuous occupation until the Early Chalcolithic period (Level I). The site was then abandoned for a long time, with smaller occupations of Late Iron Age (Level 3), Roman (Level 2) and Byzantine (Level 1) on top of the mound, as well as, most famously, a Roman pool (Öztan 2008: 84-85). There are earlier periods than the Early Neolithic, but these were only reached in a small test trench area in the northern part of the site, it remains unknown how early the site was first occupied (Öztan 2008: 83).

The site was first recorded in 1961 by M. Ballance, with a surface survey conducted by Richard Harper and Margaret Ramsden in 1964 and again in 1965 by I.A. Todd (Todd, 1980). The site was excavated from 1982 until 1991 by Uğur Silistreli through Ankara University. Excavation were resumed in 1995 to 1996, and again from 2000 to 2009 by A. Öztan through Ankara University (Öztan 2008: 84). The excavations at Köşk Höyük were undertaken in order

to better understand the Late Neolithic/Early Chalcolithic transition period, as well as to excavate a large horizontal exposure of these periods.

The Early Chalcolithic levels at Köşk Höyük were primarily excavated in an area 80x90 meters in size. The Early Chalcolithic village appeared to have been well organized, with three, broad (one street is around 4 meters wide) and distinct streets discovered during the course of excavations. One street begins at the spring at the bottom of the mound and continues up the mound, along the western edge of the mound, defining a western boarder of the settlement. The other two roads bisect the center of the village (Öztan 2012: 199).

A number of houses were excavated, built along the streets mentioned above, with a central open space at the top of the mound. Only two buildings were placed within this open, presumably public, space. All the buildings were of a similar shape and layout: rectangular in shape, with a few rooms each, often a living space and a workshop or storage space, with varying sizes. The houses had stone foundations and rough limestone block walls with mud mortar and plaster finishing (Öztan 2003: 46).

A total of 24 houses were excavated dating to the Early Chalcolithic period, making Köşk Höyük one of the best preserved and largest horizontally exposed Early Chalcolithic sites in central Anatolia yet excavated. At the end of the occupation period, approximately 50 to 60 years are the level was constructed (Oztan 2003: 71). After a fire, the settlement was re-inhabited for a short period of time, with new houses built in a similar style to the older houses, even reusing some of the walls from the earlier structures, but smaller in size, and without the external storage buildings or platforms. The new, smaller village was far more impoverished than the earlier settlement, and was eventually abandoned completely after only a short period of time (Öztan 2008: 86-87). This different greatly from the Late Neolithic periods, when the streets were

uneven, and the houses far less organized (Öztan 2012: 198-199).

Küllüoba

The site of Küllüoba has been excavated since 1996 and continues to this day, under the direction of Turan Efe and the University of Istanbul. The ovular shaped mound measures 300 by 150 meters, rising ten meters above the level of the surrounding plain (Efe and Fidan 2008: 67). The site consists of a mound, as well as a lower town surrounding it, though little is known of the lower town due to a lack of excavation in this region (Efe and Efe 2007: 254).

The site was settled continuously from the Late Chalcolithic Period to the end of the Early Bronze III period, making it an ideal site to understand the transition from the Chalcolithic to the Early Bronze Age, as well as the Early Bronze Age itself.

In the Early Bronze Are transitional period, while not as fully excavated as the rest of the Bronze Age period levels, the general layout of the settlement is known. The settlement pattern at Küllüoba closely resembles that found of Demircihöyük, the so-called "Anatolian Settlement Plan," with a number of megaron-style buildings built into a circle, forming an exterior wall and a large open communal space in the center. The earliest levels of this site plan begin earlier than those found at Demircihöyük, and none of the long houses characteristic of Demircihöyük are present at Küllüoba until the Early Bronze II period. The town was projected in this period by a large fortification wall built in a zig-zag pattern, which was refurbished and reused until the site was abandoned at the end of the Early Bronze III period (Efe and Fidan 2008: 68).

In the Early Bronze II and III periods, the city plan changed quite a bit, with an acropolis built at the apex of the mound, and a lower city below, which was newly founded in the Early Bronze II period. Excavations so far have mainly concentrated on the mound itself, so less is known about the lower city region (Efe 2003: 269). At the center of the central courtyard stood a

large central palatial complex, made up of a large megaron-style building flanked by two smaller megaroid structures. The layout of the settlement strongly suggests a preconceived and well thought out settlement plan, and is split by the excavators into two sectors, Complex I and Complex II. Complex I, while only partially excavated, was the location of the houses of the ruling or upper class of Küllüoba in Early Bronze II and III. It consisted of three to free-standing four long houses, one of which, the longest, was a megaron structure with a paved cobblestone porch. Complex II was more domestic in nature, with long houses were set against the fortification wall, surrounding the three large inner buildings in the center, which are likely administrative in nature, without any of the typical attribute of domestic structures. A series of open courtyards and streets run between the buildings of the citadel. The buildings in general had stone foundations with mudbrick walls. The courtyard spaces were paved in stones as well, which was likely imported from the foothills approximately 10 kilometers from the site. The mudbrick walls were plastered inside and out (Efe et. al. 2001:43; Efe and Efe 2007: 254-; Efe and Fidan 2008: 68-70).

Kültepe-Kaneş

The site of Kültepe-Kaneş is one of the best known archaeological sites in Anatolia. Kültepe is a very large site; the mound itself is round, 550 meters in diameter and rising 20 meters above the surrounding plain. To the north, east and south of the mound is the well known Lower City, or Karum, which extends for another kilometer and was only inhabited during the Middle Bronze Age. The site was first excavated by E. Chantre in 1893-1894 (Chantre 1989), H. Winckler in for eight days in 1906 (Winckler 1906), and B. Hrozny for one season in 1925 (Hrozny 1911).

The site was known to contain a large number of tablets, and so was extensively

excavated in order to find the archives. This resulted in the site being very damaged, with the entire center of the citadel nearly completely removed, without careful excavation methods. As a result, information on the citadel section remains forever unknown. More concise excavations of the site began in 1948 under the direction of Tahsin Özgüç and Nimet Özgüç, through the University of Ankara, and continued until 2005, when excavations were taken over by the current director, Fikri Kulakoğlu, making Kültepe one of the longest and most extensively excavated sites in Turkey (Kulakoğlu 2011: 1013).

The site was inhabited from the Early Bronze I period at least, though the earliest levels at the site still remain unknown. The site was continuously inhabited through the Early Bronze Age (Levels 18 to 11) into the Middle Bronze (Levels 10-6, and Levels I and II on the Karum), where the site was at its apex, before being abandoned at the end of the Middle Bronze period. The site had some smaller habitation during the Iron Age (Levels 5-4), Hellenistic (Level 3) and Roman (Level 2-1) periods as well (Kulakoğlu 2011: 1014).

The Chalcolithic levels are Kültepe remain unclear. More recently, the current excavations have been focused on the Early Bronze Age levels at the site. Unfortunately, the main portion of the Early Bronze Age palace and the central portion of the site were completely destroyed by the first excavations at Kültepe, in an attempt to find the Late Bronze Age palatial district. The current excavators are working on understanding the place of Kültepe in Early Bronze Age trade routes and its importance in this earlier phase, as its place in Middle Bronze Age trade is very well attested. With the Middle Bronze Age in mind, the current excavations are attempting to understand the origins of Kültepe as a central trade center.

In the Early Bronze III period, a small number of buildings have been unearthed. In Level 13, a structure with stone foundations was excavated, and was found destroyed by fire. Next, in

Level 12, a small temple was uncovered, made of mudbrick. At the end of the level, the temple was burned down. In Level 11, on the same site, a large multi-roomed rectangular mudbrick structure was uncovered. The building contained a central open courtyard with a central hearth, and numerous smaller rooms leading off from this courtyard, from Level 11b. The building was destroyed by an intense fire, and was never rebuilt. The building was not a domestic structure, but its exact use remains unknown, but may have been some sort of public space (Özgüç 1986: 31-34).

Kuruçay Höyük

The site of Kuruçay Höyük was excavated from 1978 until 1988 under the direction of Refik Duru through Istanbul University. The site itself rests upon a natural rise within the lower slopes of a set of hills, and is 90 meters in diameter and nearly 8 meters in height. The site is not easily recognizable at first look as höyük, and so was not recorded as part of the survey of the Burdur area by Mellaart in 1957. The site was first recorded in 1973 as part of a survey completed by Judith Burmingham (Duru 1994: 95).

The site was settled from the Late Neolithic until the Early Bronze II period. Virgin soil was reached "nearly everywhere" in the excavations (Duru 1994: 95). The excavation continued for 11 years, excavating nearly 3500 square meters of the site, in very large horizontal exposures, allowing for a good view of the layout of the various settlements present. A total of 13 Levels were recognized at the site: Levels 13-12 were Early Neolithic, Level 11 was Late Neolithic, Levels 10-7 were the Early Chalcolithic, Levels 6-3 were Late Chalcolithic, Level 2 was Early Bronze Age I, and Level 1 was Early Bronze Age II (Duru 1994:6).

In the Early Chalcolithic Level 11 habitation, the site was rebuilt after a disastrous flood at the end of the Late Neolithic, and likely after a period of abandonment. Presevation of the

Early Chalcolithic was not good, and only a small amount of architecture was found. The architecture of this period was made with stone foundations under mudbrick walls and wooden cross-beam roofs, as told from a small number of domestic buildings excavated, in the form of rectangular one-room, one story houses. In the last phase of the Early Chalcolithic, Level 7, the settlement seemed well planned, with regularly spaced domestic buildings (Duru 1994: 99-100).

After the destruction and abandonment of the Early Chalcolithic level, the site was abandoned and reestablished later in the Late Chalcolithic, by a entirely new cultural group, likely after a gap of around a millennium (Duru 1996: 144). In rebuilding the city, some parts of the mound were filled with rubble a meter thick, while in other parts, the Level 6A occupations were built directly over the ruins of the previous settlement (Duru 1996: 113). The architecture of the Late Chalcolithic was a single course of a double row stone foundation underneath a mudbrick structure, approximately 30 cm in thickness and with packed clay floors. The houses were single-roomed rectangular buildings for the most part, with a small number of buildings containing a small second "cell" room. A total of 23 domestic buildings were excavated, mostly of a similar size, except two at the center of town which may have been for higher ranked peoples. One structure may have served a religious or cultic function, containing wooden columns and a small altar.

From the earliest phase of the Late Chalcolithic, the settlement was well laid out in a very defensive structure, with the inner-most buildings surrounded by a second round of houses, creating a reinforced ring around the settlement, instead of a free-standing fortification wall. The excavators calculate the population at around 175-200 people (Duru 1996: 139). The houses were arranged in a saw-toothed pattern, each house slightly in front of or behind the next. Walls were built between houses that were not already enjoined. These exterior walls were built thicker

and stronger than the other interior walls of buildings (Duru 1996: 113-114).

Throughout the settlement, large open areas were left as courtyards or public areas, though little evidence remained in these areas to tell of their original use. At the end of Level 6A, many of the passageways were stopped up with hastily made blockages, limiting movement in the settlement. The Level 6 city was burnt and rebuilt a number of times, largely in the same plan, with Level 6A being the most completely destroyed. After the destruction of Level 6, the site continued to exist, with a similar layout and material culture, but the settlement became smaller and smaller with the architecture less and less well made, with small new innovations in pottery and architecture beginning in Level 4 and into Level 3 (Duru 1994: 117). After Level 3, the site was again destroyed, and a new settlement began with the Early Bronze Age I.

The Early Bronze Age levels of Kuruçay were very badly preserved, and little could be learnt from the excavations, no complete buildings were excavated (Duru 1994: 117).

Maşat Höyük

The site of Maşat Höyük measures 450 by 225 meters, and rises up to 29 meters above the surrounding plain. Maşat Höyük is best known for its large Hittite era Late Bronze Age levels, though the entire mound was also inhabited during the Early Bronze Age (Yakar 1985: 204-205).

The architecture of the Early Bronze Age was made of plastered mudbrick over stone foundations. The buildings were rectangular in shape, with hard packed earthen floors. At the end of the Early Bronze III period, the entire settlement was destroyed in a large fire (Yakar 1985: 204-205).

Orman Fidanlığı

The site of Orman Fidanlığı was excavated from 1992 to 1994 under the direction of

Turan Efe through the University of Istanbul The sides of the mound had been extensively disturbed due to gravel excavation, so that the original shape and size of the mound remains unknown. Two different areas of the site were excavated, one in the west, and one in the east, though only the western trenches revealed a substantial amount of materials, so the majority of the emphasis was placed on that region.

A total of seven phases were uncovered at Orman Fidanlığı, the youngest being Phase VII, the oldest being Phase I; Below Phase I was virgin soil. The phases were largely differentiated by pottery and stratigraphic differences. Phase VII, according to similar pottery from other sites, most notably Ilıpınar and Demircihöyük, dates to the Late Chalcolithic, VI and V to the Middle Chalcolithic, and IV to I to the Early Chalcolithic (*Ibid:* 57).

Little architecture was found in the six phases. The architecture at Orman Fidanlığı was largely wattle-and-daub with mud floors (*Ibid:* 7-9) in phases I and II, then stone foundations over mudbrick starting in Phase III and continuing until the site was abandoned. The most complete architecture came from Phase IV, a nearly complete apsidal, single roomed house (*Ibid:* 9-15). Between building levels, the inhabitants of Orman Fidanlığı would often flatten and terrace the previous level, making the stratigraphy of the site particularly difficult. They also made great use of the natural bedrock, building rooms into the living stone and terracing their living spaces. As only a small area of the site was able to be excavated, due to a short excavation season, no city plan or settlement area was discovered during excavations at Orman Fidanlığı. The size of the settlement remains unknown, as well as the size of the population *(Ibid*: 15-16).

Oymaağaç-

A small Early Bronze Age cemetery site. The cemetery was visited but not excavated during excavations of nearby Maşat Höyük in 1975. The site was noted to be “ruined,” highly

looted with likely few to no graves intact. A number of items that had been pillaged from the cemetery ended up at the Archaeological Museum in Istanbul and were later studied and published by Tashin Özgüç (1978:89-99) as a side note of the Maşat Höyük publications.

Resuloğlu-

Survey work of the Çorum region in 1998 by Tunç Sipahi and Tayfun Yıldırım of the University of Ankara reexamined the Kalatepe mound, discovering an Early Bronze Age cemetery in the village of Resuloğlu, located nearby the small Chalcolithic site of Büyük Güllücek. The cemetery was located on a high ridge, which overlooks three small Early Bronze Age settlements contemporary to the cemetery, to the southeast, north and northeast of the cemetery ridge. Unfortunately, the cemetery itself was highly looted and largely destroyed prior to the discovery of the cemetery by survey. Despite this, excavations at the Resuloğlu cemetery began in 2003 and continue to this day under the leadership of Tayfun Yıldırım of the University of Ankara and İsmet Ediz of the Çorum museum. Excavations focused primarily on the cemetery rather than the settlements (Yıldırım 2006: 1-2).

Salur North-

The site of Salur North was discovered in 1997 as part of the Paphlagina project, surveying the north-central region of Anatolia. Salur North was one of 12 Early Bronze Age sites recorded during the course of the survey. The site is in a valley region, with large hills with high amounts of flint outcrops located to the south of the site, while to the north, the remains of volcanic activity have left large bands of obsidian deposits, both of which are comparatively uncommon raw materials for north-central Anatolia, probably adding to the importance of the site (Matthews 2004: 57).

Salur North itself is a small site, recognizable only by the lithic scatter on the surface.

Salur North is not a höyük. The visible site measures approximately 60 by 50 meters, just off the edge of Salur Höyük, a large mound with occupation between the Late Chalcolithic to the Iron Ages, though the site itself remains unexcavated. Salur North was highly disturbed due to modern ploughing, as the site itself is located within modern agricultural land. The site was a single period, Early Bronze Age cemetery, likely an entirely pithos-style burial ground. The site is a good indicator of small, single period extramural cemetery from the Early Bronze Age period. (Matthews 2004: 59-60).

Yumuktepe/Mersin

The site of Mersin/Yumuktepe was first excavated between 1937 and 1940 through Oxford University and the British Institute of Archaeology, Ankara, under the directorship of John Garstang. Excavations were interrupted by the outbreak of World War II, and were afterwards restarted from 1946 until 1949 (Garstang 1953: 1-3). The excavations then ceased, until 1993, when new excavations were begun, under the University of Salento, Levva and the Mimar Sinan Fine Arts University, Istanbul, under the direction of Isabella Caneva, and continue to this day (Caneva 2010: 3). The site measures twelve acres in size, and rises up to 25 meters above the surrounding river plain (Garstang 1953: 3).

The Garstang excavations split the site into 19 strata, ranging from the Neolithic (approximately 7000 BCE) to Medieval Islamic levels, with nearly continuous occupation between the Neolithic levels to the end of the Late Bronze Age/Early Iron Age, making this site somewhat unique in Anatolia. Virgin soil was never reached at the site, as the water level flooded the lowest Neolithic levels, and further excavation proved difficult (Garstang 1953: 2).

During the many years between the Garstang excavations and the new Caneva excavations, the site of Yumuktepe was made into a public park, with some areas excavated out

to add terraces, trees, pathways and a water reservoir, while other areas were filled in to stop erosion of the sides of the mound, drastically changing the shape of Yumuktepe from the time of Garstang's excavations, to the point where the new team are not completely sure of where Garstang's original trenches were placed. As much as possible, the new excavations have attempted to use Garstang's original terminology and level numbers, including the twelve cultural phases he distinguished (Caneva 2010: 14-15).

Accordingly, the levels of Yumuktepe that concern this dissertation are: Level XX-XXIII for the Early Chalcolithic, XIX-XVII for the Middle Chalcolithic, XVI-XIIB for the Late Chalcolithic; XIIa for the Early Bronze Age.

Yumuktepe is very unique as already in the Late Neolithic (ca. 5800 BCE), large 1.2 meter thick monumental stone fortification walls were already being constructed along the outside of the village settlement, as well as terraced buildings on the slopes of the mound, showing a well designed and well planned city, already by the end of the Neolithic (Caneva 2000b: 167).

In the Chalcolithic era, (around 5000 BC, Level XVI), both the Mesopotamian Ubaid and Uruk spheres were found in varying degrees, making this site the westernmost known site to contain these elements, though the site is rarely mentioned in general studies on the expansion of these periods (e.g. Stein 2010), even though there is visible Ubaid influence on the architecture, and hardly any evidence of influence from central Anatolian cultures until the Early Bronze Age. Far less evidence of the Late Chalcolithic period has been found at Yumuktepe (Caneva et. al. 2012: 354).

The mound was greatly changed, with a new architectural layout starting in the Chalcolithic. A central fortified citadel was built at the top of the mound. Adjacent to the city

wall, and found throughout the entire circumference of the fortification, were rows of small domestic buildings, interpreted as the living quarters for solders or guards (Caneva 2000b: 167), and placed in a radial pattern, further strengthening the outer fortifications. A new type of building material was used in the period than from the previous periods; for monumental walls or ramparts, stone foundations were built, while all smaller buildings and walls were made with only mudbrick. For all architecture though, the size of the mudbricks used were surprisingly uniform. The interior space of the fortified zone was somewhat small, only 35 by 40 meters, while the lower town was more spread out and was far less standardized in the shape and layout of the excavated structures. The rooms inside, according to modern excavations, did not show signs of being a military settlement, instead seeming to be a number of domestic spaces and attached courtyards that were likely open space for craft workshops. The current excavators suggest that this fortified zone was not for military purposes, but rather a protected area for the local inhabitants and their workshops (Caneva 2010: 37-50).

Close by the gate, a larger building was found, consisting of several rooms arranged around a central court with two flanking wings. This building is very similar to the typical Ubaid tripartite architecture, and is the only know example from the period at Mersin. The building was domestic in nature, containing domestic furniture and other small finds. This building was not built into the radial plan of rooms mentioned above, but stood somewhat apart (Caneva et. al. 2012: 355).

Yumuktepe was in an ideal location for trade between northern Mesopotamia, southeastern Anatolia and central Anatolia, and was very likely a major trading location for obsidian from the Neolithic onwards, as well as other items present in the Cilicia region, such as metal ores, semi-precious stones, timber and textiles (Steadman 1996: 147-148, 154).

Far less is known about the Early Bronze Age at Yumuktepe. There are Early Bronze levels (Level XIIB) found, as well as Early Bronze Age pottery, but the Middle Bronze levels seem to have largely destroyed much of the Early Bronze Age stratigraphy. The pottery becomes far more influenced by Western Anatolia than in northern Syria in this phase, with Trojan style *depas* cups found in the Early Bronze levels. Likely, the start of maritime trade is a reason for this departure. The site of Yumuktepe was very likely a major town on the copper and tin trade in the Early Bronze Age, though little archaeological evidence has been found on this level, also indicating perhaps the site as much smaller in the Early Bronze Age or partially abandoned (Caneva 2010: 51-56).

Appendix 2 : Southeastern Anatolian Settlements Excavation Histories and Site Information

Arslantepe (Malatya)

The large mound of Arslantepe has been excavated since 1973, with excavations continuing to this day. The site was originally directed by Alba Palmieri, of the University of Rome. After the death of the original excavator, the site was then directed by Marcella Frangipane (Frangipane 1983: 287-288).

Arslantepe is a large ovular site, measuring 250 by 180 meters, and up to 30 meters high above the surrounding plain. The surrounding Malatya plain was surveyed more thoroughly between 2003 and 2005 as part of the Archaeology Survey Project undertaken by Di Nocera through the University of Rome, using both on the ground survey and satellite imagery of the area. Arslantepe was the only site in the survey with a sizable Late Chalcolithic/Late Uruk period occupation, during which time Arslantepe was a large, very centralized site that dominated the entire Malatya plain (Di Nocera 2008: 635-637).

Arslantepe has habitation levels from the Early to Middle Chalcolithic (Period VIII), Late Chalcolithic (Period VII) to Roman (Period I). The Early Bronze Age is well represented, with levels from the Early Bronze Ia (Period VIA), Early Bronze Ib (Period VIB), Early Bronze II (Period VIC) and Early Bronze III (Period VID) (Di Nocera 1998: 12-22). The site has a very well established Uruk presence in Period VIA.

The Period VIII levels are not yet well attested at the site, only being found largely through pottery dated to the final Ubaid period of even the post-Ubaid period, dating to around the final years of the fifth millennium, and a small amount of domestic structures. The style of

known architecture from Period VIII and the pottery recovered point to connections primarily with southeastern Anatolia, west of the Euphrates, during the post-Ubaid period (Balossi Restelli 2008:25-26). The time seems to be during the Late Chalcolithic 1-2, and only a small part of the mound appears to have been occupied during this early period. Excavations of Period VIII remain minimal due to the difficulty of reaching the earliest levels of the settlement (Frangipane 2012: 291).

Period VII, the Late Chalcolithic 3-4 period, was the earliest secure level. This long period of time, between 3800 to 3400 BCE, did not have any visible cultural breaks, and the settlement covered the entirety of the mound. Excavations of the Fourth Millennium period are now up to 2800 square meters in horizontal exposure (Frangipane 2012). The site was already split into visibly different zones, with smaller, mudbrick domestic structures along the north-eastern edge of the site and burials under the floors. In the central-western part of the mound, a number of large, well built monumental elite buildings were found, most of which were more likely elite housing rather than any kind of public function. As well, a large single temple built in the Mesopotamian tripartite layout, Temple C, was built at the center of the mound, in an isolated space, and free standing. This building was the only tripartite building found at the site of Arslantepe. Within the temple, thousands of mass-produced bowls (similar in creation, but different in style from the well known beveled-rimed bowls) were found as well as 334 *cretulae,* or stamped mud sealings, speaking of the temple as a place for the redistribution of foodstuffs, as well as number of craft workspaces located just outside of the temple. This also speaks to the likely possibility of *corvées* labor associated with the temple and the giving out of food for labor or as part of a cultic organization. The temple was a large, tripartite mudbrick building (as was commonly found in Mesopotamian temple structures), well built, and nearby the large elite

residences. The temple itself stood upon a created terrace made of large stone slabs and pisé, making this structure the most visible building at the settlement. This was the only tripartite structure found at Arslantepe, and though the structure was uniquely Mesopotamian in design, a number of local details were also incorporated into the building, such as the use of wall paintings in the large central room, and the use of wood in the construction of the building (Frangipane 2010: 25-26, 31-36).

Arslantepe in the Late Chalcolithic levels had many ties, cultural, architectural and administrative, with the southern Mesopotamian Uruk cultures. This is not to say that Arslantepe was a Uruk "colony", but rather that the inhabitants of Arslantepe likely had a large amount of connection with Mesopotamia, and took aspects of Mesopotamian culture and incorporated it into their own culture in their own way, especially in the treatment of the elite class, and their elite goods and lifestyles (Frangipane 2003:124-125). An example of local culture include large public structures such as Building XXIX, a large ceremonial stone and mudbrick building located on the western edge of the mound and first built in Period VIA. This building was a constructed in a bipartite plan, before the palatial complex of the same period was built. The building was destroyed by fire, so that the contents were well preserved in its room, such as a huge number of clay-sealings and stacked mass produced bowls, which seems to indicate the building was in use for redistribution of food goods and as an administrative center. Building XXIX was larger and better constructed than the later temples found at the site, which were used for similar purposes. This building is built entirely in a local style, without any visible Uruk influence, showing the presence of complex administrative practices and large central public architecture before the appearance of the Uruk sphere of influence. In later periods, as major public buildings take on a more Uruk style, it seems that rather than the Uruk "culture" creating a

complex administrative structure, the inhabitants of Arslantepe rather incorporated aspects of the Uruk culture into their already existent system (Frangipane 2001: 2-3).

In the Period VIA Chalcolithic levels, the site of Arslantepe is a unique site for the study of incipient complex societies in Anatolia. The site was well excavated with a large amount of both vertical and horizontal excavation, revealing much of the centralized palatial complex at the center of the site from the fourth millennium period in period VIA, while still never being a particularly large settlement, at least by the standards of large, urban settlements contemporary in southern Mesopotamia, such as Uruk (Frangipage 2010: 5).

Arslantepe is one of the sites at the center of the so-called Uruk "colonization" model, in which southern Mesopotamia, weak in natural resources but strong in cultural innovation, creates a center which trades with the more peripheral settlements, such as those found in southeastern Anatolia, which is less "complex and evolved economic and social structure" (Frangipane 2010 6), but with a wide variety of natural resources, thus creating a trade in goods for economic structure (Algaze 2008). Indeed, the site of Arslantepe is one of the main sources in information on the various viewpoints of this contentious theory (e.g. Stein 2001; Algaze 2008; Rothman 2001; Frangipane 2010).

The height of of Arslantepe was during Phase VIA, dated by the excavators to the Late Chalcolithic 5 period, contemporaneous to the Late Uruk period in Mesopotamia, and during the height of the so-called Uruk "colonization" period, with the entirety of the mound inhabited, from the mound summit with its palatial structures, all the way around the base of the mound (Frangipane 2010: 23; Di Nocera 2008: 635-636). Temple C was abandoned and the area built over, with a series interconnected buildings, each with a different function, rather than the single centralized building of the previous phase. The central complex area included a large number of

buildings. A large "Palace" structure was excavated, built over the large elite quarter of Period VII. It contained a series of rooms of various functions, and may not have acted as a domestic residence of a "king" or "chief" but did appear to have been an area for a variety of public functions that were presided over by the local elites. The complex consisted of two temples, Temple A and Temple B, a series of storerooms, a number of large monumental entrances and internal courtyards, and a number of other rooms whose functions could not be ascertained. The complex was built of well-made mudbricks, with stone foundations (Frangipane 2007: 25-29).

The excavators found that the various buildings were not all built at once, but were added on over time, though all were in use contemporaneously by the end of the Phaser VIA period (Frangipane 2010: 23). This area included buildings both with a cultic purpose, such as the two large temples, as well as non-cultic, administrative purposes, such as the palatial structure and its many rooms. While the Palace was built in phase VII originally, the size was greatly expanded in Phase VIA, to include a larger number of rooms, used for a variety of economic and administrative purposes, as well as a larger courtyard, which allowed more people to accumulate in the area, along with an impressive monumental gated entrance and fortification system around the central complex. Interestingly, the various ares of the central complex often did not connect to one another, and were often built even at different elevations, so while the central complex area of the site was clearly and ideologically set apart from the rest of the site, though its location and surrounding fortification system, the various buildings with their distinct purposes, be they cultic, administrative, economic or public meeting space, were clearly separated from one another in the micro-landscape. This was a marked difference than in the previous period VII, with far fewer buildings at the center of the mound and an isolated temple, not the surrounded temples of Phase VIA. This is a marked difference than what is found in contemporaneous

southern Mesopotamia, where the cultic centers are set apart from the economic centers, such as at the Eanna district found at the site of Uruk, while here, the cultic is intermixed in the same area as the economic. Such a set up also limited the number of people who had access to the temples. In Phase VII, the isolation and large size of Temple C allowed for a large number of people who could be in the temple. In Phase VIA, the temples are part of the larger central complex, were smaller in size, and were not readily accessible to the general public. (Frangipane 2010: 23-26).

Despite the excavation of a large area from Level VIA, only a small number of domestic structures were uncovered, all large elite houses in the central complex. It seems the far fewer people actually lived on the mound in the period than did in Period VII with its large lower class neighborhoods in the northeastern section. Large portions of the mound remain unexcavated, so perhaps more domestic structures were located in the northern half of the mound. (Frangipane 2010: 36-37).

Also of great importance at Arslantepe was the presence of thousands of *cretulae*, or seal impressions, as well as nearly 300 different seals found throughout the palatial structure, showing a very complex system of organization and recording of various goods and services, and especially food stuffs, a unique set up in Anatolia, but similar in many ways to the sealings system found at Uruk. Thanks in large part of these *cretulae*, the functions of many of the rooms in the palatial structure are now known (Frangipane 2007: 148-157).

The site quickly deteriorated at the end of the VIA phase. The entrance into the central complex was made smaller, and the fortification wall was built to be larger, while the paintings in the rooms were covered with plaster, and Temple A converted into a administrative center for food distribution, rather than a cultic space, as the number of weapons increased, as seen in the

Weapons Building. At the end of Period VIA, a large fire completely destroyed the palace area, ending the way of life found in Periods VII and VIA. After the fire, the site was partially abandoned, and a period of crisis seems to overtake the entire Malatya region, with only occasional occupation by what appeared to have been transhumant pastoral nomads with a style of material culture previously unknown at Arslantepe (Frangipane 2010: 38-42).

The site was rebuilt in Phase VIB, but in a completely different style than before, but with some continued cultural elements, such as the production methods of potter and the types of livestock in use, while the structure and administration of the site changed quite radically, with the *cretulae* of the previous two periods gone completely. The centralization of the previous period was gone, with no evidence of the redistribution of food any longer, or mass production of pottery. It seems then that the common folk of the previous period did re-inhabit the site, but the ruling elite changed, with a far more war-like attitude among the top strata (Frangipane 2010: 38-42).

The architecture in Period VIB was made up of small, mudbrick buildings built into small, dense neighborhoods with narrow streets between them, and a variety of outdoor work areas for the processing of foods, especially barley, wheat and legumes, as well as for the slaughtering of animals and copper smelting. The area inside the city wall remains unknown, except for a large, paved open space running along the wall itself, though likely some sort of more imposing buildings were built inside this region. The Period VIB settlement did not last long, perhaps because of its war-like nature, and perhaps due to the high number of nomads that seemed to be endemic during this period in the Malatya plain (Frangipane 2010: 38-40).

There is evidence of new populations either present at the site or in the general vicinity during period VI B at Arslantepe, seen in the new style of architecture, new styles of pottery and

new material culture in general. While there is some semblance of continuity between periods VI A and VI B, there is an increase in more local styles of life during Period VI B, especially in the ceramic sequence, where Mesopotamian style pottery, very common in the previous phase, becomes increasingly less common in favor of locally made, hand made or wheel made ceramics. This is very likely related to the collapse of the Uruk system in Mesopotamia. Arslantepe is by no means abandoned during Period VI B, but the settlement overall becomes more modest in its buildings and materials, with local nomads likely settling at the site in this period, not displacing but settling along site the previous population. The large public structures at the top of the mound were abandoned, while the slopes and lower parts of the mound were built up with smaller domestic structures. In fact, no signs of a large central public buildings are yet known from Period VI B, while material culture does remain somewhat similar, showing a decrease in the complexity of the site while a continuation of the population into the Early Bronze I period (Frangipane 2000: 447-449).

At the end of Period VI B, the entire site was destroyed by fire. All the monumental buildings were demolished, and were never rebuilt. The site was splintered and not well populated during the Early Bronze II periods, Periods VIC and VID1, and was not well settled again until period VID2 (Frangipane 2010: 40), but in these periods, there was a profound shift in material culture and settlement patterns. The first new buildings constructed at the site were small circular wattle and daub structures, with hand-made red-black pottery style, never previously found at Arslantepe. Perhaps the site was settled at first by nomadic pastoralists from Transcaucasia. The recent discovery of two new, larger and more substantial buildings at the site have slightly altered this picture, with a possible cultic/public building and a larger hut, surrounded by a double-row fence, found at the summit of the mound, showing the possibility of

a governmental figure during this phase. This settlement did not last long, and the site again changed and began to grow larger (Frangipane 2013:239-245).

In Period VIC, a new small village next was built on the top of the mound, with mud-brick houses and the return of wheel-made pottery, as Arslantepe transitioned into the Early Bronze Age II period, which is otherwise not yet attested in the Malatya region beyond small pastoral seasonal villages (Frangipane 2001: 4). The number of bronze goods greatly increased beginning in the third millennium, likely also as a result of the nomadic newcomers from Transcaucasia. The coming of these new peoples, and their well attested metallurgical skills, changed the economy from one mostly based on agricultural goods and elite goods, to one that was far more reliant on trade of metal (Frangipane 2001: 5).

By the Early Bronze III, Period VID, Arslantepe remained a smaller site, though this was the peak size for Arslantepe during the Early Bronze period. This small settlement was urban in nature, but lacked completely the strong centralized administration that was such a trademark of the Late Chalcolithic period. While in the previous periods, the culture of Arslantepe was highly influenced by Mesopotamian culture, in the final phases of the settlement, the culture changed to a far more Anatolian style culture. The biggest change was the transfer from the highly centralized, religious/temple based administration of the Late Chalcolithic, with the large temple redistribution centers and trade in lavish elite goods, to a power system based on warriors and chiefs, such as seen in the "Royal" tomb. The symbols of power changed from religious to might, despite perhaps no major change in the amount of fighting and warfare actually present, as the shift in Arslantepe went from Mesopotamia towards Anatolia, for the first time, as sites in the southeast became far more independent and localized in their styles than in the previous Uruk/Mesopotamian dominated period (Frangipane 2001:7-8).

The site was abandoned at the end of the Early Bronze III period for some length of time, perhaps as long as a century, before being once again inhabited during the Middle Bronze Age.

Birecik

The Birecik Dam cemetery is a three hectare large Early Bronze Age cemetery site that was discovered during the construction of the Birecik Dam project on the Euphrates river in southeastern Anatolia. The site was discovered by accident during construction, which destroyed some number of the graves from the site before the site was recognized. Salvage excavations of the site were quickly begun once the mistake was realized, excavating a total of 312 burials in two season, in 1997 and 1998, before the entire area was destroyed through continued construction of the dam, except for a small area of the site in the southwest, measuring 90 by 40 meters, and that left unexcavated and protected, for future research. The excavations were directed by Rıfar Ergeç and Kemal Serok, through the auspicious of the Gaziantep Museum (Sertok and Ergeç 1999: 87-88). Unfortunately, previous construction work took place in the densest portion of the cemetery, destroying an unknown number of burials, so that the full number of burials originally present cannot be known (Sertok and Ergeç 1999: 88).

The settlement to which these burials were associated remains unknown, with two possible explanations given by the excavator. One: the nearby settlement was destroyed by flooding from the Euphrates river or has otherwise not been found, or two: more than one community shared the cemetery. No signs of seriation of graves or reused was found, and it was not possible to find any sort of stratigraphic difference, so it was assumed the cemetery was used by heavily during a short period of time, perhaps only a few centuries in the beginning of the third millennium, likely from the early Bronze Age II. In addition to the burials, a number of shallow depressions, one to seven meters in diameter, and small pits, one to two meters in

diameter and one to two meters in depth, were found scattered amongst the burials. These were often filled with stones, ceramic sherds, half-baked mudbricks, stone tools, animal bones and ash. Likely, these features represent the remains of funerary feasts and other activities associated with burial customs. Otherwise, the tombs were organized in small groups separated from one another, perhaps indicating family or caste differences. No other features, architecture or walls in the cemetery were recovered (Sertok and Ergeç 1999: 88-89, 94).

Carchemish

The creation of the Tishrin dam in northern Syria and the Carchemish and Birecik dams in southeast Turkey led to a large concentration of efforts to excavate the sites of the Middle Euphrates Valley before many of the as of yet unexcavated sites were lost forever. In the course of excavations and surveys of these regions, a total of 45 sites with recognizable Early Bronze Age levels were recorded, if not excavated. After the creations of these dams, a sizable number of these sites were inundated, and so the only information known on these sites comes from the quick salvage archaeology completed before the dam completions (Peltenburg 2007: 3).

The site of Carchemish was first excavated from 1911 until 1915 by the British Museum under the leadership of C. Leonard Woolley (Woolley 1921). The site is one of the larger excavations undertaken in Anatolia/Syria, with a number of very famous orthostats uncovered at the site. The outbreak of World War I prematurely ended excavations of Carchemish, with later excavations never undertaken due to the location of the site along the newly created boarder between the modern countries of Syria and Turkey, with part of the site in both countries. As a result, despite its great importance to the history of the ancient Near East, the site was left unexcavated, as well as partially covered in landmines. A project to remove the landmines begun in 2009, with completion in 2011. Excavations of Carchemish resumed in 2011, under the

direction of Nicolo Marchetti, and the University of Bolognia and through the University of Gaziantep. Excavations continue to this day (Marchetti 2012).

Carchemish was inhabited over a very long period of time, with levels dating from the Neolithic until the Islamic era. As a result, and as is typical in these situations, far less is known about the prehistoric levels of Carchemish than of the very large and well exposed Iron Age and Late Bronze Age levels for which the site is best known. The later levels were of more interest to the excavators, covered the earlier levels, and at times, were built into the lower levels, destroying large parts of the earlier stratigraphy (Falsone and Sconzo 2007: 73-75). Again unfortunately, much of the excavation materials, including artifacts as well as the excavations records and notes, were lost during the First World War, and what was published was based largely on the remaining notes and drawings and the memories of the original excavators.

Unfortunately, little remains known about the Late Chalcolithic and Early Bronze Age levels at Carchemish, though both were seemingly quite extensive. The earliest levels at Carchemish were mainly found in the deep soundings on the acropolis. The Chalcolithic levels were around three meters thick, and the Early Bronze Age levels, though greatly disturbed by the foundations of a later Roman temple construction, were approximately 1.5 meters thick upon the mound (Falsone and Sconzo 2007: 75).

The Early Bronze Age levels contained a very high number of cist and pithos burials, but far less architecture. The original excavators referred to the Early Bronze Age I and II periods as the "champagne-glass period," due to the high prevalence of the so-called "champagne-glass" vessels found in this period. The rest of the likely Early Bronze Age III levels were almost completely destroyed by the later Roman activities (Falsone and Sconzo 2007: 75-76).

As the site of Carchemish was excavated only very recently after the rediscovery of the

Hittites, much of the periodization used by the original excavators has been revealed to have been incorrect. For example, the excavators refer to two periods at the "Early Hittite" and "Middle Hittite," when in fact, the Large Bronze Age Hittites were not present in the Carchemish area until the reign of Šuppiluliuma I in 1352 BCE. Modern reworkings of the Carchemish pottery date these periods instead to the Early Bronze I/II for the "Early Hittite," making it contemporary to the so-called "champagne-cup period," and the Early Bronze III/IV for the "Middle Hittite" (Falsone and Sconzo 2007: 77).

It remains highly contested how large of a settlement Carchemish was during the Early Bronze Age. The arguments go from as small as four hectare settlement, only a small regional village (Bunnes 2007) to a large, important regional center with a full fortification system (Algaze 1999). The little evidence of the Early Bronze Age settlement from the original excavations do not give enough information to better answer this question, though hopefully the new excavations can shed more light on this problem. It seems that the Early Bronze Age settlement was present on the top of the mound itself, and likely (some small amounts of pottery and burials were found) with some extent off the mound into the lower city, though how far it extended remains unknown (Falsone and Sconzo 2007: 87). A large earthen ramparts that was dated by Woolley to the "Middle Hittite" period cannot be conclusively dated to the Early Bronze Age at this point (Parr 1968: 31).

The city of Carchemish is briefly mentioned in contemporary records from the city of Ebla, directly before the area is conquered by the Akkadians, which indicate that Carchemish was under the direct control of the king of Ebla, and does not seem to have an independent king of its own, indicating a small status for the city, though it was important enough to be mentioned in the records at all, so few conclusions can be drawn from the textual records alone (Pettinato

1976). Carchemish is unique in being the only site mentioned in this dissertation to have any textual references.

Değirmentepe

The site of Değirmentepe was excavated in 1973, and again from 1979 until 1986, before being unexpectedly flooded as part of the Keban dam project in 1974, before excavations were completed. The excavations were headed by Refik Duru, for the University of Istanbul. While the area around the site in the Altınova plain was surveyed in 1968 by Whallon and Kantman, the mound of Değirmentepe was not mentioned in the publication though the mound itself was recorded on the map made for the publication (Duru 1979: 63). The site was then selected out of several other mound in the vicinity for excavation due to the likelihood of it being a completable project in two seasons, though the site was ultimately inundated later than initially thought and allowed for more years of excavations, until 1986 (Balkan-Atlı 2003: 373).

It was a small mound, only 130 by 120 meters at the time of excavation, though parts of the mound has been previously destroyed both by erosion and irrigation farming (Duru 1979:65-68). The mound was up toelevenmeters in height, above the surrounding plain, and virgin soil was reached during excavations. It was easily mistaken for a natural formation, as it lies along a series of natural ridges surrounding the Murat Su. The site was specifically chosen for its small size, as it would have been a nice representational site for small villages in the Early Bronze period. Değirmentepe contained habitation levels from the Late Chalcolithic, Early Bronze I and the Iron Age. The stratigraphy was split into eleven habitation levels: Levels 11-6 dated to the Chalcolithic/Ubaid period (Balkan-Atlı 2003: 373).

The site is best known for its Chalcolithic levels, where Değirmentepe is one of the 'type sites' for the spread of Ubaid culture in northern Mesopotamia, and also as the northernmost

known site to have substantial Ubaid cultural hallmarks. Değirmentepe is also interesting as it is the only site in the region with Ubaid attributes, leading to some confusion as to why this site, and not other contemporary sites in the region, such as Norşuntepe, was so influenced by the Ubaid styles. Değirmentepe is not believed to have been any sort of Mesopotamian enclave, as a rather large part of the material culture, ceramics and architecture are local in style, though the Ubaid links are impossible to ignore (Marro 2012: 19).

Both rectangular and tripartite buildings were encountered during excavations at Değirmentepe. The few areas from the Late Chalcolithic found at Değirmentepe contained a small building complex made of mudbrick, with a larger central room surrounded by smaller rooms, of rectangular or trapezoidal shapes. This complex was rebuilt during all three of the Chalcolithic levels, with only minor changes over time. At the end of the oldest phase, Subphase 3, the complex was destroyed by fire, and was then rebuilt. The walls of the complex were plastered, and painted with simple red and black geometric shapes and lines, with similar designs found on the Ubaid style painted pottery and seal impressions from the same period. Both local-style rectangular multi-roomed structures and Ubaid-style tripartite structures were found next to one another, in an agglutinative style of architecture with roof access as is typical from the earlier Neolithic period throughout Anatolia, and unknown in Mesopotamia (Esin 1985:253-254).

The architecture of the Early Bronze Age at Değirmentepe was made of stone foundations under mudbrick rectangular structures, often multi-roomed, in Levels IV and then only of pisé without stone foundations in Level III. Not enough of the site was excavated to learn if the settlement was surrounded by a wall or not, and no major destruction levels were uncovered, though only a small area was excavated (Esin 1985:254-256).

Domuztepe

The site of Domuztepe was first recorded in 1993 as part of the Kahramanmaraş regional survey, under the leadership of Elizabeth Carter through University of California, Los Angeles. An initial surface survey of the mound was completed in 1994, a more detailed survey in 1995, and excavations from 1996 until 2011, though the site may again be excavated in the future. The site was co-directed under the leadership of Elizabeth Carter of the University of California Los Angeles, and Stuart Campbell of the University of Manchester (Carter 1996; Carter 1997). The mound is quite large, at 20 hectare in total area, and rising twelve meter above the current level of the surrounding plain, though it likely was even higher originally, as alluviation raised the level of the surrounding plain while erosion and plowing from farming likely somewhat shrank the mound itself over time. Even so, Domuztepe remains of the largest known Halaf period sites in all of the ancient Near East (Campbell et. al. 1999: 398). If the entire site was occupied simultaneously, as suspected by the excavators, at least for the later phases of the site, due to both surface survey and geophysical surveys, the population may have been as high as 1500 people, substantially larger than any other known Chalcolithic site in Anatolia or contemporary Mesopotamia (Kansa et. al. 2009: 161).

The site was occupied from the around 5700 to 5450 BC, calibrated, though the original occupation of the site remains unknown due to the high water table (Carter et. al. 2003: 118). Domuztepe remains one of the most important Chalcolithic sites in southeastern Anatolia, due to its surprisingly large size, as well as the lack of later deposits covering the top of the mound, with only a small scattering of first millennia AD deposits found on the surface of the mound (Campbell et. al. 1999: 399). The site is of great importance to the study of Chalcolithic southeastern Anatolia, as it covers the Halaf expansion from Mesopotamia into upper

Mesopotamia, until the end of the Halaf culture and into the start of the Ubaid. Domuztepe has many aspects of the Halaf cultural tradition, while maintaining a its own distinct cultural variations, and the Ubaid culture is only minimally present here, unlike many other sites that stretch beyond the Halaf into the contemporary Ubaid. Domuztepe is located right at the very edge of the Halaf expansion, showing the most fringe of Halaf cultures (Carter et. al. 2003: 117).

Due to the large size of the site, only a small portion of the settlement could be excavated, totaling around 17500 square meters of area in total, as of 2000, mostly on the southern edge of the mound (Kansa 2009: 161).

Architecture at Domuztepe consisted mainly of a number of tholoi, built in a variety of techniques, from stone foundations under mudbrick to no foundations and mud and pisé. These domestic buildings were never densely packed and each was only shortly inhabited and they were often moved around the site. A number of buildings were also rectangular in shape, often between one rooms and three, with similar building materials as the tholoi. In-between living phases, an area would often be flattened then filled over with a very sterile mix of white lime plaster and a reddish clay matrix, creating a number of terraces over time, before rebuilding on the same area (Carter et. al. 2003: 118-119).

Fıstıklı Höyük

The site of Fıstıklı Höyük is a small mound, approximately 0.5 hectare in size and rising only four meters above the surrounding plain, and was situated originally on a small natural hill, so that not all of the mound is cultural material. The mound is covered in pistachio trees, giving the mound its name. The mound was originally recorded as part of the survey of the Carchemish area in the Tigris-Euphrates Archaeological Reconnaissance Project in 1993 (Algaze et. al. 1994), with a more through surface collection survey of the mound in 1998 by the team headed

by Susan Pollack and Reinhard Bernbeck (Pollock and Bernbeck 1999). Excavations of Fıstıklı Höyük took place between 1999 and 2000.

Fıstıklı Höyük dates from the Early Halaf, then a later settlement dating to the Late Hellenistic and Roman periods. All cultural levels at Fıstıklı Höyük were not more than two meters in depth, and it seems that there was no more than a single Halaf-period building level at the site at any given spot, indicating a rather short lived early occupation at Fıstıklı Höyük (Pollock et. al. 2001:41). In the 2000 season, virgin soil was reached (Bernbeck et. al. 2000: 26). Likely, the total length of Halaf occupation at Fıstıklı was around 250 to 300 years in total, based on both pottery chronologies and radiocarbon dates (Bernbeck et. al. 2000: 31). After this period, the site was abandoned, though there is some evidence of occasional visit by nomadic herders for some time. (Bernbeck et. al. 2003: 24-25) In total, around 14% of the entire Halaf site was excavated (Bernbeck et. al. 2003: 14). The site-wide stratigraphy called Phase IV the earliest camp site phase, and Phase IIIB a camp site and storage phase, Phases IIIA-3, IIIA-2 and IIIIA-1 three phases of tholos buildings, then the camp was once again a small camp site, then abandoned in Phase IIIx. Phases II and I date to the later Roman and Hellenistic phases (Bernbeck 2013: 55).

The Halaf architecture at Fıstıklı Höyük was largely comprised of the typical Halaf-style tholos buildings, some as large as four meters in diameter, constructed with stone foundations and pisé walls. Nearby some of the tholos buildings are small, cellular planed buildings, likely for storage purposes. A total of six tholoi were excavated. The surfaces between houses were often open work spaces with remains of debris from pottery making, stone working or food preparation, as well as garbage dumps. The open areas between buildings was quite large, allowing for much communal work space in the site, similar, if slightly more spacious than what

is known from other contemporary sites of similar size, such as Kazane or Sabi Abyad. The earliest levels at Fıstıklı Höyük did not have permanent architecture, but rather seems to have been a short-term use camp site, with evidence of quickly made architecture, and storage installations. This is followed by three phases of tholos buildings, storage buildings and ovens, before the site once again becomes a camp site, before being abandoned. (Pollock et. al. 2001: 41-45; Bernbeck et. al. 2002: 26-31; Bernbeck et. al. 2003: 16).

The seemingly short-term use of buildings at Fıstıklı Höyük was taken as evidence by the excavators that the site was a cyclical use site for semi-nomadic peoples. The site was used for a few years at a time, using up the more easily available natural resources, before the inhabitants moved on to a new home, allowing the region to replenish itself before returning, as was previously discussed in Chapter Three (Bernbeck 2013: 54-55).

Gedikli/Karahöyük

The site of Gedikli, also called at times Karahöyük is a large ovoid mound, measuring 240 by 190 meters, and rising 24 meters above the surrounding plain, and 569 meters above sea level. The site was first mentioned in the publications on nearby Zincirli on a survey map of the region from 1890 (Koldeway 1895: map) and again in 1908 from a survey of the Plain of Sakçagözü by Garstang (Garstang 1908: Plate XXXII). Surface surveys of the site took place in 1958 and 1963, with full excavations between 1964 and 1967, under the direction of U. Bahadır Alkım and Handan Alkım, through the University of Istanbul. Prior to excavations, parts of the eastern and western slopes of the mound were removed by local inhabitants for the manufacturing of mudbricks, significantly damaging the site. The excavators of Gedikli chose to call the site Gedikli Höyük rather than Karahöyük in their publications, due to the high number of known mounds with the name Karahöyuk, in order to avoid any confusion. This dissertation

will follow this convention and hereafter only refer to the site as Gedikli (Alkım and Alkım 1966: 27-29).

The site has habitation levels dating to the Middle Chalcolithic (Level IV), Late Chalcolithic (Level IIIj-IIIk), the Early Bronze Age (Level IIIa-i), as well as later occupation dating to the Roman, Byzantine and Islamic periods.

Gre Virike

The site of Gre Virike is located along the eastern bank of the Euphrates River, 10 km north of the site of Carchemish, and 15 km south of the Birecik cemetery. The site was built upon a natural terrace upon the bank of the river, with a small built mudbrick rectangular terrace, measuring 35 by 50 meters. The edges of the terrace were lined with basalt to keep the sides intact, similar to contemporaneous Mesopotamian terraces (Heinrich 1982: 90-91). Vre Virike was excavated between 1999 to 2001 by the Middle East Technical University, under the leadership of Tuba Ökse (Ökse 2015).

The site was built in the Early Bronze I/II period, and used as a cemetery through the Early Bronze Age. Three phases were recognized by the excavation team: Phase I, dating to the Early Bronze I/II, Phase IIa, dating to the start of the Early Bronze III, and Phase IIb, dating to the end of the Early Bronze III (Ökse 2006: 1-2).

The site was never used as a habitation site during the Early Bronze Age, instead used as a ritual center and cemetery site for elite burials. During Period I, two plastered pools were built into the northeastern edge of the platform, and coated in plaster. The pits were likely for sacrificial purposes, with nearby pits filled with grain, animal bones and small votive objects, including miniature stone axes. In the southwestern edge of the terrace, a subterranean structure was dug into the terrace, though to be a "spring grotto" by the excavators (Ökse 2006: 4).

In Phase II, ten tombs of various types were constructed, including three simple inhumations, one pithos grave, and three jar graves, one mudbrick lined cist tomb, one stone lined cist tomb, one shaft tomb and one oval chamber tomb. Other than the tombs, a small number of stone chambers were built on the surface of the terrace, filled with ceramic fragments, ash, charcoal and remnants of cooking pots.

Girikihaciyan

The site of Girikihaciyan was excavated between 1968 to 1970 by the Joint Prehistoric Project, Istanbul-Chicago by Halet Çambel of Istanbul University and Robert Braidwood of the University of Chicago, and Patty Jo Watson. The site was special in that it was a single period settlement, with only Halafian period levels, allowing for larger horizontal exposures of the Halaf period than is usually possible at other sites with significant upper layers covering the earlier Halaf layers. The mound was first discovered in 1963 as part of a larger survey of the southeastern region of Anatolia by the Joint Prehistoric Project, Istanbul-Chicago. The mound was 175 meter in diameter with a height of three meter above the surrounding plain (Watson and LeBlanc 1990: 1-5).

The site was excavated in two seasons, 1968 and 1970, and in some parts of the excavation, virgin soil was reached. The mound was found to have two distinct occupation periods, with the main occupation, about one meter in thickness, dating to the Halafian proper, and a smaller, later occupation, only about half a meter in thickness and only found in the southern and western portions of the mound (*ibid*: 31). The architecture of the Halaf period was found to be a series of the ubiquitous *tholos* style buildings, with stone foundations and *pisé* walls with plastered interiors, and plastered floors. Some of the buildings were also simple round houses, with a similar style of architecture (*ibid:* 32-35). Some of the houses, (e.g. Round house

4), appeared to have been burnt down, but nothing in this shows any signs of violence (*ibid:* 33). From what can be seen, all or nearly all of the buildings excavated were used as domestic or storage space, with no signs of any special non-domestic use or ritual use (*ibid*: 39).

After the houses were abandoned and destroyed, the majority of the site seemed to have been reused as a dumping ground for trash, or as a place to dig pits for various reasons. The site was thought to have been inhabited for about 200-500 years between the first habitation and its final abandonment, but this does not necessarily mean a continuous habitation (*ibid*: 40). The site was a farming village, using domesticated sheep, goat, pigs and cattle, with a maximum population of around 200 to 300 people (*ibid*: 134).

Gritille

The site of Gritille was excavated as part of the salvage archaeology through the Lower Euphrates Salvage Project, completed in the region due to the construction of the Karababa Dağı dam, with the site of Gritille scheduled to be inundated under the waters by 1990. The excavations began in 1981 and continued until 1984. The site was roughly ovular in shape, the top measuring 80 by 40 meters, and the base 150 by 100 meters, with approximately twelve meters of occupational deposit, and the top of the mound 24 meters above the surrounding plain. The original occupation was founded upon a natural terrace above the river bank. Part of the eastern edge of the site was eroded away by the Euphrates river, prior to excavations, allowing for part of the stratigraphy to be visible from the start (Voigt and Ellis 1981: 89).

Gritille was inhabited from the Neolithic until the Islamic era, with some gaps in occupation in between. The site did not appear to have been occupied during the Chalcolithic period. In the Early Bronze Age, a combination of domestic buildings and open work space or industrial areas, were excavated. the architecture was made of mudbrick with stone slab and

cobble foundations. The floors were made of white plaster in late periods, and packed mud in earlier periods. Overall, the materials from Gritille in the Early Bronze period show a greater similarity with Northern Syria than with Central Anatolia, in both the pottery styles and the architecture. Likely, Gritille, with its location along the Euphrates river, was a trading post with the Mesopotamian world (Ellis and Voigt 1981:325).

Hacınebi Tepe

Hacınebi Tepe was excavated between 1992 and 1997, under the direction of Gil Stein and Northwestern University, as part of the Northwestern University salvage excavations. Hacınebi is a small 3.3 hectare site, roughly triangular in shape (Stein et. al. 1998:147-148).

The site was occupied from the Late Chalcolithic until the Hellenistic era, with the major focus on the excavations on the Chalcolithic levels. The Late Chalcolithic period was founded upon virgin soil and bedrock. The Late Chalcolithic is divided into two phases, Phase A, "early pre-contact" (4100-3800 BCE), and Phase B, which is further divided in B1 "late pre-contact" (3800-3700 BCE) and B2 "contact phase" (3700-3300 BCE). As can be gleaned from these names, in Phases A and B1, the settlement at Hacınebi was a small, locally inhabited site. In these periods, the architecture, ceramics and material culture were all of the local tradition without any foreign influence. This changes in Phase B2, where the Uruk style material culture first arrives and becomes an integral part of Hacınebi society. In this phase, the settlement is split largely into two areas, the larger local settlement, and a smaller Mesopotamian immigrant enclave, making the study of Hacınebi a fruitful one for the understanding of Mesopotamian influence on local societies, the integration of Uruk culture, and the results of a Mesopotamian enclave within a local community the economic, social and political realties of this unique situation (Stein 2002: 149).

After the end of Phase B2, the site was abandoned, only to be later used in the Early Bronze Age I as a cemetery site. After the cemetery went out of use, the site was again abandoned, until the site became a small Hellenistic settlement from the fifth to the second century BCE. During excavations, approximately 1400 square meters of the site were excavated (Stein et. al. 1998:147).

In Phase A,the earliest settlement of the site was a series of small domestic structures, without a wall around the village. These were soon removed, as the settlement grew larger. The architecture was made of mudbrick, rectangular multi-roomed buildings, often with central courtyards flanked by rooms. This central area was an open air courtyard, used for food preparation. Some of the buildings in the southern portion of the site were destroyed by fire at the end of Phase A, others were abandoned and fell apart over time (Stein et. al. 1998:147-150).

In the B1 Level, some of the houses were burnt down and destroyed (Stein et. al. 1998:147). In this period, evidence of long distance trade was already apparent, in the form of chlorite pendants from the east, marine shell ornaments from the Mediterranean, and evidence of copper production at the site, from raw materials to finished products. The closest copper source to Hacınbei is 200 km, from the Ergani copper mines. In addition, locally produced stamp seals were already produced and were in use before the arrival of the Uruk populations to Hacınebi, showing evidence of long distance trade, administrative records, large scale building projects, elite goods and thus likely social stratification (Stein 2002: 150).

In Phase B2, a small “Mesopotamian trading enclave” was established in the northeastern corner of the site. The Uruk materials in this section include ceramics, as well as architecture, both public and private, as well as general material culture with a marked different nature than those of the Anatolian style found throughout the rest of the settlement. The people of this sector

were locally making Uruk style ceramics and living Mesopotamian Uruk style lives. Though little architecture was uncovered, ceramic wall cones, a benchmark of Uruk architecture, were found in this sector, as well as bitumen, which is only available from southern Mesopotamia, and was sourced to have originated from southern Mesopotamia. Other Mesopotamian goods include personal ornaments, stone weights, and clay sickles, as well as Mesopotamian style cylinder seals, over the use of Anatolian style stamp seals, as well as jar stoppers, and clay bulla with tokens inside. Neutron activation analysis of some of the jar sealings and tablets found in the northern section of the site proved that these had been created from clays native to southwestern Iran as well as from local clay, proving these materials often originated from very far away (Stein 2002: 152).

Even the food preparation between the two areas was different, with different butchery practices found in the north than in the south and west. The southern and western sections of the site were "Local" in their material culture, with little of the Mesopotamian material culture found in the north, taking over only the ubiquitous "beveled rim bowl" in their pottery styles. All the evidence is indicative of a small but independent Mesopotamian enclave at the site, with little control over the remainder of the "Local" site. In the locally controlled southern section of the town, architecture, ceramics and material culture are a smooth continuation of materials found from Phase B1, including the stamp seals mentioned above, with only occasional Uruk style ceramics found in this section of the site (Stein 1999: 16-20: Stein 2002: 151).

Most interestingly, the site of Hacınebi showed nearly no signs of violence or warfare. While the settlement was protected by a city gate, no weapons were noted in graves, few of the levels contained evidence of destruction, and the human remains found did not show evidence of violent death, indicating peaceful coexistence between the local peoples and the Mesopotamian

immigrants (Stein 2002: 152).

Hassek Höyük

The site of Hassek Höyük was excavated between 1978 and 1986, under the direction of M.R. Behm-Blancke and the German Archaeological Institute and the University of Munich. The site is 350 by 150 meters in size, and rises only 1.7 meters above the surrounding plain, measuring 1.5 hectares in total (Helwing 1999: 94; Helwing 2002: 2).

The site was inhabited between the Late Chalcolithic, Phase 5 (often called the Late Uruk in the publications), and the Early Bronze I/II periods, phases 0-4. The majority of the site dated to the Early Bronze I, with only a small amount of surface finds from the Early Bronze II, with very little preservation (Behm-Blancke 1992: 12-15).

In the Late Chalcolithic period, the settlement at Hassek Höyük was a small, walled city, ovular in shape. Inside of the settlement, a number of domestic structures were excavated, as well as a large storage building and a possible granary. One structure, House 1, was far larger than the remaining, and was likely a elite house an administrative center, made of a series of rooms and courtyards built in a tripartite arrangement, typical of the Uruk period. The pottery was also Uruk in style, but locally made, as well as a number of local style pottery, distinct in shape from the Uruk style. In addition, a number of Uruk style cylinder and stamp seals were recovered. (Helwing 1999: 94-95; Helwing 2002: 14-20).

Two different levels of Phase 5, Phase 5a and Phase 5b, were both destroyed in a large fire that spread to the entire settlement (Helwing 2002: 14-20). The evidence suggested that Hassek Höyük was a small Uruk enclave populated by immigrants from the south, one of the northern-most such settlements known, though the ceramic record contains both locally made Uruk-style wares as well as indigenous ones. At the end of the Late Chalcolithic, the settlement

at Hassek Höyük was burned, with a new settlement placed over the remains (Algaze 1999:540, 545).

The Early Bronze settlement was larger than that of the Late Chalcolithic, and more densely packed. The entire settlement was again surrounded by an ovular fortification wall, though only approximately 1/3 of the wall was excavated. A single long gated area was excavated as well, on the eastern edge of the site, this time without any casemate buildings, but rather the straight wall of the town, and a thinner, niched and buttressed wall on the exterior. The architecture inside the town was different than the multi-roomed complexes of the Late Chalcolithic. The building were now long, rectangular single or double roomed houses, often with a central hearth. Through the period were multiple phases of building and rebuilding over the course of the Early Bronze Age I, but no recognizable central palatial structure as seen in the Late Chalcolithic (Gerber 2005: 18-29). There is a sizable disconnect at Hassek Höyük between the Late Chalcolithic and the Early Bronze levels, with a change from large public buildings present at the site, to a settlement almost entirely made up of domestic architecture.

Hirbemerdon Tepe

The site of Hirbemerdon Tepe is made up of a High Mound (Area A), which measures around four hc in area; an Outer Town (Area B), which measures about 3.5 hc in area and lies to the south of the High Mound, on a natural rock formation, and a Lower Town (Area C), which measures around three hectares in area and lies northwest of the mound, separate from the rest of the site by a natural rock formation (Laneri 2006:69).

The site was excavated between 2003 and 2010 under the leadership of Nicola Laneri and Necdet İnal, through the University of Naples. The site was first recorded as part of the survey of the region by Algaze between 1987 and 1990 (Algaze et. al. 1991: fig 2b), and was excavated as

part of the archaeological salvage work in the Ilısum Dam region of the upper Tigris river. The site was inundated under the waters of the Ilisu dam in 2010.

The site was inhabited in the Chalcolithic period (Level 1), the Early Bronze III period (Level 2a), the Middle Bronze Age (Level 2b), the Late Bronze Age (Level 2c), the Iron Age (Level 3), and finally in the Islamic Period (Laneri and Schwartz 2008:137-140). The Chalcolithic level was only found in the Outer Town area of the site. This phase was only minimally excavated, and was badly preserved. The pottery styles from this era was similar to other sites in the upper Tigris Valley and in southeastern Anatolia. The Early Bronze III level was found in both the Outer Town and High Mound areas, though again, most of the known information comes from pottery styles, with similar ceramics to those found in Northern Syrian sites, rather than contemporary Anatolia (Laneri and Schwartz 2008:137-140).

Kalaycık Tepe

Kalaycık Tepe was excavated as part of the Keban dam project. The site was excavated by Ümit Serdarğlu, through Ankara University. The mound was excavated between 1968 and 1971. Kalaycık. The mound measured 260 by 180, and was 60 meters above the level of the river, though only the top 32 meters are from human habitation, as the site was built upon a natural rise. The site was inhabited between the Chalcolithic to the Islamic era, with more known about the Middle and Late Bronze Age levels than the Early Bronze Age levels (Serdarğlu 1968).

Kazane Höyük

The site of Kazane Höyük has been excavated since 1992 under the direction of Patricia Wattenmaker of the University of Virginia, and work continues to this day. Kazane Höyük measures twelve hectares in area, and is 20 meters in height, with an additional lower town surrounding the mound itself, with the excavators suggesting that at its height during the Ubaid

period, the site covered up to 100 hectare of habitation area, making it one of the largest known sites in southeastern Anatolia at the time (McCarty 2013: 225). Only the Halaf period levels, Levels VII-II were well preserved on the mound. Level I was primarily surface collection ceramics dated to the Early and Middle Bronze Age, with very little observable associated architecture (Bernbeck 1999:119). For the purposes of this dissertation then, the site will only be considered for its Early and Middle Chalcolithic levels.

During the Halaf period, it is estimated that Kazane already covered 20 hectares of area, making it one of the largest known Halaf sites ever found, along with Domuztepe, Samsat, Mounbateh, Nusaybin and Takyan Höyük (McCarty 2013: 225). The size is large enough that some have wondered if perhaps the entire area was not settled simultaneous, but rather that settlement drifted around the site during this earlier period (Bernbeck 2013). The Ubaid period architecture consisted of a number of tholoi buildings, many, but not all made with stone foundations and pisé or mudbrick walls. The external areas of the settlement were often paved with pebbles between buildings, while the buildings themselves were very spread out over the landscape, without any semblance of city planing (Bernbeck 1999: 119). Likely, at the end of the Late Halaf/Early Ubaid period, the settlement was abandoned for a period of time, then reestablished at some point in the Early Bronze Age. Unfortunately, less is known about the later settlement due to lack of preservation (Coursey et. al. 1998:6-7).

Kenan Tepe

The site of Kenan Tepe was first recorded as part of a survey of the Diyabakır region as part of the Tigris-Euphrates Archaeological Reconnaissance Project, led by Guillermo Algaze (Algaze 1989a). Kenan Tepe was cexcavated between 2000 and 2008, under the direction of Bradley Parker through the University of Utah, and Lynn Dodd of the University of Southern

California, as part of the Upper Tigris Archaeological Research Project. The site is located upon a natural terrace above the river. The mound rises 56.3 meters above the river and 32.6 meters above the surrounding plain. The original size of the site remains unknown as parts were eroded away over time due to movement of the Tigris, but the site currently measures 225 by 350 meters, for a total of approximately 4.5 hectares, and has both a lower town, in use during the Late Chalcolithic, and a central mound (Foster 2009:151-153).

The site was inhabited from the Middle Chalcolithic (Ubaid) period, beginning at 4650 BC, until the Iron Age, with various breaks during the chronology. Virgin soil and bedrock was reached during excavations at Kenan Tepe. For the purposes of this dissertation, the site was inhabited during the Middle Chalcolithic/Ubaid period, the Late Chalcolithic, from the Late Chalcolithic 3, Late Chalcolithic 4 and Late Chalcolithic 5 periods (3600-3100 BCE), the Late Chalcolithic/Early Bronze I transition period (ca. 3000 BCE), and was abandoned at some point towards the end of the Early Bronze I period (Parker 2007: 3).

In the Ubaid period, only a small portion of this early level was exposed, so that the layout of the settlement could not be ascertained, though it seemed to be restricted to the eastern and southern slopes of the mound. According to a remote sensing survey of the mound, the Ubaid period site was likely no larger than a single hectare (Parker et. al. 2008:136). In the earliest occupation at Kenan Tepe, the settlement was small, and consisted of either a campsite or semi-permanent structures. Next, the architecture became more permanent, with multi-roomed buildings made of mudbricks, both domestic and storage spaces. These were all heavily burnt down at the end of the phase, preserving them quite well. No tripartite buildings, such as are commonly found in Ubaid era sites, were recovered (Parker 2007:4-7).

The Late Chalcolithic levels are Kenan Tepe, the settlement grew far larger,

encompassing four hectares at its height, with both a lower town and a settlement on the top of the mound. Though this site dates to the Late Uruk period, the archaeological remains were in general largely "local" in style, including pottery and architecture styles, with only minimal amounts of Uruk encroachment. In fact, unlike other contemporaneous sites with large Uruk presence, as the Late Uruk movement began to disappear from the landscape, other sites, such as Arslantepe, went into a decline, while Kenan Tepe continued to flourish through to the start of the Early Bronze Age I. The site contained a good amount of complexity, without any visible insight from the Uruk sphere of influence. Only a small number of domestic and storage buildings were excavated, so the planning of the Late Chalcolithic town could not be ascertained. The buildings found were made of mudbrick with cobble stone foundations and were rectangular in shape, often with multiple rooms. In general, these buildings were quite large in size, a minimum of twelve square meters in size, with mud plaster floors and open air workspaces outside of the houses, often with large pyrotechnic installations. A small number of houses from this period showed signs of burning, but not enough to indicate any large scale destruction of the site at any period. At the end of Level 4, the entire site was destroyed but a very large fire, and all architecture was demolished. After, the next next was slow to rebuilt, though eventually the site grew again to its original size (Foster 2009:158-174).

Korucutepe

The site of Korucutepe was excavated between 1968 and 1970 and again from 1973 to 1975 as a salvage excavation for the area to be flooded by the creation of the Keban Dam. The site was a joint excavation between the University of Chicago, University of California, Los Angeles, and the University of Amsterdam, and headed by Maurits N. van Loon, Giorgio Buccellati, Philo Houwink ten Cate and Hans G. Gutterbock. After the end of excavations, and

even as the site was still being excavated, the site was flooded by the Kevan Dam, making any further excavations of Korucutepe impossible (van Loon 1978: 3-4). Korucutepe was first recorded as part of the 1958 survey of Eastern Anatolia by Charles Burney (Burney 1958: 197-198) and again in the 1967 survey in eastern Anatolia by Robert Whallon Jr. and Sönmez Kantman as site O55/1 in the Keban Reservoir Survey (Whallon and Kantman 1978: 9).

The Korcutepe mound was approximately 190 meters in diameter and rose 16 meters above the surrounding landscape. Before excavations, the top of the mound had been extensively modified and disturbed by dirt quarrying, a dairy farm, and a network of water pipes, so that the later archaeological levels were largely destroyed. The site was located in the Altinova valley, a riverine valley near the Murat river, and close to where the Murat River meets the Euphrates. The area surrounding the site is relatively flat, with good agricultural land, and a series of low mountains to the north (van Loon 1978: 5).

Korcutepe was occupied between the Early Chalcolithic until the Seljuk/Mongol Middle Ages, with various gaps in the occupation. Virgin soil was reached in parts of the deep soundings. Phase A dates to the Early and Middle Chalcolithic (4500-3500), Phase B to the Late Chalcolithic (3500-3000), Phase C to the Early Bronze Age I-IIA (3000-2600), Phase D to the Early Bronze Age IIB (2600-2300), Phase E to the Early Bronze Age IIIA (2300-2150) and Phase F to the Early Bronze Age IIIB (2150-2000). Phase G to Phase L date to the Middle Bronze Age, Late Bronze Age, Early Iron Age, and the Seljuk period (*ibid*: 6).

The Early and Middle Chalcolithic Phase A levels (Strata I-XXIX) were reached only in a small part of the site, being under a total of 16 meters of fill. The pottery in this level is similar both to Amuk dark-faced burnished ware as well as some Halaf type pottery. The architecture was mudbrick with plastered interiors, with wooden support systems. By the end of Phase A,

"Ubaid-like" pottery was found in the remains. Not enough of the phase was uncovered to say more about the make-up of the settlement or its layout (*ibid*: 7-8).

The Phase B Late Chalcolithic (Strata XXX-XXXIII) was only slightly larger in horizontal exposure than Phase A. The architecture found in this level was highly burnt, with remains of a nearly complete two-room mudbrick house with a central hearth. Floors were either earthen, or covered with pebbles or reeds. A number of burnt buildings were found in this phase, with various degrees of preservation. The pottery was similar to Amuq F chaff-faced wear (*ibid*: 9-10).

Phase C covers the Early Bronze Age IIA period (Strata XLV-LXXVII), with nothing datable to the Early Bronze I period found, so perhaps the mound was abandoned for a period of time. A series of badly preserved mudbrick buildings were found, with high degrees of burnt remains inside, and a large amount of pottery filled with grain found in the remains. In Phase D, Early Bronze IIB (Strata LV-LXXI) were more layers of very highly burnt mudbrick architecture. Starting in strata LXXIII, more than 200 square meters of horizontal exposure was excavated, allowing for a little more information on the set up of this settlement. This yielded two partially roofed courtyards with cooking installations such as hearths and ovens, as well as food storage areas and food processing materials, with surrounding rooms, likely domestic spaces. This whole area was again highly burnt, and was rebuilt again in the next stratum (*ibid*: 12-18).

In Phase E, Early Bronze IIIA (strata LXXVIII-LXXXIX), the architecture changes to stone foundations under mudbrick and timber walls, with a new orientation to the buildings than in the previously, highly burnt phase. The buildings were also apparently of better quality construction in this period. Again, open spaces with cooking materials were found, next to rooms

that were likely domestic in nature. Starting in Stratum LXXVII, the inhabitants of Korucutepe began to built terraces out of mudbrick in order to better level their buildings. The buildings became larger, with long halls, and storage rooms along side, with two-story architecture or basements likely. At the end of Phase E, the area was again burnt, and the settlement abandoned for a period of time until resettled by seemingly a new population, with new habitation in a different area of the mound (*ibid:* 18-22).

In Phase F, Early Bronze Age IIIB (strata XC-XCII), it seems that the mound was not heavily settled, with the height of the Early Bronze Age at Korcutpe happening at Phase E, while the nearby site Norşuntepe was a major stronghold. In Phase F, habitation was only found at the foot of the mound, with some small amount of architecture and ovens. After the end of Phase F, the Middle Bronze Age levels are larger and are quite different in nature (*ibid*: 22-23).

Kurban Höyük

The site of Kurban Höyük was first recorded as part of Mehmet Özdoğan's 1977 survey of the Lower Euphrates basis, as Site U50/7 (Özdoğan 1977: 182-183). Kurban Höyük was excavated between 1980 and 1984, under the direction of Leon Marfoe and the University of Chicago, as part of a larger survey of the Urfa region of the Euphrates Valley, called the Chicago Euphrates Archaeological Survey. The area was flooded in 1991 as part of the Karbaba/Atatürk Dam (Wilkinson 1990: 1; Wattenmaker 1994: 196). The site was a saddle-shaped low double mound, shaped roughly like a cresent when seen from the air. The larger southern mound measuring 250 by 170 metes, and the smaller northern mound measuring 170 by 120 meters. The height of the mound is therefore quite varied, between 9-10 meters in the eastern south mound, only four meters for the eastern north mound, only two meters in the "saddle" portion, and up to 12-13 meters in the western southern mound and six meters for the western north mound. In

total, the area of the mound is around six hectares (Algaze 1990: 5-7).

The site was inhabited from the Late Neolithic until the Byzantine period, with the main bulk of the habitation levels dating to the Early Chalcolithic and the Early Bronze Age; virgin soil was reached in numerous areas of the site in deep soundings. Kurban Höyük is especially important, as it has a more continuous occupation from the Early Chalcolithic until the end of the Early Bronze Age III, one of the few sites with such a long occupation mentioned in this dissertation. A small break in occupation did occur between the Early Bronze I and II periods however. Due to time and budget constraints, large horizontal exposures were only completed for areas dating to the Early Bronze/Middle Bronze transitional period (Level III), and the Early Bronze II/III period (Level IV) (Algaze 1990:14-20).

The Early Chalcolithic period, labeled as Middle-Late Halaf (5000 BC, Level VIII) in the publication, was found directly on top of virgin soil, with a total of 5 phases dating to this period. This period was only reached in small areas of deep sounding, so little architecture was excavated, and the layout of the Halaf village was not ascertained. In the north mound, the buildings found were made of stone, up to four courses high, both small rectangular and circle structures, and two tholoi buildings, as was typical of the Halaf period, one from Phase 3 and one from Phase 5 (Algaze 1990: 23-28).

The Middle Chalcolithic Period (Level VII) was found only in northern mound, and only in the deep soundings. No standing architecture was excavated, and little beyond pottery was recovered (Algaze 1990: 28: 120). The pottery was noted to have similarities to Halaf style ceramics, while having a more local characteristic than other contemporaneous Halaf mounds showing the high amount of local variance still present in this period, despite a shared pottery style that was present by the end of the Halaf (Mottram 2013: 438-440).

The Late Chalcolithic Period (Period VIA-B) was found in the northern mound, but the area was not well preserved and little standing architecture or small finds of note were uncovered (Algaze 1990: 28-29). The Period VIA era was dated to the Uruk expansion in the Turkish Euphrates Valley. The architecture from this period was largely made of stone with mudbrick walls, with multi-roomed rectangular buildings, often with pebble floors in rooms and courtyards. The large open spaces between buildings were communal work spaces and shared space, with small multi-roomed buildings and roads around them. At the end of the Late Chalcolithic, an ash layer was found, with the site being completely rebuilt in a new fashion in the Early Bronze I period (Algaze 1990: 121).

The Early Bronze I period (Period V) was only excavated in the northern mound, in a small three meter area, so little of this period is known. The new architecture found in this period was a sharp departure from that of the Late Chalcolithic with its series of rooms and open spaces and courtyards. The Period V architecture were better built, and more dense with internal rather than external courtyards, and well built mudbrick walls with stone foundations and plastered exteriors and floors, and all work space in individual houses, though by the end of the Early Bronze I, a few smaller open work spaces were again found (Algaze 1990: 121-128, 140-141). In this phase, there is ample evidence that Kurban Höyük was a center of pottery production, and may have been a center for ceramics between the Anatolian Highlands and northern Syria (Algaze 1990: 426-4270).

The Early Bronze II/III period (Period IV) was likely the highest point of the settlement, with the best built architecture and the most organized layout of the settlement, and a total of six hectares of settlement area, and a possible population of around one thousand people. In Period IVB, the mound was at its largest, but already had begun to decline by Period IVA. The

architecture changes in this period to mudbrick in some of the buildings, often without stone foundations, as well as some stone architecture as well. The rooms are larger, often one or two roomed long rectangular structures, with narrow streets between blocks of buildings, as well as open courtyards and workspaces scattered throughout the settlement, often with large hearths or ovens. In the center of the southern mound, the buildings are larger than those on the edges of the southern and northern mounds, with more communal space, indicating perhaps a more administrative sector as well as domestic space for the elites (Algaze 1990: 187-188).

In Level IVB, in phase 13, a series of rooms were built up against the city wall, with well made, plastered mudbrick walls, with likely domestic uses, and the remains of a likely street between the houses, paved in cobbles. At the end of Phase IVB, most of the rooms were burnt down, and filled with collapse rubble, which was not cleaned out later. A short period of time elapsed before this part of the mound was rebuilt (Algaze 1990: 34-41, 130). Domestic buildings, well made and well plastered, were also found outside of the wall in phase and in the northern mound, so that only a portion of the settled area was actually fortified. The area inside the wall had larger and better built houses, as well as possible public buildings and elite housing, with smaller and more dense domestic housing outside of the wall, often with open courtyards and roads between housing blocks (Algaze 1990: 427-428).

The Early Bronze/Middle Bronze Transitional period (Period III) was begun after a short abandonment of the Period IV settlement, and was found only on the southern mound. The settlement was far smaller in size than the Period IV village, now only approximately one hectare in total. The architecture found in Period III was far less well made and had smaller rooms than in Period IV, and often reused buildings from Period I, with only minimal changes. 20% of the total Period III settlement was excavated, allowing for a great amount of knowledge of the layout

of the smaller settlement. The Phase III village was well laid out, with various visible neighborhoods and sectors (Algaze 1990: 57-60: 189-193)

In the southwest, a more open area with a small number of smaller structures was an open air work space, and a pebble lined street. In the northeast, the quarter was more of a extramural work area and domestic zone. In the eastern area of the settlement, were many reused buildings from Phase IV, likely primarily domestic in nature, with a final domestic quarter in the west, with a number of excavated houses varying widely in size and in quality, all built around a large central court. Though Phase III was not well preserved and was far smaller than Phase III, more of the settlement was uncovered in a horizontal exposure, and so far more is known about it than any other phase at the site (Algaze 1990: 57-60: 189-193).

At the same time that Kurban was becoming smaller and smaller, the survey of the region by Chicago Euphrates Archaeological Survey showed an increase of small sites dating to this period, perhaps indicating that people were moving from larger sites like Kurban to smaller villages once more. At the end of this period, the site was abandoned until the Abassid period (*Ibid*: 431).

Norşuntepe

The site of Norşuntepe was excavated from 1968 until 1974, under the directorship of Klaus Schmidt through the German Archaeological Institute and as part of the Keban Dam Project. At the end of the excavations, the site was inundated under the waters of the Keban Dam (Schmidt 2002: 1). The site is a large mound, measuring 500 by 300 meters.

Level VII, Layers 31-40 are from the Late Chalcolithic; Level IV, Layers 25-20 are from the Early Bronze I, Level V, Layers 19-14 are from the Early Bronze II and Levels IV and III, Layers 6-13 are from the Early Bronze III. Layers 4-5 are Middle Bronze, Layer 3 is Late Bronze

and Layers 1-2 are Iron Age (Schmidt 2002: 3).

The site was inhabited from the Late Chalcolithic to the Middle Iron Age, though due to the rising waters, the Chalcolithic levels were only reached through soundings in the West Terrace and the south slope, due to the high water table no further excavations were possible, so the Late Chalcolithic levels are only known though ceramic collections. A small portion of a large mudbrick building dating to the Late Chalcolithic was uncovered, but not enough to give any information on the size or use of the structure (Sagona and Zimansky 2009: 149). The Late Chalcolithic architecture found was made of simple single roomed rectangular mudbrick or wattle and daub houses, with white plastered walls, but little else if known of the Late Chalcolithic level. At the end of the Late Chalcolithic, Norşuntepe was abandoned for a period of time, then reestablished near the end of the Early Bronze I period. (Hauptman 1976: figure 28, 29).

In the Early Bronze I period, the site underwent a large change from the previous period. The architectural styles, orientation, and pottery styles were all dramatically different than the previous era. The architecture of the Early Bronze Age was made of wattle and daub walls, either single or multiple roomed houses, with white plastered walls. The buildings were rectangular in shape, with internal benches and hearths (Hauptman 1982).

Norşuntepe was abandoned between 3300 to 2800 BCE. When the site was rebuilt, the houses were freestanding, made of mudbrick (Sagona and Zimansky 2009: 184). In the Early Bronze II period, the site expanded in size, and the pottery became far more influenced by Trans-Caucasian styles and less and less influence from northern Mesopotamia was present. The architecture now also included round houses, similar in style to those found in northeastern Turkey or the Caucasus region (Hauptman 1979; 1982).

The Early Bronze III settlement was the largest settlement at Norşuntepe, lasting approximately 500 years (2500-2000 BCE). Three main building levels were found from this period. A large palatial complex was found on the acropolis of the mound, with smaller residential buildings along the lower slopes. The palatial complex consisted of a number of rectangular structures linked together in groups of three to four rooms with internal benches, and surrounded by terraces, courtyards and streets in between (Hauptman 1976: 77-79). The Level IV palatial complex was highly burnt and destroyed then rebuilt in Level III. In Level III, a large palatial structure was erected on the citadel of the mound, mace of mudbrick with stone foundations. The walls were quite thick, up to 1.8 meters in thickness, and was likely more than one story tall. The structure had contained a number of different wing, with differing purposes. The northern wing was for workshops and food preparation, as well as for storage, including the "pithos structure," (*Pithos Gebäude*) where nearly 100 pithos were found still embedded in the floors of a total of eight rooms, in tidy rows. The southern wing was primarily residential in nature. The palatial complex was entered through a large gate, three meters in width and 15 meters in length (Hauptman 1976; 1982).

Oylum Höyük

Oylum Höyük is a double summited mound. It is a large site, a total of 17 hectares in size, and 38 meters in height, making it the largest site in the Kilis Plain and one of the largest sites in southeastern Turkey. The mound would have been quite imposing in the prehistoric landscape. The site consists of the large saddle shaped mound with two summits, as well as a large lower town, though little is known of the lower town due to the presence of modern villages and farm land in this area. (Özgen and Helwig 2003: 61,76).

The site of Oylum Höyük was excavated between 1988 and 2009. During excavations in

the early 2000s, the site was excavated in tandem with the survey of the surrounding Kilis province (Özgen et. al. 2003: 151). The site was directed by Engin Özgen, and is a joint project since 1995 of Hacettepe University and the German Archaeological Institute in Istanbul. Since 1995, the project was jointly directed by Engin Özgen and Barbara Helwing. The site was first recorded during surveys of the region in the 1960s by U.B. Alkım (Alkım 1968b: 40-41) and by A. Archi in the early 1970s (Archi et. al. 1971: 87-88). The site was originally slated for excavation as a salvage project, as numerous objects were noted on the antiquities market that appeared to have originated from this site, and the site was visibly looted. Parts of the mound had also been removed prior to excavations by earth quarrying (Özgen and Helwing 2003: 61-62).

The site has occupation levels from the Late Neolithic to the Hellenistic period, as well as a Byzantine cemetery. Oylum Höyük had a particularly good sequence between the end of the Late Bronze Age and the Early Iron Age, a period that is not well known anywhere in Anatolia. The only large hiatus at the site was at the end of the Early Bronze Period and the start of the Middle Bronze, making the site one of the more continuous settlements known, and likely a highly important settlement in the Kilis plainfor a considerable amount of time. Virgin soil was not reached during the course of excavations (Özgen and Helwing 2003: 63).

The Chalcolithic levels were poorly preserved and mainly found in areas exposed by quarrying at the site. Though Ubaid style pottery was found at the site, no clear levels have yet been found dating to this period. A large wall made of uncut basalt boulders was found in the western edge of the mound, but as the wall did not continue around the site, it was likely not a fortification wall, but instead a possible large platform or a small retaining wall to help prevent flooding. Architecture from the Late Chalcolithic was mainly domestic in nature, though there was little horizontal exposure to give more information on the layout of the Late Chalcolithic

settlement layout. The buildings were made of mudbrick, and were rectangular in shape, often with two rooms or more, though not a single complete building has yet been excavated from this period. The pottery consisted of many coba bowls and chaff tempered jars, as well as some crudely made stone stamp seals and ear-plugs. Uruk influence is seen at the site, especially in the eastern edge, such as beveled rim bowls and other Uruk style shapes, as well as more local shapes, and small buttressing of some poorly preserved domestic buildings. (Özgen and Helwing 2003: 63- 66).

There is no visible hiatus between the end of the Late Chalcolithic and the start of the Early Bronze I period at Oylum Höyük, and the transition in very gradual. Pottery styles are slow to change, with new styles gradually replacing older styles, and there are no large differences in the architecture. The little architecture found was made of mudbrick, with agglutinative rectangular rooms. One level was found to have been destroyed in a fire, and was seemingly immediately rebuilt. The pottery of the Early Bronze Age was similar in style to that found in the Middle Euphrates region, rather than in central or southeastern Anatolia. At the end of the Early Bronze period, the site appears to have been abandoned for a period of time, before being resettled in the Middle Bronze Age (Özgen and Helwing 2004: 66-67).

Pulur (Sakyol)

The site of Pulur was excavated between 1968 and 1971, under the direction of Hâmit Zübeyr Koşay and the General Directorate of Museums and Ancient Monuments. Pulur, also known as Sakyol, was 50 by 75 meters, and 20 meters in height. The site was later inundated and so no longer exists (Koşay 1976: 117).

The mound contained habitation levels from the Late Neolithic to the Late Bronze, though the vast majority of the surviving habitation levels all date to the Early Bronze Age. The

Late Bronze habitation was mostly visible through survey, as the habitation levels themselves were eroded away completely by the time the site was excavated. The site itself was placed on a natural rise, and so had only approximately eleven meters of cultural deposits on top of the virgin soil. The hill sites near the source of a small stream, and is not easily visible from the surrounding landscape (Koşay 1976: 117-119). The Early Bronze Age levels at the site were from Levels I to XI. Levels XII and XIII dated to the Late Neolithic, but were only excavated in a single deep sounding.

The buildings of the Early Bronze Age were mudbrick, usually one one or two room houses, some with very simple stone foundations. Many of the houses were built directly next to one another, with the entrances facing towards the center of the village, creating a simple wall around at least part of the town. This may have been for defensive purposes, or as a retaining wall against flooding. Some levers, Level VIII and Level IX,Level X, were burnt down, but little can be learned other than this fact (*Ibid:* 127-143).

Samsat

This large mound is located along the western shore of the Euphrates river, near a traditional location for crossing the river in the region. The site was excavated for a single season in 1964 by T. Goell, with the idea that the site would be inundated in the Halfeti dam in the next year. Ten years later, Samsat was included as part of the survey of the Lower Euphrates Project in 1975 and 1977 by M. Özdoğan and Ü. Serdaroğlu. Excavations of the site resumed in 1978 to1987 under the direction of N. Özgüç, before the site was finally destroyed by the flooding of the Atatürk dam in 1987. The large mound was roughly circular in shape, with a flat top, and measured 350 by 500 meters in size, as well having as a sizable, but unmeasured, lower city (Özgüç 1992).

Samsat is best known for its well documented Hellenistic and Roman era remains. As a result, little of the prehistoric levels were able to be reached, due to the abundance of later material on top. Through survey, it was noted that Samsat has a sizable Late Chalcolithic settlement, dating to the Late Uruk period, extending perhaps up to 17.5 hectares in size. The Late Chalcolithic levels were only reached through deep soundings, as Levels XX to XXVII, so that the layout of the early levels remains unknown (Özten 1984:267). The Late Chalcolithic settlement did appear to have been fortified, as remains of a large wall were uncovered around the edges of the mound, though the settlement itself likely only covered a small portion of the large mound, and was on the small side during this period (Özgüç 1992:152). Architecture included a small number of domestic buildings made with stone foundations wall cones, typical of the Uruk period, were also found in the sounding, indicating the possibility of large Uruk style monumental architecture. In addition, Uruk pottery styles were recovered, including beveled rim bowls as well as cylinder seas (Algaze 1993: 34).

Tepecik/Makaraz Tepe

Tepecik was first recorded in the survey of eastern Anatolia by Burney (Burney 1958), and then again in the 1967 survey by Whallon and Kantman (1970). The site was excavated between 1968 and 1974, under the direction of Ufuk Esin. The site was inundated under the waters of the Keban dam in 1974, prohibiting any future excavations of the site (Esin 2001: 102). Tepecik was 200 x 300 meters in size and rose 17 meters above the surrounding plain (Esin 2001: 102-107).

The site was inhabited between the Late Neolithic and the Iron Age, and then used as a cemetery starting in the 11th century AD (Yalçın 2012: 68). Virgin soil was reached during the course of excavations, though it was below the level of ground water. No architecture was

uncovered in the soundings of the Neolithic and Chalcolithic levels, though the Early Chalcolithic pottery had a small number of Halaf-type potsherds and Ubaid-type potsherds, and a small number of crucibles and copper ores recovered showed that metal working was being done at the site (Esin 2001: 102-107).

In the Late Chalcolithic level, the remains of two large monumental structures were uncovered, dating to the Uruk period and showing signs of connections to that cultural horizon. One was a simpler quadrangular structure. The second was a tripartite building, typical of the Ubaid and Uruk periods, with a central courtyard and two side wings. Evidence of copper smelting was also present in the Late Chalcolithic structure. This was one of the few known sites located north of the Taurus mountains to have evidence from the Halaf, Ubaid and Uruk cultures present, and in a seemingly uninterrupted sequence (Esin 2001: 102-107).

The site also had a large Early Bronze Age settlement, ranging from the Early Bronze I to the Early Bronze III, with a strong Karaz (Khirbet Kerak) ceramic style present, though a local style of architecture. The buildings of this period were mudbrick without stone foundations, and some light colored plaster and rectangular in shape, with shared party walls and occasional courtyards in between (Esin 1974: 130).

Tilbes Höyük and Surtepe

The site of Tilbes Höyük was excavated as a salvage project as part of the Birecik Dam inundations of the Turkish Euphrates region. The site was excavated from 1996 to 1999; the site was flooded in the summer of 2000. The site was excavated along with the nearby sites of Tilmusa, Tilobür, Tilvez and Surtepe, all located along the Euphrates river, north of the modern Birecik area. The sites were excavated by the Spanish Archaeological Mission to Turkey, under the leadership of Jesús Gil Fuensanta. All were flooded as part of the Birecik Dam in 1998.

Tilbes Höyük was a small mound, only 1.3 hectares in size. The site was seemingly continuously occupied between the Late Chalcolithic and the Early Bronze III (Fuensanta and Mısır 2000: 180).

Overall, the site were not extensively excavated, and no signs of major architecture were excavated. What is interesting here is a number of small, concurrently occupied settlements, likely with Surtepe as the center, all occupied between the Late Chalcolithic and the Early Bronze Age, with the transition from Uruk to Early Bronze, and a seeming change from Mesopotamian influence to Western Anatolian influence in that transitional period, which seems to be a bit of a theme in this area. (Fuensanta 2007).

Tilbeshar

The site of Tilbeshar was excavated under the leadership of Christine Kepinski and Rifat Ergeç, through the Gaziantep Museum. The site was first surveyed in 1994 and 1995, with excavations between 1996 and 2000 and again between 2005 and 2006.

The site consists of an upper city, six hectares in size, and a far larger lower city, which expanded outwards up to 50 hectares around the mound, though much of this remains under modern farm land. Though this area is quite large, it was never simultaneously occupied, as different areas were inhabited then abandoned during occupation at Tilbeshar. The site was first occupied in the Neolithic period, with a larger habitation from the Late Chalcolithic period through the Middle Bronze Age, with a later habitation during Achaemenid and Byzantine periods, under the name of Turbessel. (Kepinski 2005: 145).

In the Late Chalcolithic period, only a small area was reached in a deep sounding from the citadel, but the pottery appears to have been locally produced, with some local styles and some Uruk styles, but missing some of the more common Uruk styles found at other sites, such

as four-lugged jars and spouted bottles, showing a high amount of local variance. The site was abandoned for an unknown period of time, though likely only a short period of time, after the end of the Late Chalcolithic period (Kepinski 2007: 152; Kepinksi and Ergeç 2000:135).

In Level III A1, the Early Bronze I period (3100-2900), a number of buildings were constructed directly up against the interior side of the city wall. While little is known about the city inside the wall as only this area was excavated, it did appear to be a densely occupied settlement by this period. The buildings inside the wall were well made, densely packed and with well plastered floors (Kepinski 2005: 147-148; Kepinski 2007: 153).

By Level III A2, (2900-2700), still in the Early Bronze I, the local architecture far less well made, as the settlement seems to have shrunk in size, with only the citadel itself occupied, with only a short time of abandonment in-between the two levels. The mudbricks were made in new sizes as well. The layout of the village changed quite a bit between these two levels, while the pottery did not change overly much (Kepinski 2007: 153).

By 2700-2500, Level III B1 and B2, in the Early Bronze II period, the town was on the rise again (Tilbeshar IIIB). The size increased to 30 hectares and a lower town was established off the mound. The top of the mound was reconstructed with a well built terrace covering the previous destruction levels, though due to later medieval period construction, the terrace was not well preserved and less is known about this period (Kepinski 2005: 148-149; Kepinski 2007: 156).

By 2500 BC, Level IIIC in the Early Bronze III, the site reached its largest size, now 56 hectare It was a well planned city with a new city wall and well laid out streets creating neighborhoods of buildings, though the city has been mapped only through magnetometry, rather than a large amount of horizontal excavation. The layout of the city was relatively similar into

the Middle Bronze Age, despite a hiatus of two to three hundred years after the end of the Early Bronze III period (Kepinski 2010:305). Only domestic architecture was discovered from this period, with no monumental buildings found. The architecture was stone foundations under mudbricks, with plentiful plastered coating. Tilbeshar likely was a center of wine and olive oil production as this time, as botanical studies suggest, but was abruptly abandoned at the end of the period, with the floors of buildings left scattered with pottery and other small finds. At the end of Level III C, the settlement was abruptly abandoned, down to ceramics and small finds left *in-situ* on the floors of houses (Kepinski 2007: 156-157).

In the final Early Bronze level, Level D (2300-2100 BCE), the site was quickly reoccupied, with a small amount of new construction, and the reuse the many of the older buildings. The walls become quite large in this phase in the new construction, with large, megalithic stones used for the foundations, with mudbrick on top, though this was not well preserved. The walls were plastered, and the floors constructed of pebbles or mortar. The city had a well made sewer system, to help rain and waste water run out of the city and down the terraces. While other areas of northern Syria, notably Ebla, were experiencing periods of downturn, Tilbeshar continued to thrive for a period. Before being abandoned abruptly, again with numerous objects left *in-situ* upon the floors, including more valuable objects such as bronze tools and weights. The settlement was reoccupied in the Middle Bronze Age II period, though the settlement was smaller, with only the citadel and northern lower town reoccupied (Kepinski 2005: 150; Kepinski 2010: 309).

Tilmen Höyük

The site of Tilmen Höyük was first recorded in a survey of the Islahiye region from 1955 to 1958, under the direction of Bahadır Alkım. The site of Tilmen Höyük was singled out by this

survey as a good place for excavations, due to its long period of occupation, its size, and the lack of prehistoric information from that region otherwise. Excavations at Tilmen Höyük took place between 1959 to 1964, and then again from 1969 until 1972, under the direction of Bahadır Alkım. Sadly, the excavator passed away before final excavations could be published, outside of smaller interim annual reports. Not until 2003 was anything more concrete published on Tilmen Höyük, a short introduction to the site by Refik Duru (Duru 2003) with the hopes of a more complete final report to be published in the future.

Tilmen Höyük is an ovular mound, 220 by 150 meters and 21 meters high on the mound itself, with a lower terrace to the west measuring 160 by 100 meters in size and four meters in height. (Duru 2003: 51). The site was occupied continuously between the Late Chalcolithic to the Middle Bronze Age, before being abandoned until the Iron Age. A final small amount of habitation was dated to the Roman, Byzantine and Islamic periods. Excavations at Tilmen Höyük were made especially difficult due to the very high amount of basalt stone used in the construction of the settlement, and also present naturally at the site. Large amounts of stone had to be removed by railroad trucks in order to reach new levels, so that while ten seasons were completed at Tilmen, only a small amount of the earlier levels were ever reached (Duru 2003: 52).

The Late Chalcolithic levels (Level IV) were only uncovered in a single deep sounding at the top of the mound. Due to the difficulties mentioned above, the deep sounding trench became increasingly difficult to excavate the further down it progressed. Virgin soil was not reached, as further excavations would have been dangerous for the excavators, so the earliest occupation of the site remains unknown. The Late Bronze levels were a total of three meters thick, though little is known of this period, other than the buildings were made of kerpiç, with Ubaid style pottery

found (Duru 2003: 53).

Little is known about the Early Bronze levels at Tilmen Höyük for similar reasons as for the Chalcolithic. A total of 4.5 meters of accumulated cultural material dates to the Early Bronze Age, though little can be said of this period. The Early Bronze I and II levels (Level III j-g) was again only partially exposed. The architecture was again made of kerpiç. No complete buildings were excavated, but a number of partial rectangular and circular buildings were exposed, though all seemed to have been for storage purposes, rather than domestic. By the Early Bronze III levels (Level III c-f), the architecture began to be made from the vast amounts of local basalt, rather than kerpiç, and continued to be used until the site was abandoned at the end of the Middle Bronze Age. It is unknown if any town walls were built in this period, or if the city was destroyed at any point (Duru 2003: 53-54).

Tishrin Dam Sites in Northern Syria:

Shiukh Fawqani/Siyuh Fauqani

The site of Tell Shioukh Fauqani was excavated between 1994 and 1998, through the Group Internatioanl de Recherches Archéologiques, under the leadership of Luc Bachelot. The site measures 150 by 120 meters, and rises 25 meters above the level of the surrounding floodplain. The occupation levels at the site date from the Late Chalcolithic/Uruk and Early Bronze Age I and II (Level D), the Late Bronze Age (Level E) and the Iron Age (Levels F,G,H). The site was at its largest during the Early Bronze I and II periods (Bachelot 1999:143-146).

Jerablus Tahtani/Garablus Tahtani

The site of Tell Jerablus Tahtani is a ovular shaped mound, with steep sides, measuring 180 by 220 meters, and rising 16 meters above the level of the Euphrates river, which runs along the eastern edge of the mound. The site was first recorded by Leonard Woolley, during his

excavations at Carchemish. He named it Tell Alawihey (Woolley 1921: 38), but the site was never excavated until the Tishrin Dam salvage excavations. The site was included in the 1970s survey of the Upper Euphrates region by Copeland and Moore (Sanlaville 1985: 53. 70). The site was excavated from 1992 to 1996 by the University of Edinburgh, under the direction of Edgar Peltenburg. The site had occupations levels dating to the Late Chalcolithic/Late Uruk (Period 1), Early Bronze Age (Periods 2A and 2B), Late Iron Age (Period 3), the Roman Period (Period 4) and the Islamic Period (Period 5). A total of 1100 square meters of exposure were excavated at the site, given a descent amount of information on the layout of the site, especially in the Early Bronze Age, which was the main focus of the excavations This site was of particular importance as it was so close to the site of Carchemish, which was not accessible to archaeologists until relatively recently. Tell Jerablus Tahtani was excavated to understand better the situation at Carchemish in the Early Bronze Age (Peltenburg 1999: 97; Peltenberg et. al. 2000: 55).

During the Late Chalcolithic period, the site was founded upon virgin soil, along the Euphrates floodplain, and seems to have been flooded quite often. The initial occupation contained only Uruk pottery and cultural styles, without any sign of a "local" difference, though only a small portion of the Uruk period settlement was excavated. It dates to the mid-4th millennium, and was contemporaneous to Arlantepe VIA and Hacınebi B. The little architecture found was made of mudbrick, though no complete buildings were excavated. The pottery is Uruk in style, with some beveled rim bowls containing remnants of bitumen. Little else is known of this first occupation period. The Uruk period site was only occupied for a short period of time, then the site was abandoned, likely due to the constant flooding of the site by the river (Peltenburg et. al. 1996: 3; Peltenburg 1999a: 98-99).

In the Early Bronze Age, two major phases were excavated, Periods 2A and 2B. The

earlier phase, 2A was an open settlement, with mudbrick constructed rectilinear buildings, founded some period of time after the Late Chalcolithic abandonment. At the end of this phase, the site was burnt and destroyed. The second phase, 2B is also known at the fortified phase, built directly over the remains of the previous destroyed settlement (Peltenberg et. al. 2000: 56). The wall had a drainage system that connected with the heart of the settlement, leading the excavators to conclude the site was well planed and thought out in this period, with a strong administrative apparatus in place.

Many of the sites along this region of the Euphrates all erected walls at this period, including Habuba Kabira, Halawa, Tell el-'Abd, Sweyhat, Banat, Shioukh Tahtani and Armana. The architecture in this period was made of mudbrick, often with buttressed walls, some having upper stories. Eventually, the interior of the settlement was artificially raised, and a twelve meter wide glacis made of crushed limestone with a smooth plastered surface was created around the exterior of the wall, blocking the earlier drainage system. This may have been done to help with problems due to the annual flooding, rather than for protective purposes, but it also greatly changed the look of the site, making it far more imposing and visible in the landscape than before, and perhaps similar in appearance to the White Monument of Tell Banat. The interior of the settlement remained largely domestic in nature, with some amount of workspace found, for the production of textiles. At the end of the Early Bronze Age, the site was abandoned, at around 2200 BC, and remained empty until the Late Iron Age, after, seemingly, a series of large floods made the site an island in the river. At the same time, Carchemish was at its largest size, population wise, so it is likely the population of Tell Jerablus Tahtani moved over to the larger site at this time (Peltenburg 1999: 100-103; Cooper 2006: 20).

Tell Shiyukh Tahtani/Siyuh Tahtani

The site of Tell Shiyukh Tahtani was first recorded by L. Woolley during his excavations at nearby Carchemish, though he called the mound Tell Malah. The survey of the region in the 1970s by Copeland and Moore also included the site, finding pottery from the Middle Bronze and Islamic eras. The site was excavated from 1993 to 1994 by the University of Palmero, under the direction of Gioacchino Falsone. The mound itself is six hectares in size, conical in shape, and rises 17 meters above the level of the Euphrates river. A lower town extends another 240 meters from the site, along the south-eastern edge of the mound. A large amount of modern damage was done to the site in the construction of a water tower on top of the site, as well as leveling operations (Falsone 1998: 22-25).

The site contains occupation levels from the Early Bronze Age, Middle Bronze Age, Iron age and the Byzantine and Islamic periods. The lower town was seemingly primarily Roman/Byzantine in occupation, though this area was never extensively excavated. A small amount of Chalcolithic ceramic materials were found at the site, though no occupation levels have yet been found that date to this period (Falsone 1998: 24-26).

The Early Bronze levels, Period 1, date to the Early Bronze I and II periods, and were excavated along the lower sloped on the western edge of the mound. The architecture found were a series large mudbrick rooms, made of thick, well made walls with buttresses on the inner side, with white plaster lining. The fill from the Early Bronze contained evidence of burning and destruction levels, though not enough of the Early Bronze settlement was uncovered to say anything further (Falsone 1999: 137-138).

Period 2 was dated to the Early Bronze III and IV periods, and was excavated along the eastern edge of the mound. Most of the remains from this period were highly disturbed by later

Byzantine structures, so little found intact, and no architecture was excavated from this period. The site was abandoned for a period at the end of Period 2, and was later re-inhabited in the Middle Bronze period (Falsone 1998: 31-32; Falsone 1999: 137-138).

Tell Amarna/ ʿAmarna

The site of Tell Amarna is an ovular site, 20 meters in height. Tell Armana is surrounded to the west and north by the wadi Amarna. The site was first recorded, by L. Woolley, who did a small amount of survey work upon the mound during this excavations at Carchemish (Woolley 1921). The site contains occupation levels from the Half period, Early Bronze Age, and the Roman/Byzantine periods. The site was excavated from 1991 to 1997, through the University of Liége under the direction of Öhnan Tunca (Tunca 1999: 129-130).

In the south-eastern edge of the mound, Halaf levels were excavated at Tell Amarna in 1993 and again in 1997. No architecture from this period was unearthed, only a small amount of Halaf-era pottery. This seems in indicate a Halaf era settlement at the site, but unfortunately, excavations did not give any further information on the appearance or size of that habitation (Cruells 1998:1).

Tell Al-'Abr/ ʿAbr

The site of Tell Al'-Abr (also ʿAbr) was 140 meters long, 80 meters wide and 10 meters in height above the surrounding plain and the level of the Euphrates. North of the mound, measuring at least one kilometer in length and 200 meters in width, was a small elevated area, approximately 5 meters above the surrounding terrain, that was likely an associated lower town. The area was completely covered by modern crops, and no survey work or excavation was completed in this region, so the date of occupation is not known for the lower town (Hammade

and Koike 1992:109-110). This site is the southern most site to be considered in detail for the purposes of this dissertation.

The site was first recorded as part of the survey of the northern Euphrates region by Sanlaville and McClennan in the late 1970's (Sanlaville 1985), and a number of small soundings were made at the site by Gil Stein of the Oriental Institute in 1989. Full excavations of Tell Al-Abr took place as part of the Tishrin Dam salvage excavations, under the direction of Yayoi Yamazaki, and was excavated from 1989 to 1992. The site was completely flooded by the waters of the Tishrin Dam by the end of the 1990s. (Yamazaki 1999:83-84; Hammade and Yamazaki 2006: 9-10).

Tell Al'-Abr, though a small site, was an important excavation, as the site was nearly completely Chalcolithic in habitation, and so was an ideal site to give information on the Ubaid and Uruk periods in this area of northern Mesopotamia. A total of seven layers of cultural strata were identified at Tell Al-'Abr, Levels 1 to 7, with Level 7 location on virgin soil. The settlement was placed upon a small natural hill along the edge of the Euphrates river. Only the western edge of the tell was excavated, due to the presence of a modern village upon the eastern edge of the mound. Additionally, the north, south and eastern edges were largely disturbed by modern farming practices and the creation of an associated large irrigation system. Levels 7 to 2 dated to the Ubaid period, and Level 1 dated to the Uruk, with a small amount of Hellenistic materials on the surface of the mound, many of which were largely removed prior to excavation by bulldozing the top of the mound (Hammade and Yamazaki 2006:15-16).

Only a small portion of the site was excavated, so less is known about the general layout of the settlement, the size of the population, the density of the buildings, or whether or not there was a fortification system present. All architecture from the Ubaid period was made of mudbrick.

The buildings were rectangular in shape, often with large central rooms flanked by smaller rooms. Many of the buildings found were for storage rather than for domestic use, as well as work shop areas for the creation of ceramics, complete with kilns and pot sherds and wasters left over from production. Of the six Ubaid levels, five of them contained ceramic workshops. Only Level 2 did not. Only Level 3 contained an domestic architecture, though only part of this building was uncovered. Level 7 had was destroyed by burning, though it was unclear if the entire settlement was burnt, or only a few buildings. Level 5, while unburnt, appeared to have been quickly abandoned, as a large amount of pottery and tools were found abandoned *in-situ* on the floors of the rooms found. The buildings of Level 2 also appear to have been destroyed by fire, then rebuilt in a similar fashion. The pottery from the site was Ubaid in style, locally made (Hammade and Yamazaki 2006:23-40; Yamazaki 2012: 185-186).

The Uruk Level 1 remains were badly eroded, so little information on the layout and use of the Uruk period habitation was ascertained. Survey of the area around Tell Al-'Abr also suggested that the Uruk habitation spread north from the mound to a lower city around the mound, making the Uruk period settlement far larger than the previous levels. Unfortunately, no excavation of the lower town was possible, due to the modern village and modern fields. The architecture of the Uruk periods was still made of mudbrick. The buildings found had central courtyards, with pebble pavement, and very Uruk-like "*riemchen"* mudbricks. The pottery from this period was locally made, Uruk-style pottery, including the ubiquitous beveled-rimmed bowls. (Hammade and Yamazaki 2006:40-42).

Titriş Höyük:

The site of Titriş Höyük was first recorded as one of the sites surveyed by Tony Wilkinson's team in their survey of the lower Karababa Basin in the 1980s, as part of the

excavation and survey of nearby Kurban Höyük. The site was chosen for later excavation due to the high visibility of Early Bronze Age remains, without substantial later levels covering them, as well as for its relatively large size for a site dating to the Early Bronze Age (Wilkinson 1990).

Titriş Höyük was excavated between 1991 and 1999 under the leadership of Guillermo Algaze through the University of California San Diego and the Archaeological Museum of Şanlıurfa. The site consists of a central mound, called the citadel by the excavators, and a surrounding lower city. The citadel was 22 meters in height, and 3.2 hectares in size. The lower city was quite large, extending up to 35 hectares in size around the central mound, and could be split into two parts. The inner part was labeled the "Lower Town," measuring approximately 14 hectares, and sat upon a natural ridge, extending from the west and east of the citadel. The "Outer Town," measuring approximately sixteen hectares sat upon a second ridge, and extended north of the mound. Large parts of both areas are covered by a modern village and farm land, so that only portions could be excavated or mapped by the archaeological team. In addition, a total of nine small sites, located along the banks of the Tavuk Çay, were found to be small, short-occupation satellite suburbs to Titriş in the late Early Bronze Age, though little excavation work was completed on these sites (Algaze and Matney 2011: 995-996).

The site was first inhabited from the start of the Early Bronze Age I (3100-2600 BCE) until the end of the Late Bronze Age, more or less continuously, though the site reached its largest size during the Early Bronze Age II period. The site was later reoccupied in the Iron, Classical and Medieval periods as well. Virgin soil was reached in deep soundings at the site, in both the mound and in the lower town regions. The excavations of the city were able to uncover very large amounts of horizontal exposure, especially of the Early Bronze Age city, up to 750 square meters of excavation, as well as up to 50 percent of the subsurface layout, using

magnetometry. This all allows for much information on the layout and sectors of the city, as well as its administrative practices (Algaze and Matney 2011: 994-995).

The earliest levels, dating to the Early Bronze I periods at Titriş Höyük, were only excavated in limited areas in deep sounding, so little is known about the foundational settlement at the site. The settlement was only found during this period upon the central mound, showing that the site was likely a small village in this period, but little further is known about the earliest occupation at Titriş Höyük (Algaze and Matney 2011: 997).

The site rapidly increased starting in the Early Bronze II period. By the end of this period, the settlement covered both the central citadel and a very large and compact lower city, as well as a substantial settlement of the hinterlands, called the suburbs by the excavators. In the height of the Early Bronze II period, up to 43 hectares of land was settled and farmed in the land around Titriş Höyük itself, larger than any other contemporaneous sites in the vicinity (Algaze and Pournelle 2003: 107). By the start of the Early Bronze II period, at about 2600 BCE, the small Early Bronze I village was transformed into a small urban center, and grew to 32 hectares in size. Due to the high amount of later occupation over this level, less is known about it than the Early Bronze III period city, with 365 square meters of horizontal exposure completed over all. Both domestic and public architecture was excavated, as well as some buildings likely representing elite housing. On the mound itself, the occupation was mainly made up of elite housing and large monumental public buildings, while the lower city and suburbs were smaller, less well constructed domestic houses for the non-elites, with a large amount of open air workspace present, and evidence of stone working, food production and metallurgy present. The evidence suggests a prosperous and elite central site surrounded by a far more impoverished and dependent surrounding suburbs (Algaze and Matney 2011: 997-999; Algaze and Pournelle

2003:107). Excavations of the Early Bronze II period were unable to conclusively answer if the settlement was fortified in this period or not (Algaze and Pournelle 2003: 106).

In the Early Bronze III period, the entire settlement was reorganized. All the suburbs inhabited in the Early Bronze II period were abandoned, and the lower town to the north was more densely inhabited for the first time, though roughly the same amount of settlement area was in use between the two periods, with the Early Bronze Age III period covering approximately 33 hectares. One possible reason for this was the presence of far more violent trauma found on the skeletons recovered, showing perhaps growing outside hostilities, and the need to bring the inhabitants of Titriş Höyük in closer together for safety. The site became fare more dense in this period. The layout of the Early Bronze III settlement was further helped by a massive magnetic field gradiometry of the site, which allowed much of the site to be mapped out, without excavation, especially in the Outer Mound and the Lower Town region, which did not have any later occupation covering the Early Bronze III settlement, which were found nearly directly under the surface. In the edges of the settlement at this period, nearly no open space was found, and with well made streets running between the various neighborhoods (Matney 2002: 22-25)

The city was well planned, with first roads built, then houses built along the roads, filling up all available space, so that sometimes, the houses were somewhat irregular in shape, to fit the space. The orientation of buildings in the Early Bronze III was different than that of the Early Bronze II. In the outer town, a total of 1600 square meters of horizontal excavation was completed, uncovering seven different complete domestic buildings. In general, the houses were surprisingly similar in construction, with very uniform allotments of land plots given to each building. The buildings in this area were made of mudbrick, with limestone foundations, with beaten earth floors, and cobbled open-air courtyards. Houses had anywhere from ten to twenty

rooms, built around a central courtyard. (Matney 2002: 22-27).

The houses in this period are very similar in structure and layout, indicating a likely template for the houses, with the foundations of the houses built along the streets, blocks of housing built onto constructed terraces and shared subfloor drainage systems. The streets themselves were well formed as well, some over 400 meters through the settlement. The streets were well constructed, with some having nearly a meter of rocky foundations below the street level and a well made pebble and sherd pavement. In the Outer Town, new housing complexes were built upon virgin soil, while other neighborhoods were built atop earlier Early Bronze II neighborhoods. This further signals a large amount of central organization in the Early Bronze III period (Algaze and Pournelle 2003:109).

At the end of the Early Bronze III period, the city collapsed, with most of the population deserting the city. The Lower and Outer Towns were completely abandoned, never to to be re-inhabited. Only the central mound area was inhabited into the Middle Bronze Age, at only a small fraction of the size, approximately three hectares in size. Some of the hinterland settlements, previously dependent upon Titriş Höyük, continued or were newly founded, becoming instead small, independent farming villages and hamlets (Algaze and Pournelle 2003: 110).

Tülintepe

The site of Tülintepe was excavated between 1971 and 1974 as part of the Keban Dam salvage project. The site was excavated under the leadership of Ufuk Esin through the University of Istanbul. The site was flooded in 1974 (Esin 1979: 112). The mound was 200 by 250 meters in size, and originally rose 16.6 meters above the surrounding plain. Before excavations were started, several meters of earth from the top of the mound were removed in order to create an

embankment for the nearby Elazığ-Bingöl railway in 1966. No archaeologist oversaw the removal of the earth, so nothing is known about the top layers of this site, though a small number of small finds were removed from the earth without further provenience and brought to the Elazığ museum for curation. (Esin and Arsebük 1974: 149-150).

Tülintepe was inundated under the waters of the Keban dam in 1975, before which, more than 2000 square meters of the site was excavated (Esin 1982: 133). The mound was one of the five largest in the Keban dam area, with extensive habitation from the Chalcolithic until the Ottoman period, with extensive settlement of the Early Chalcolithic, Late Chalcolithic, and Early Bronze Age. The Middle and Late Bronze ages, and Iron Age levels were nearly completely removed along with the top layers of the site. The removal of the top layers prior to excavation allowed for a more broad horizontal exposure of the older layers than was possible at other large sites with extensive later layers left intact (Esin and Arsebük 1974: 154). The Chalcolithic levels were not well preserved, with walls rarely preserved higher than 10 cm in height (Esin 1976: 150).

The Early Chalcolithic levels, without great preservation, did contain a good amount of Halaf style pottery, and a smaller amount of Ubaid style, but both were found together in the same layers, leading the excavators to place this at the Half/Ubaid transitional period (Esin 1976: 151). The Early Chalcolithic village was inhabited for approximately 600 years and was approximately two thirds of an acre in size, according to the excavators. The village may have had somewhere between 32 and 35 houses in total in the village, for a projected population of 160 to 180 inhabitants (Arsebük 1983: 52-53). The architecture was unburnt mudbrick without stone foundations, with plastered floors, rectangular, either two roomed or multi-roomed houses, often with a central hearth and/or oven, and streets and courtyards between the various buildings.

Often, ovens, hearths and workspaces were found in the courtyards between buildings. The architecture was dense enough to form recognizable districts within the settlement, with roads and courtyards between the various regions of the site, though buildings were constructed without any common orientation and added to as needed by the inhabitants. The settlement was a small, farming based, unfortified village (Esin 1976: 151-162; Arsebük 1983: 53-54).

The Early Bronze Age settlement was surrounded by a wall, built in the Early Bronze I, and with strongly built stone foundations that cut into the Chalcolithic levels, further destroying a large amount of the earlier settlement. Little of the Early Bronze Age architecture was found intact at the site (Esin 1976: 148-151).

Yarım Höyük

The site of Yarım Höyük is a small mound, which has been partially destroyed by movement of the Euphrates river. The site was first recorded as part of the survey of the Birecik region by Algaze in the early 1990s, as site 50 (Algaze et. al. 1994: 47). Yarım Höyük measures 90 by 80 meters, with cultural deposits no more than two meters in depth, and was chosen for excavation due to its layers dating to the Late Chalcolithic/Early Bronze Age transition, especially as the site was occupied after the collapse of many other local sites, such as Hacınebi, during this time period, and an example of a small farming community from this tempestuous time period. Yarım Höyük was excavated in order to better understand the reasons for the foundation of small farming villages in southeastern Anatolia and Norther Syria during the Uruk period, and what happens to such sites after the collapse of the Uruk sphere. The site was excavated only in a single season, in the summer of 1996. Yarım Tepe was excavated under the direction of Mitchell Rothman and Gülriz Kozbe. The cultural levels dates from the Late Chalcolithic to the Early Bronze I period, with a small amount of Hellenistic material on the top

of the mound. In the prehistoric levels, the site was inhabited for approximately 200 to 300 years. Virgin soil was reached in all excavated trenches (Rothman et. al. 1998:65-66, 74, 78).

Unfortunately, the small size of the mound also made preservation at Yarım Höyük rather poor, as all deposits were near the surface. The Hellenistic levels did much to disturb the earlier remains, due to the construction of foundations and dug pits. Additionally, the water table was quite high at the site, making excavation conditions difficult and preservation of the cultural remains quite poor. The little architecture found was made of mudbrick, creating small rectangular domestic houses, with internal walls dividing the building into two rooms. The pottery found was largely classically Uruk in shape and in make-up, with nearly no local styles of pottery present, suggesting the inhabitants were originally from the south, at least as far as the Middle Euphrates region. Yarım Höyük was a small subsistence farming village, with at most a dozen houses at its height (Rothman et. al. 1998: 74-75).

Zeytinlibahçe Höyük

Zeytinlibahçe Höyük was first discovered during survey work in the Turkish Euphrates region by Algaze in 1992 (Algaze et. al.. 1994), as a Early Bronze Age mound. The site was excavated as part of the salvage operations for the TAÇ DAM project from 1999 until 2003 by the La Sapenze University of Rome and the Middle East Technical University, under the leadership of Marcella Frangipane. It was chosen due to its very high height, and its likely very long sequence, but its small size made it possible to excavate enough to give information on the layout of the various settlements present. This was a small mound, only 2.6 hectares in size, it rises 31 meters above the surrounding plain, making it very visible from a distance due to the flat lands surrounding it within the Euphrates river valley. The mound is actually comprised of two mounds, a broad lower mound, and a steep upper mound. Overtime, erosion has fused these two

mounds together into a simple pyramid-like steep shape. (Frangipane et. al.. 2001: 109-110). The mound was inundated under the waters of the TAÇ dam soon after excavations at the site ended.

Zeytinlibahçe Höyük has habitation from the Late Chalcolithic/Early Bronze I period, Early Bronze III to Middle Bronze Period, and the Roman and Late Byzantine periods, with a small amount of Iron Age and Hellenistic. Virgin soil was never reached due to both time constraints and the high water table, so the earliest occupation of the mound is not known (Frangipane 2007: 126). The Late Chalcolithic and Early Bronze I settlements were mainly focused around the western edge of mound, which unfortunately, was also highly eroded away in parts by movement of the Euphrates River. In the Early Bronze III period and later, the settlement shifted towards the northern portion of the mound, and was smaller in size (Frangipane et. al.. 2004:35)

The majority of the excavations of the prehistoric levels at the site were through soundings, so that little horizontal exposure has been completed and little known about the layout of the settlement. It does seem that this site was founded as a small settlement of immigrants from the Uruk homeland, which overtime had more and more contact with locals and had more change over to local customs. The site has largely uninterrupted development between a very Uruk style Late Chalcolithic and a very localized Early Bronze I, with a slow progression between one and the other through a series of reconstruction of existing architecture, rather than any sort of full fledged destruction and rebuilding of the site. Unfortunately, the nature of salvage archaeology and the short period of time allotted for excavation at Zeytlinlibahçe Höyük did not allow for horizontal exposure of this period, and so little is known about the layout of the Late Chalcolithic and Early Bronze Age I settlement. It is interesting that while a very long sequence is visible at the site from the late 4th to the early 3rd millennium, both architectural

styles and material culture were very conservative, with change coming only very slowly, and the same buildings being reused and rebuilt over centuries (Frangipane et. al. 2004: 20-25).

A total of 16 superimposed levels were excavated dating to this period, with remarkably little change. The two earliest levels were entirely local in character, with locally made chaff-tempered pottery and domestic architecture with no evidence of Uruk intrusion. The architecture consisted of plastered mudbrick walls in rectangular buildings with cobbled open courtyards. The site was abandoned for a very short period of time at the end of this phase (Balossi et. al. 2007:361).

In the next phase, Zeytinlibahçe Höyük was again inhabited, during the Middle Uruk period, with some major changes in the settlement. The excavators hypothesize that perhaps settlers from the south had arrived at the site. The buildings were again made of mudbrick, with limestone foundations, and mud plastered floors and open courtyard work spaces. In between buildings were narrow alleyways, lined with pebbles. Uruk materials included Uruk style pottery, the presence of bitumen, limestone eye-idols, and Uruk style architecture with cellular small rooms by the later levels of the Middle Uruk period. In this phase, little Anatolian style archaeological remains were present at the site, perhaps indicating an Uruk colony, rather than a local Anatolian settlement. At the end of the Middle Uruk period, the site was again briefly uninhabited (Balossi et. al. 2007: 361-362).

The site was inhabited again in the Late Uruk period, with similar architecture styles as the last phase, except for the larger cell buildings, which never reoccur. The pottery in this period was very similar to that of the previous phase, and continued in the same vein until the end of the Early Bronze I phase. In fact, the transition from the end of the Late Chalcolithic to the start of the Early Bronze I period is very difficult to ascertain, due to the high amount of continuity in

the material culture and the urban layout. Buildings are erected, used and then new buildings in the same style built directly over the old contours, duplicating the same architectural patterns over the centuries. Over time, the buildings became larger in size, with thicker mudbrick walls. The settlement became more regular, with a more well laid out plan, which seems to indicate an increase in urbanization over time, with an increase as well in the number of pigs over sheep and goats over time, showing a decrease in more nomadic styles of animal husbandry (Frangipane 2007: 129-131; Frangipane et. al.. 2004: 37-43, 52; Balossi et. al. 2007: 362).

The site is interesting because of this continuity. The Uruk period came to an end in the Late Chalcolithic, often coinciding with large disturbances in other settlements in southeastern Anatolia and northern Syria. At Zeytlinlibahçe Höyük, no break in habitation is visible, and the Uruk style material culture continues into the Early Bronze I period, as the former adapted foreign materials are further incorporated into the local culture, with continuity and slow adaptation into new styles of pottery production, animal husbandry, architecture and the layout of the settlement (Balossi et. al. 2007: 358-359).

At the end of the Early Bronze I, the site was abandoned for a period of time, before being reestablished in the Early Bronze III period (Frangipane et. al. 2004: 35, 41). It remains unclear why the site was abandoned at this time, having already weathered out the collapse of the Uruk sphere, which disrupted so many other contemporary and local sites. The excavators current hypothesis is a rise in the levels of the adjoining Tigris, flooding the site and causing it to be unlivable for a period of time, in combination with an unknown political or cultural issue, for which little archaeological evidence was found at the site. The immense growth in size of nearby Carchemish in the same period would give the possibility that the population moved south to that settlement, abandoning this smaller, and perhaps flooded, Zeytlinlibahçe Höyük (Balossi et. al.

2007: 359, 366).

In the late Early Bronze III/IV period, the site was smaller in size than in the earlier Early Bronze I, and settlement shifted to the central section of the mound, and the eastern edge of the mound. The new smaller settlement was a large departure from the Early Bronze I village, with new styles of architecture and material culture present. Unfortunately, this phase was not well preserved and only a small portion, less than 65 square meters, was excavated from this phase. The architecture was mudbrick over stone foundations and with plastered floors. The domestic structures were smaller than in the previous phase, with a large amount of open outdoor paved workspaces around the buildings. The buildings were not rebuilt in the same pattern over and over again, as was common in the previous phases, but rather far more haphazardly laid-out, and without the strong urban planning seen in the previous phase. The pottery is similar to that found at contemporary sites in the Middle Euphrates region. The site was again abandoned at the end of the Middle Bronze II period, this time only reoccupied in the Roman period (Frangipane et. al. 2004: 35-36; Balossi et. al. 2007:360-361).

Appendix 3 : Burial Data

Table 3.1: Burial Data from Early to Middle Chalcolithic Central Anatolia

Site Name	Total Burials	MNI	Adult	Male	Female	Unknown	Child	Injury	Inhumation	Pithos/ Jar	Cist
Acemhöyük											
Alaca Höyük											
Bademağacı Höyük											
Boğazköy-Büyükkaya											
Cadır Höyük											
Camlıbel Tarlası											
Can Hasan	1	1	1	1					1		
Çatal Höyük West											
Demircihöyük Sarıket											
Gelveri-Güzelyurt											
Gözlü Kule/Tarsus											
Güvercinkayası											

Table 3.1: Burial Data from Early to Middle Chalcolithic Central Anatolia Continued

Site Name	Total Burials	MNI	Adult	Male	Female	Unknown	Child	Injury	Inhumation	Pithos/ Jar	Cist
Hacılar	21										
Harmanören											
Kalınkaya-Toptaştepe	15	15	5	6	3				15		
Köşk Höyük						3	many		"majority"		
Kuruçay Höyük	7								7		
Orman Fidanlığı											
Suberde											
Yumuktepe/ Mersin											

Table 3.2 Burial Data from Middle Chalcolithic to Early Bronze I Central Anatolia

Site Name	Total Burials	Total MNI	Adult	Male	Female	Unknown	Child	Injuries	Inhumation	Pithos/ Jar	Cist
Acemhöyük											
Alaca Höyük											
Alişar Höyük											
Bağbası											
Beycesultan	2	2					2			2	
Boğazköy-Büyükkaya	1	1					1		1		
Büyük Güllücek / Kaletepe	1	1	1					1	1		
Çadır Höyük	10	10	1		1		9	0	2	8	
Camlıbel Tarlası											
Can Hasan											
Demircihöyük / Sarıket											
Elmalı-Karataş (Semayük)											
Gelveri-Güzelyurt											
Gözlü Kule/Tarsus	7	7					7		2	4	1

Table 3.2: Burial Data from Late Chalcolithic to Early Bronze I Central Anatolia Continued

Site Name	Total Burials	Total MNI	Adult	Male	Female	Unknown	Child	Injuries	Inhumation	Pithos/ Jar	Cist
Harmanören											
İkiztepe	NA	NA					"small number"			small number	
Kalınkaya-Toptaştepe	85	72				79	26		58	55	10
Küllüoba											
Kuruçay Höyük	55								5	50	
Orman Fidanlığı											
Suberde											
Yumuktepe/ Mersin											

Table 3.3: Burial Data from Early Bronze II to III Central Anatolia

Site Name	Total Burials	Total MNI	Adult	Male	Female	Unknown	Child	Injuries	Inhumation	Pithos/ Jar	Cist
Acemhöyük											
Ahlatlıbel	18	22	unclear	unclear	unclear	unclear	unclear	NA		10	8
Alaca Höyük	24	14	24	5	4	5		NA	6	2	16
Alişar Höyük	49	49				49		NA	13	31	5
Bademağacı Höyük/Kızılkaya Höyük											
Beycesultan											
Boğazköy-Büyükkaya											
Büyük Güllücek / Kaletepe											
Çadır Höyük	4	4					4		1	2	1
Camlıbel Tarlası											
Demircihöyük/ Sarıket	497	363	unclear	unclear	unclear	unclear	unclear	4	400	20	20
Elmalı-Karataş (Semayük)	198	584	unclear	unclear	unclear	unknown	unclear	many	17	328	1

Table 3.3: Burial Data from Early Bronze II to III Central Anatolia Continued

Site Name	Total Burials	Total MNI	Adult	Male	Female	Unknown	Child	Injuries	Inhumation	Pithos/ Jar	Cist
Gâvur Evi Tepesi	unclear	unclear	unclear	unclear	unclear	unknown	unclear	unknown		all	
Gelveri-Güzelyurt											
Gözlü Kule/Tarsus											
Hacılar Büyük Höyük											
Harmanören		124	23				3	3		x	
Horoztepe	1	1	1								1
İkiztepe	627			46	5		5	84	627		
Kalınkaya-Toptaştepe											
Küllüoba											
Kültepe-Kaneş											
Kuruçay Höyük	9	9							9		
Maşat Höyük	4								1	3	
Oymaağaç											
Resuloğlu	118									97	21
Salur North	40									40	
Suberde											
Yumuktepe/ Mersin											

Table 3.4 Burial Data from Early to Middle Chalcolithic Southeatern Anatolia

Site Name	Total Burials	Total MNI	Adult	Male	Female	Unknown	Child	Injuries	Inhumation	Pithos/ Jar	Cist
Arslantepe (Malatya)											
Bademağacı											
Carchemish											
Değirmentepe	31						31			31	
Domuztepe	1	43									
Fıstıklı Höyük											
Gedikli/ Karahöyük											
Girikihaciyan	4	4	2				2	0	4		
Hallan Çemi											
Kalaycık Tepe											
Kazane Höyük											
Kenan Tepe	9				1		6		1	6	
Korucutepe											
Kurban Höyük	1	1			1			0			
Lidar Höyük											
Tepecik/ Makaraz Tepe		14						3			

Table 3.4: Burial Data from Early to Middle Chalcolithic Southeastern Anatolia Continued

Site Name	Total Burials	Total MNI	Adult	Male	Female	Unknown	Child	Injuries	Inhumation	Pithos/ Jar	Cist
Tell Amarna											
Tell Al-'Abr	7	7	1						4	3	
Tülintepe											

Table 3.5 Burial Data from Late Chalcolithic to Early Bronze I Southeastern Anatolia

Site Name	Total Burials	Total MNI	Adult	Male	Female	Unknown	Child	Injuries	Inhumation	Pithos/ Jar	Cist/ Chamber Tomb
Arslantepe		24		4	8		22	5	10	6	
Bademağacı											
Carchemish											
Değirmentepe											
Gedikli											
Gritille											
Hacınebi	24	35	12					6	16	4	4
Hassek Höyük	4			2			2				
Hirbemerdon Tepe											
Kalaycık Tepe											
Kenan Tepe	19	13		2	3	4	10	0	7	9	3
Korucutepe	5	6							1	1	3
Kurban Höyük	1	2		1	1			0			
Lidar Höyük											
Norşuntepe											
Oylum Höyük	51								x	x	6
Pulur (Sakyol)											
Samsat		25					25			25	
Tepecik/ Makaraz Tepe											

Table 3.5: Burial Data for Late Chalcolithic to Early Bronze I Southeastern Anatolia Continued

Tilbes Höyük and Surtepe											
Tilbeshar											
Tilmen Höyük											
Shiukh Fawqani											
Jerablus Tahtani											
Tell Shiyukh Tahtani											
Tell Al-'Abr											
Titriş Höyük	2	1			1						
Tülintepe											
Yarım Höyük	1						1			1	
Zeytinlibahçe Höyük							x			x	

Table 3.6: Burial Data from Early Bronze II to III Southeastern Anatolia

Site Name	Total Burials	Total MNI	Adult	Male	Female	Unknown	Child	Injuries	Inhumation	Pithos/ Jar	Cist/ Chamber Tomb
Arslantepe (Malatya)		16		6	6		4	16			
Bademağacı											
Birecik	312	64	55	18	9	28	9	13		13	299
Carchemish	46		X	X	X	X	X	0		31	15
Gedikli/ Karahöyük	200	200								200	
Gre Virike	13	13	4		1	3	9		1	4	5
Hassek Höyük	62	39	12	8	4		27		x	x	x
Hirbemerdon Tepe											
Kalaycık Tepe											
Kenan Tepe											
Korucutepe											
Kurban Höyük	1	2		1	1			0	1		
Lidar Höyük	226	113	87	26	33		26		x		x
Norşuntepe											
Oylum Höyük											
Pulur (Sakyol)	2		2								
Tepecik											

Table 3.6 Burial Data from Early Bronze II to III Southeastern Anatolia Continued

Site Name	Total Burials	Total MNI	Adult	Male	Female	Unknown	Child	Injuries	Inhumation	Pithos/ Jar	Cist/ Chamber Tomb
Tilbes Höyük and Surtepe											
Tilbeshar											1
Tilmen Höyük	3	4	2	1	1		2				3
Shiukh Fawqani											
Jerablus Tahtani	17						1		12		6
Tell Shiyukh Tahtani	8	13	7				6		7	6	
Tell Amarna											
Titriş Höyük	47	82	48	25	13	1	38	23	1		46
Tülintepe											
Zeytinlibahçe Höyük											

Table 3.7: Bioarchaeological Data from Early to Middle Chalcolithic Central Anatolia

Site Name	Excavation Information	Trauma Excavation
Acemhöyük	No burial data published	
Alaca Höyük	No burials excavated from these levels	
Bademağacı Höyük/Kızılkaya Höyük	No burial data published	
Boğazköy-Büyükkaya/ Yarıkkaya	No burials excavated from these levels	
Cadır Höyük	No burials excavated from these levels	
Camlıbel Tarlası	No burial data published	
Can Hasan	MC burial, buried with a bracelet and a copper macehead	
Çatal Höyük West	No burials excavated from these levels	
Demircihöyük/ Sarıket	No burials excavated from these levels	
Gelveri-Güzelyurt	No burial data published	
Gözlü Kule/Tarsus	No burials excavated from these levels	
Güvercinkayası	No burials excavated from these levels	
Hacılar	Remains of children and adults found in the burnt remains of level IB, though no anthropological work was completed on the remains	
Harmanören	No burials excavated from these levels	
Kalınkaya-Toptaştepe	Simple EC inhumations; no anthropological data known	
Köşk Höyük		

Table 3.7 Bioarchaeological Data from Early to Middle Chalcolithic Central Anatolia Continued

Kuruçay Höyük	Simple burials of both children and adults; nothing further known	
Orman Fidanlığı	No burial data published	
Suberde	No burial data published	
Yumuktepe/ Mersin	No burial data published	

Table 3.8: Bioarchaeological Data from Late Chalcolithic to Early Bronze I Central Anatolia

Site Name	Excavation Information	Trauma Information
Acemhöyük	No burial data published	
Alaca Höyük	No burials excavated from these levels	
Alişar Höyük	No burials excavated from these levels	
Bağbası	No burials excavated from these levels	
Beycesultan	Two infant burials, no further information	
Boğazköy-Büyükkaya	Single child burial, no grave goods, under the floor of a domestic space	
Büyük Güllücek / Kaletepe	Under the floor of a domestic space; copper spearhead was found under the adult male's head	Two perimortem depressions on the skull, one on the right frontal eminence, one on the right parietal eminence; likely made by a round weapon.
Çadır Höyük	9 infant burials, one teenage simple inhumation; no signs of injuries on any of the remains	
Camlıbel Tarlası	No burial data published	
Can Hasan	No burials excavated from these levels	
Demircihöyük/ Sarıket	No burials excavated from these levels	
Elmalı-Karataş (Semayük)	No burials excavated from these levels	
Gelveri-Güzelyurt	No burial data published	
Gözlü Kule/Tarsus	All children and infants with no signs of trauma	
Harmanören	No burial data published	

Table 3.8 Bioarchaeological Data from Late Chalcolithic to Early Bronze I Central Anatolia Continued

Site Name	Excavation Information	Trauma Information
İkiztepe	Some unknown number of isolated child jar burials from under the floors of houses	
Kalınkaya-Toptaştepe	No anthropological data yet published on human remains	
Küllüoba	No burials excavated from these levels	
Kuruçay Höyük	All simple inhumations were adult, all jar burials were infants; found under floors with no burial goods	
Orman Fidanlığı	No burial data published	
Suberde	No burial data published	
Yumuktepe/ Mersin	No burial data published	

Table 3.9: Bioarchaeological Data from Early Bronze II to III Central Anatolia

Site Name	Excavation Information	Trauma Information
Acemhöyük	No burial data published	
Ahlatlıbel	7 pithos burials from under house floors; two double burials, the rest single burials	
Alaca Höyük	14 Royal Burials and 10 non-Royal; many weapons from the Royal Tombs	
Alişar Höyük	No known anthropological work on the remains	
Bademağacı Höyük/Kızılkaya Höyük	No burial data published	
Beycesultan	Some number of infant burials recovered, with no further information in publications on numbers or ages	
Boğazköy-Büyükkaya/ Yarıkkaya	No burials excavated from these levels	
Büyük Güllücek / Kaletepe	No burials excavated from these levels	
Çadır Höyük	All infants under the age of three; one was placed in a clay box upon the floor of a workshop.	
Camlıbel Tarlası	No burial data published	

Table 3.9 Bioarchaeological Data from Early Bronze II to III Central Anatolia Continued

Site Name	Excavation Information	Trauma Information
Demircihöyük/ Sarıket	Burial goods included vessels, beads, pins, and weapons such as maceheads, a crescent axe, spearheads and daggers	One child with a healed cut mark on the left zygomatic; two adult males with parry fractures on the lower arms, one of whom also had a healed cranial wound; one adult made with a fatal cranial wound, on the right frontal bone from a rounded weapon
Elmalı-Karataş (Semayük)	A total MNI of 897 was given, including missing individuals from empty pithoi; Only 82 skeletons were well preserved enough for anthropological analysis	Relatively large number of healed injuries on the adult remains, both male and female; mainly ulnar parry fractures and healed and unhealed cranial trauma; two adult males had fatal cranial trauma on the occipital from an axe
Gâvur Evi Tepesi	All pithos graves from Bronze Age II, with minimal grave goods; very badly preserved remains	
Gelveri-Güzelyurt	No burial data published	
Gözlü Kule/Tarsus	No burials excavated from these levels	
Hacılar Büyük Höyük	A number of burials were found in 2012, but no further information has been published	
Harmanören	124 individuals recovered, and only 26 well preserved enough for further anthropological analysis	One adolescent with a healed fracture on the clavicle; one male adult with a healed fracture on the right radius, one adult female with cut perimortem cut marks on the frontal
Horoztepe	Single individual from an EBII/III tomb, badly preserved and never further analyzed	

Table 3.9 Bioarchaeological Data from Early Bronze II to III Central Anatolia Continued

Site Name	Excavation Information	Trauma Information
İkiztepe	Large cemetery dating to the EBIII, all simple inhumations, all age groups and both sexes represented. Only 445 of the burials were well preserved enough to further anthropological study	Total of 84 remains with cranial trauma, 18.9% of the population studied; 43% of the studied male population showed signs of violent trauma, 17 males died of their trauma; one sub-adult (10-12 years) had perimortem cranial trauma; no infants or women had severe trauma; 4 children had cranial fractures; 105 young adults, 26.7% had signs of injury; middle aged adults 29.3% had trauma, 35 of older individuals had trauma; 55 individuals had a single wound, 29 had two or more; three females with two injuries, six males two males with six wounds each. 53 penetrating injuries, 27 made by sharp edged weapons, 12 fatal. 26 by ovular or circular weapons 20 fatal, 53 penetrating wounds from swords or knives, 16 fatal.
Kalınkaya-Toptaştepe	No burials excavated from these levels	
Küllüoba	No burials excvated from these levels	
Kültepe-Kaneş	No burial data published	
Kuruçay Höyük		
Maşat Höyük		
Oymaağaç	Cemetery site, but no excavations were undertaken of the burials themselves due to high levels of looting	
Resuloğlu	No anthropological data yet published	
Salur North	No anthropological data yet published	
Suberde	No burial data published	
Yumuktepe/ Mersin	No burial data published	

Table 3.10: Bioarchaeological Data from Early to Middle Chalcolithic Southeastern Anatolia

Site Name	Excavation Information	Trauma Information
Arslantepe (Malatya)	No burials excavated from these levels	
Bademağacı	No burial data published	
Carchemish and the Carchemish Valley	No burial data published	
Değirmentepe	All subadults from jar burials, with no signs of trauma	
Domuztepe	All bioarchaeoligcal data from "Death Pit"	Signs of human consumption of the human remains; all remains were decapitated with evidence of severe blunt force trauma, though unclear if peri- or post-mortem; the remains were de-fleshed before being placed in the pit; outside of the death pit, three more individuals showed signs of cranial blunt force trauma
Fıstıklı Höyük	No burials excavated from these levels	
Gedikli/ Karahöyük	No burials excavated from these levels	
Girikihaciyan		No sigs of injuries on the remains
Hallan Çemi	No burial data published	
Kalaycık Tepe	No burial data published	
Kazane Höyük	No burial data published	
Kenan Tepe		No sigs of injuries on the remains
Korucutepe	No burials excavated from these levels	

Table 3.10 Bioarchaeological Data from Early to Middle Chalcolithic Southeastern Anatolia Continued

Site Name	Excavation Information	Trauma Information
Kurban Höyük	Single female burial with no signs of violence	
Lidar Höyük	No burials excavated from these levels	
Tepecik/ Makaraz Tepe		No cranial fracture, but three individuals had post-cranial fractures on the arms and ribs
Tell Amarna	No burial data published	
Tell Al-'Abr		
Tülintepe	No burial data published	

Table 3.11: Bioarchaeological Data from Late Chalcolithic to Early Bronze I Southeastern Anatolia

Site Name	Excavation Information	Trauma Information
Arslantepe		Older adult female with a parry fracture from LC level; From EBI level, four adolescent females were recovered, with signs of violent death by cranial trauma, possibly due to human sacrifice
Bademağacı	No burial data published	
Carchemish	No burial data published	
Değirmentepe	No burials excavated from these levels	
Gedikli	No burials excavated from these levels	
Gritille	No burial data published	
Hacınebi		One adult skull had a depressed cranial fracture; 5 others had post-cranial trauma, on the fingers, clavicle, and long bones
Hassek Höyük		
Hirbemerdon Tepe	No burial data published	
Kalaycık Tepe	No burial data published	
Kenan Tepe		No trauma found
Korucutepe	No anthropological data on the burials published	
Kurban Höyük		
Lidar Höyük	No burials excavated from these levels	
Norşuntepe	No burial data published	

Table 3.11 Bioarchaeological Data from Late Chalcolithic to Early Bronze I Southeastern Anatolia Continued

Site Name	Excavation Information	Trauma Information
Oylum Höyük	No information on the ages and genders of the burials published	
Pulur (Sakyol)	No burial data published	
Samsat	All children, no anthropological studies completed	
Tepecik	No burial data published	
Tilbes Höyük and Surtepe	No burials excavated from these levels	
Tilbeshar	No burials excavated from these levels	
Tilmen Höyük		
Shiukh Fawqani	No burial data published	
Jerablus Tahtani	No burial data published	
Tell Shiyukh Tahtani	No burial data published	
Tell Al-'Abr	No burial data published	
Titriş Höyük	Single adult female, no injuries; Unexcavated and looted pithos cemetery also noted	
Tülintepe	No burial data published	
Yarım Höyük		
Zeytinlibahçe Höyük	Unknown number of infant jar burials from under domestic floors	

Table 3.12: Bioarchaeological Data from Early Bronze II to III Southeastern Anatolia

Site Name	Excavation Information	Trauma Information
Arslantepe (Malatya)	From a single burial/death pit	Three adults with sings of healed trauma from rib fractures and a parry fracture; In unhealed trauma, three sub-adults and four adults had no signs of trauma, 8 adults did, both male and female. Four with single trauma, four with multiple, up to 15 fractures. Cranial fractures on the frontal, parietal and occipital bones, made with ovular weapons, likely a macehead, most likely the fatal wounds. Post-cranial trauma included 2 ulna fractures, 5 rib fractures, 3 metacarpals, one metatarsal. All from a single burial context.
Bademağacı	No burial data published	
Birecik	Jar burials were primarily children	Cut marks on the long bones, but may have been postmortem processing rather than living trauma
Carchemish		31 jar/pithos burials, but very badly published
Gedikli/ Karahöyük	All cremations burials placed inside jars	
Gritille	No burial data published	
Hassek Höyük		
Hirbemerdon Tepe	No burial data published	
Kalaycık Tepe	No burial data published	
Kenan Tepe	No burials were excavated from these levels	
Korucutepe	No burials were excavated from these levels	
Kurban Höyük		
Lidar Höyük		No injuries noted

Table 3.11 Bioarchaeological Data from Late Chalcolithic to Early Bronze I Southeastern Anatolia Continued

Site Name	Excavation Information	Trauma Information
Norşuntepe	No burial data published	
Oylum Höyük	Chamber tombs, looted prior to excavations	
Pulur (Sakyol)	No burial data published	
Tepecik	No burial data published	
Tilbes Höyük and Surtepe	No burials were excavated from these levels	
Tilbeshar	Unknown number of child burials excavated from EBII and EBIII domestic contexts, one large burial chamber that was looted in antiquity	
Tilmen Höyük		
Shiukh Fawqani	No burial data published	
Jerablus Tahtani	Unknown ages and genders of the burials recovered	
Tell Shiyukh Tahtani		
Tell Amarna	No burial data published	
Titriş Höyük	Most tombs had multiple burials	From the EBII, three individuals had healed cranial trauma, one a perimortem trauma; From EBIII, most had cranial trauma, both male and female, likely made by battle axe blows to the skull, as well as spears and daggers, on the parietal, occipital and frontal
Tülintepe	No burial data published	
Zeytinlibahçe Höyük	No burial data known	

Appendix 4 : Weapons Data

Table 4.1 Weapons Data from Early to Middle Chalcolithic Central Anatolia

Site Name	Projectile Points	Sling Balls	Maceheads	Knives	Daggers	Axes	Spearheads	Swords	Other Information
Acemhöyük									
Alaca Höyük									
Bademağacı Höyük									
Boğazköy-Büyükkaya									
Çadır Höyük									
Camlıbel Tarlası									
Can Hasan			1						Earliest known copper macehead in Anatolia
Çatal Höyük West		x				x			Unknown number of greenstone axes and clay sling balls
Demircihöyük/ Sarıket									
Gelveri-Güzelyurt									
Gözlü Kule/Tarsus		x							clay sling balls
Güvercinkayası		x							stone sling balls
Hacılar		x	x						clay sling balls and stone maceheads from levels II and I
Harmanören									
Kalınkaya-Toptaştepe									

Table 4.1 Weapons Data from Early to Middle Central Anatolia Continued

Site Name	Projectile Points	Sling Balls	Maceheads	Knives	Daggers	Axes	Spearheads	Swords	Other Information
Köşk Höyük									
Kuruçay Höyük									
Orman Fidanlığı									
Suberde									
Yumuktepe/Mersin		x				x			clay sling balls and copper axes made in open molds

Table 4.2: Weapons Data from Late Chalcolithic to Early Bronze I Central Anatolia

Site Name	Projectile Points	Sling Balls	Maceheads	Knives	Daggers	Axes	Spearheads	Swords	Other Information
Acemhöyük									
Alaca Höyük									
Alişar Höyük									
Bağbası						1			Greenstone axe
Beycesultan					x		x		Single dagger from LC period, earliest yet known. Arsenical bronze daggers and spearheads from EBI levels
Boğazköy-Büyükkaya/ Yarıkkaya									
Büyük Güllücek / Kaletepe						2			Copper flat-axes
Çadır Höyük									
Camlıbel Tarlası									
Can Hasan									
Demircihöyük/ Sarıket									
Elmalı-Karataş (Semayük)									
Gelveri-Güzelyurt									
Gözlü Kule/Tarsus	1				1				Single bronze, bent arrowhead and a bronze dagger
Harmanören									

Table 4.2: Weapons Data from Late Chalcolithic to Early Bronze I Central Anatolia Continued

Site Name	Projectile Points	Sling Balls	Maceheads	Knives	Daggers	Axes	Spearheads	Swords	Other Information
İkiztepe									
Kalınkaya-Toptaştepe									
Küllüoba									
Kuruçay Höyük					1	4	1		All copper weapons, flat axes
Orman Fidanlığı									
Suberde									
Yumuktepe/Mersin		hundreds		x	x	x	x		Both stone and bronze axes, clay sling balls, all other weapons made of bronze

Table 4.3: Weapons Data from Early Bronze II to III Central Anatolia

Site Name	Projectile Points	Sling Balls	Maceheads	Knives	Daggers	Axes	Spearheads	Swords	Other Weapons	Other Information
Acemhöyük										
Ahlatlıbel			1		x	Axes				Found in graves, on the hips of individuals, two of the graves were female, the remainder male; one dagger was bent, and so made unusable before being placed in the grave
Alaca Höyük			9		5	3	2	2		All but a single macehead were found in the "Royal Tombs" One dagger was an iron dagger, the oldest known forged iron in the world
Alişar Höyük						1				Copper shaft-hole axe
Bademağacı Höyük				x	x					"Small Number" of bronze daggers and knives
Beycesultan										
Boğazköy-Büyükkaya/ Yarıkkaya										
Büyük Güllücek / Kaletepe										
Çadır Höyük										

Table 4.3: Weapons Data from Early Bronze II to III Central Anatolia Continued

Site Name	Projectile Points	Sling Balls	Maceheads	Knives	Daggers	Axes	Spearheads	Swords	Other Weapons	Other Information
Camlıbel Tarlası										
Demircihöyük/ Sarıket	52	48		7					2 clay arrow straighteners	5 bone knives, 2 copper knives, 47 obsidian projectile points, 5 bronze projectile points, clay sling balls, crescent-shaped axe
Elmalı-Karataş (Semayük)			1		4					copper macehead
Gâvur Evi Tepesi										
Gelveri-Güzelyurt										
Gözlü Kule/Tarsus	x	x	1	3		1	x			Bronze projectile points, a cache of bronze daggers from EBIII
Hacılar Büyük Höyük					1					Possible horn handle of a metal dagger
Harmanören										
Horoztepe					1	2	4			All made of bronze
İkiztepe	3	x	fragments		27	14	147		mold for a shalf-hole axe	Three spearheads had etchings of human figures on them; all made of arsenical bronze
Kalınkaya-Toptaştepe			1		4	2				
Küllüoba										

Table 4.3: Weapons Data from Early Bronze II to III Central Anatolia Continued

Site Name	Projectile Points	Sling Balls	Maceheads	Knives	Daggers	Axes	Spearheads	Swords	Other Weapons	Other Information
Kültepe-Kaneş										
Kuruçay Höyük										
Maşat Höyük										
Oymaağaç					4	5	4	1		All found in looted contexts,in the Amasya museum
Resuloğlu					x	x	x			Numbers of shapes of weapons not yet published
Salur North										
Suberde										
Yumuktepe/ Mersin										

Table 4.4: Weapons Data from Early to Middle Chalcolithic Southeastern Anatolia

Site Name	Projectile Points	Sling Balls	Maceheads	Knives	Daggers	Axes	Spearheads	Swords	Other Information
Arslantepe (Malatya)									
Bademağacı									
Carchemish									
Değirmentepe									
Domuztepe									
Fıstıklı Höyük	x	x							Small numbers of obsidian and flint projectile points, and clay sling balls
Gedikli/Karahöyük									
Girikihaciyan		39							Sling balls made of clay, pottery and plaster
Hallan Çemi									
Kalaycık Tepe									
Kazane Höyük									
Kenan Tepe	x					1			Stone axe and obsidian projectile points from the MC
Korucutepe	x								Obsidian projectile points
Kurban Höyük					1				Flint dagger
Lidar Höyük									
Tepecik/Makaraz									

Table 4.4: Weapons Data from Early to Middle Chalcolithic Southeastern Anatolia Continued

Site Name	Projectile Points	Sling Balls	Maceheads	Knives	Daggers	Axes	Spearheads	Swords	Other Information
Tepe									
Tell Amarna									
Tell Al-'Abr	5	1							3 flint and 2 obsidian projectile points, 1 stone sling ball
Tülintepe	21	x							obsidian projectile points, three large caches of unfired clay sling balls

Table 4.5: Weapons Data from Late Chalcolithic to Early Bronze I Southeastern Anatolia

Site Name	Projectile Points	Sling Balls	Maceheads	Knives	Daggers	Axes	Spearheads	Swords	Other Weapons	Other Information
Arslantepe (Malatya)				1	3	4	21	11	3 "gouges"	LC Weapons Building; Oldest known swords in the ancient Near East; made of arsenical bronze
Bademağacı										
Carchemish										
Değirmentepe	x		x			x			Shaft-hole hammers	Aa weapons made of stone; EBI obsidian and flint projectile points
Gedikli/Karahöyük										
Gritille										
Hacınebi										
Hassek Höyük				2	1					Copper
Hirbemerdon Tepe										
Kalaycık Tepe										
Kenan Tepe	x									Chert and obsidian projectile points
Korucutepe			1		1					Iron ore maceheads and a tanged dagger
Kurban Höyük										
Lidar Höyük										

Table 4.5: Weapons Data from Late Chalcolithic to Early Bronze I Southeastern Anatolia Continued

Site Name	Projectile Points	Sling Balls	Maceheads	Knives	Daggers	Axes	Spearheads	Swords	Other Weapons	Other Information
Norşuntepe	x	x	x			x			LC stone hammers; EBI shaft-hole axe mold	Stone axes and hammers, clay sling balls, metal projectile points, copper ore
Oylum Höyük										
Pulur (Sakyol)										
Samsat										
Tepecik/Makaraz Tepe										
Tilbes Höyük and Surtepe										
Tilbeshar						x				Polished stone axes
Tilmen Höyük										
Shiukh Fawqani										
Jerablus Tahtani										
Tell Shiyukh Tahtani										
Tell Al-'Abr										
Titriş Höyük										
Tülintepe										
Yarım Höyük										
Zeytinlibahçe Höyük										

Table 4.6: Weapons Data from Early Bronze II to III Southeastern Anatolia

Site Name	Projectile Points	Sling Balls	Maceheads	Knives	Daggers	Axes	Spearheads	Swords	Other Information
Arslantepe (Malatya)									
Bademağacı									
Birecik			1		x	x	x		Shaft-hole and flat axes, tripartite spearheads, triangular dagger blades,
Carchemish	X		X	X	X	X	X		
Gedikli/Karahöyük									
Gre Virike	1		1				1		Bronze
Hassek Höyük									
Hirbemerdon Tepe									
Kalaycık Tepe									
Kenan Tepe	x								Chert and obsidian projectile points
Korucutepe	x								Obsidian projectile points
Kurban Höyük									
Lidar Höyük									
Norşuntepe	1	x	1			4	1	2 stone flat hammers; 2 molds for axes	EBII weapons all made of stone; EBIII made of stone and bronze projectile point, spearhead and flat axe
Oylum Höyük									

Table 4.6: Weapons Data from Early Bronze II to III Southeastern Anatolia Continued

Site Name	Projectile Points	Sling Balls	Maceheads	Knives	Daggers	Axes	Spearheads	Swords	Other Information
Pulur (Sakyol)	10		2			12	1		7 obsidian and 3 bronze projectile points; stone maceheads, bronze spearhead, stone axes
Tepecik/Makaraz Tepe						1			Bronze shaft-hole axe
Tilbes Höyük and Surtepe									
Tilbeshar	x								Flint projectile points
Tilmen Höyük									
Shiukh Fawqani									
Jerablus Tahtani					x	x	x	Dagger stone mold, copper pendent in the shape of a crescent axe	Polished stone axe, bronze daggers, shaft-hole axes and poker-butted spearheads
Tell Shiyukh Tahtani									
Tell Amarna						1			Crescent axe head
Titriş Höyük					x		x		
Tülintepe									
Zeytinlibahçe Höyük									

Appendix 5 : Fortification Data

Table 5.1: Fortification Data from Early to Middle Chalcolithic Southeastern Anatolia

Site Name	Known Presence/ Absence?	None	Natural	Simple	ASP	Saw-tooth	Niche and Buttress	Kasten-mauer	Casemate	Glacis	Gates	Tower	Other Information
Acemhöyük	No												
Alaca Höyük	No												
Bademağacı Höyük/Kızılkaya Höyük	Yes	x											
Boğazköy-Büyükkaya/ Yarıkkaya	Yes		x										Site located on a natural platform
Çadır Höyük	No												
Camlıbel Tarlası	No												
Can Hasan	Yes	x											
Çatal Höyük West	Yes	x											
Demircihöyük/ Sarıket	No												
Gelveri-Güzelyurt	No												
Gözlü Kule/Tarsus	No												
Güvercinkayası	Yes		x	x	x							x	Natural cliffs, a thick wall, a double fortification system
Hacılar	Yes			x							x	x	

Table 5.1: Fortification Data from Early to Middle Chalcolithic Central Anatolia Continued

Site Name	Known Presence/ Absence?	None	Natural	Simple	ASP	Saw-tooth	Niche and Buttress	Kasten-mauer	Casemate	Glacis	Gates	Tower	Other Information
Harmanören	Yes	x											Unfortified cemetery site
Kalınkaya-Toptaştepe	No												
Köşk Höyük	Yes	x											
Kuruçay Höyük	No												Earlier Neolithic levels were fortified, so the excavators assume the EC settlement was also fortified
Orman Fidanlığı	No												
Suberde	No												
Yumuktepe/Mersin	Yes			x					x	x	x		Already fortified by the Late Neolithic

Table 5.2: Fortification Data from Late Chalcolithic to Early Bronze I Central Anatolia

Site Name	Known Presence/ Absence?	No Fortific-ation	Natural Fortific-ations	Simple	ASP	Sawt ooth	Niche and Buttress	Kasten-mauer	Case mate	Glacis	Gates	Towers	Other Information
Acemhöyük	No												
Alaca Höyük	Yes	x											
Alişar Höyük	Yes	x											
Bağbası	Yes	x											
Beycesultan	No-LC, Yes-EBI			x								x	
Boğazköy-Büyükkaya/ Yarıkkaya	Yes		x										Site located on a natural platform
Büyük Güllücek / Kaletepe	Yes	x											
Çadır Höyük	Yes			x							x		
Camlıbel Tarlası	No												
Can Hasan	Yes	x											
Demircihöyük / Sarıket	Yes				x	x		x			x		By Early Bronze I only
Elmalı-Karataş (Semayük)	Yes					x				x			
Gelveri-Güzelyurt	No												
Gözlü Kule/Tarsus	Yes										x		Wall itself not excavated,

Table 5.2 Fortification Data from Late Chalcolithic to Early Bronze I Central Anatolia Continued

Site Name	Known Presence/ Absence?	No Fortific-ation	Natural Fortific-ations	Simple	ASP	Sawt ooth	Niche and Buttress	Kasten-mauer	Case mate	Glacis	Gates	Towers	Other Information
													but by EBI, a late gated entryway was built
Harmanören	Yes	x											Unfortified cemetery site
İkiztepe	Yes	x											
Kalınkaya-Toptaştepe	No												
Küllüoba	Yes				x	x							Thick sawtooth wall
Kuruçay Höyük	Yes				x	x					x		May have not been entirely for defensive purposes, as there were openings in the wall
Orman Fidanlığı	No												
Suberde	No												
Yumuktepe/Mersin	Yes			x					x	x	x		

Table 5.3: Fortification Data from Early Bronze II to III Central Anatolia

Site Name	Known Presence/ Absence	No Fortification	Natural Fortifications	Simple	ASP	Sawtooth	Niche and Buttress	Kastenmauer	Casemate	Glacis	Gates	Towers	Other Information
Acemhöyük	No												
Ahlatlıbel	No												
Alaca Höyük	No												Mainly the cemetery was excavated from this time period; no signs of a fortification system known, though not enough evidence to say for sure
Alişar Höyük	Yes			x						x	x		Two sets of walls around the settlement and around the terrace; By EBIII, monumental gate and glacis built
Bademağacı Höyük/ Kızılkaya Höyük	Yes			x	x					x			
Beycesultan	Yes			x									Assumed but not excavated
Boğazköy-Büyükkaya/ Yarıkkaya	No												
Büyük Güllücek / Kaletepe	No												

Table 5.3 Fortification Data from Early Bronze II to III Central Anatolia Continued

Site Name	Known Presence/ Absence	No Fortification	Natural Fortifications	Simple	ASP	Sawtooth	Niche and Buttress	Kastenmauer	Casemate	Glacis	Gates	Towers	Other Information
Çadır Höyük	Yes			x							x		
Camlıbel Tarlası	No												
Demircihöyük/ Sarıket	Yes				x	x		x			x		After Phase F1, Kastenmauer wall in addition to sawtooth wall created by the backs of houses
Elmalı-Karataş (Semayük)	Yes					x				x			Only the central palatial district of the mound fortified. The village itself was unfortified
Gâvur Evi Tepesi	No												
Gelveri - Güzelyurt	No												
Gözlü Kule/Tarsus	Yes					x		x			x	x	Bent-axis gate; No remains of the EBIII fortification were found, likely eroded away
Hacılar Büyük Höyük	Yes					x							
Harmanören	Yes	x											Unfortified cemetery site
Horoztepe	Yes	x											Unfortified cemetery site
İkiztepe	Yes			x									Simple wooden perimeter wall

Table 5.3 Fortification Data from Early Bronze II to III Central Anatolia Continued

Site Name	Known Presence/ Absence	No Fortification	Natural Fortifications	Simple	ASP	Sawtooth	Niche and Buttress	Kastenmauer	Casemate	Glacis	Gates	Towers	Other Information
Kalınkaya - Toptaştepe	No												
Küllüoba	Yes				x	x					x	x	Protected both by the backs of buildings set against each other, and a thick sawtooth wall
Kültepe-Kaneş	No												
Kuruçay Höyük	No												
Maşat Höyük	No												
Oymaağaç	Yes	x											Unfortified cemetery site
Resuloğlu	Yes	x	x										Unfortified cemetery site, located on a cliffside
Salur North	Yes	x											Unfortified cemetery site
Suberde	No												
Yumuktepe/ Mersin	No												

Table 5.4: Fortification Data from Early to Middle Chalcolithic Southeastern Anatolia

Site Name	Known Presence Absence	No Fortific-ation	Natural Fortific-ations	Simple	ASP	Sawtooth	Niche and Buttress	Kasten mauer	Case mate	Glacis	Gates	Towers	Other Information
Arslantepe (Malatya)	No												
Bademağacı	No												
Carchemish	No												
Değirmentepe	No												
Domuztepe	No												
Fıstıklı Höyük	Yes												Small earthworks built around the edges of the site, most likely as protection against flooding
Gedikli/ Karahöyük	No												
Girikihaciyan	No												
Hallan Çemi	No												
Kalaycık Tepe	No												
Kazane Höyük	Yes	x											
Kenan Tepe	Yes	x											
Korucutepe	Yes	x											
Kurban	No												

Table 5.4 Fortification Data from Early to Middle Chalcolithic Southeastern Anatolia Continued

Site Name	Known Presence Absence	No Fortific-ation	Natural Fortific-ations	Simple	ASP	Sawtooth	Niche and Buttress	Kasten mauer	Case mate	Glacis	Gates	Towers	Other Information
Höyük													
Lidar Höyük	No												
Tepecik/ Makaraz Tepe	Yes	x											
Tell Amarna	No												
Tell Al-'Abr	No												
Tülintepe	No												

Table 5.5: Fortification Data from Late Chalcolithic to Early Bronze I Southeastern Anatolia

Site Name	Known Presence/ Absence?	No Fortific-ation	Natural Fortific-ations	Simple	ASP	Sawtooth	Niche and Buttress	Kasten-mauer	Case mate	Glacis	Gates	Towers	Other Information
Arslantepe (Malatya)	Yes			x			x				x		Niche and buttresses on the inside of the wall; the lower town was left unfortified.
Bademağacı	No												
Carchemish	No												
Değirmentepe	No												
Gedikli/ Karahöyük	No												
Gritille	No												
Hacınebi	Yes		x	x			x				x		Stone wall built at the end of Phase A, niches and buttresses on the inside of the wall. Located on limestone bluffs overlooking the Euphrates river
Hassek	Yes			x					x		x	x	

Table 5.5 Fortification Data from Late Chalcolithic to Early Bronze I Southeastern Anatolia Continued

Site Name	Known Presence/ Absence?	No Fortific-ation	Natural Fortific-ations	Simple	ASP	Sawtooth	Niche and Buttress	Kasten-mauer	Case mate	Glacis	Gates	Towers	Other Information
Höyük													
Hirbemerdon Tepe	No												
Kalaycık Tepe	No												
Kenan Tepe	Yes			x									
Korucutepe	No												
Kurban Höyük	Yes			x									
Lidar Höyük	No												
Norşuntepe	Yes	x											
Oylum Höyük	Yes	x											
Pulur (Sakyol)	No												
Samsat	Yes			x									
Tepecik/ Makaraz Tepe	Yes								x				Built by the end of the Early Bronze I period
Tilbes Höyük and Surtepe	No												
Tilbeshar	Yes			x			x						Built by the EBI period; Unclear if the LC levels were fortified
Tilmen Höyük	No												
Shiukh Fawqani	No												

Table 5.5 Fortification Data from Late Chalcolithic to Early Bronze I Southeastern Anatolia Continued

Site Name	Known Presence/ Absence?	No Fortific-ation	Natural Fortific-ations	Simple	ASP	Sawtooth	Niche and Buttress	Kasten-mauer	Case mate	Glacis	Gates	Towers	Other Information
Jerablus Tahtani	No												
Tell Shiyukh Tahtani	No												
Tell Al-'Abr	No												
Titriş Höyük	Yes	x											
Tülintepe	Yes			x									
Yarım Höyük	Yes	x											
Zeytinlibahçe Höyük	No												

Table 5.6: Fortification Data from Early Bronze II to III Southeasten Anatolia

Site Name	Known Presence/ Absence?	No Fortific-ation	Natural Fortific ations	Simple	ASP	Sawt ooth	Niche and Buttress	Kasten-mauer	Case mate	Glacis	Gates	Towers	Other Information
Arslantepe (Malatya)	Yes			x			x						Buttresses on the inside of the wall
Bademağacı	No												
Birecik	Yes	x											Unfortified cemetery site
Carchemish	No												No wall from this period was excavated, and the existence of fortifications at this site remains controversial
Gedikli/ Karahöyük	No												
Gre Virike	Yes	x											Unfortified cemetery site
Hassek Höyük	Yes			x			x				x		Niches and buttresses on the exterior of the wall
Hirbemerdon Tepe	No												
Kalaycık Tepe	No												
Kenan Tepe	Yes			x									
Korucutepe	No												
Kurban Höyük	Yes			x							x		

Table 5.6: Fortification Data from Early II to III Southeastern Anatolia Continued

Site Name	Known Presence/ Absence?	No Fortific-ation	Natural Fortifications	Simple	ASP	Sawtooth	Niche and Buttress	Kasten-mauer	Case mate	Glacis	Gates	Towers	Other Information
Lidar Höyük	No												
Norşuntepe	Yes			x		x							
Oylum Höyük	Yes	x											A basalt wall went partially around the site, but not entirely and so was likely a retaining wall
Pulur (Sakyol)	Yes			x									
Tepecik/ Makaraz Tepe	Yes								x				Terracing around the wall
Tilbes Höyük and Surtepe	No												
Tilbeshar	Yes			x			x						Briefly unfortified at the end of the EBI period, then rebuilt into the EBII period.
Tilmen Höyük	No												
Shiukh Fawqani	No												
Jerablus Tahtani	Yes			x						x			
Tell Shiyukh Tahtani	No												
Tell Amarna	No												

Table 5.6: Fortification Data from Early II to III Southeastern Anatolia Continued

Site Name	Known Presence/ Absence?	No Fortific-ation	Natural Fortifications	Simple	ASP	Sawtooth	Niche and Buttress	Kasten-mauer	Case mate	Glacis	Gates	Towers	Other Information
Titriş Höyük	Yes			x						x	x	moat	First fortifications in the EBIII period
Tülintepe	Yes			x									
Zeytinlibahçe Höyük	No												

Appendix 6 : **Destruction Level Data**

Table 6.1: Destruction Level Data from Early to Middle Chalcolithic Central Anatolia

Site Name	Presence/ Absence?	Level of Destruction	Other Information
Acemhöyük	No		
Alaca Höyük	No		
Bademağacı Höyük/Kızılkaya Höyük	No		
Boğazköy-Büyükkaya/Yarıkkaya	No		
Çadır Höyük	No		
Camlıbel Tarlası	No		
Can Hasan	Yes	Level 2A	Entire settlement destroyed by fire then the city was rebuilt in Level 2B.
Çatal Höyük West	No		
Demircihöyük/ Sarıket	No		
Gelveri-Güzelyurt	No		
Gözlü Kule/Tarsus	No		
Güvercinkayası	Yes	MC	Nearly the entire settlement destroyed at the end of the Middle Chalcolithic
Hacılar	Yes	IIA, IIB, I	Final LN level completely destroyed by fire, then rebuilt in a new part of the mound; Level IIa the entire settlement was destroyed, then rebuilt exactly as before; Level IIb the entire settlement destroyed by fire, and rebuilt smaller in a new orientation and with new architectural styles; Level I, the entire settlement was destroyed, with the remains of inhabitants found inside the burnt rubble
Harmanören	No		
Kalınkaya-Toptaştepe	No		

Table 6.1: Destruction Level Data from Early to Middle Chalcolithic Central Anatolia Continued

Site Name	Presence/ Absence?	Level of Destruction	Other Information
Kösk Höyük	Yes	End of EC	Entire settlement destroyed by fire then the city was rebuilt in a similar style to before but smaller in size
Kuruçay Höyük	Yes	Level 7	Level 7: entire settlement destroyed by fire and abandoned until the LC when reestablished by a new cultural group
Orman Fidanlığı	No		
Suberde	No		
Yumuktepe/Mersin	No		

Table 6.2: Destruction Level Data from Late Chalcolithic to Early Bronze I Central Anatolia

Site Name	Presence/ Absence?	Level of Destruction	Other Information
Acemhöyük	No		
Alaca Höyük	No		
Alişar Höyük	No		
Bağbası	No		
Beycesultan	Yes	Levels XXXII and XXXI	Many LC buildings found burnt then rebuilt; No burning found in EBI levels
Boğazköy-Büyükkaya/Yarıkkaya	No		
Büyük Güllücek / Kaletepe	No		
Çadır Höyük	Yes	LC Level	Burnt house in the LC
Camlıbel Tarlası	No		
Demircihöyük/ Sarıket	No		
Elmalı-Karataş (Semayük)	Yes	Period I, Period II	Period I: Central complex burnt; Period II: central complex completely destroyed. The area was then razed and rebuilt as a terrace
Gelveri-Güzelyurt	No		
Gözlü Kule/Tarsus	No		
Güvercinkayası	Yes	EBI	Most of the structures burnt and destroyed
Harmanören	No		
İkiztepe	Yes	LC Level	Many signs of destruction from the LC levels
Kalınkaya-Toptaştepe	No		
Küllüoba	No		
Kuruçay Höyük	Yes	Level 6, Level 3	Level 6: burnt and rebuilt a number of times in the same plan; each time the site was smaller and less well built than before; Level 3: site completely destroyed and only reestablished in the EBI
Orman Fidanlığı	No		
Suberde	No		

Table 6.2 Destruction Level Data from Late Chalcolithic to Early Bronze I Central Anatolia Continued

Site Name	Presence/ Absence?	Level of Destruction	Other Information
Yumuktepe/Mersin	Yes	XVI	Level XVI: entire settlement burnt down, then reestablished in the EBI

Table 6.3: Destruction Level Data from Early Bronze II to III Central Anatolia

Site Name	Presence/ Absence?	Level of Destruction	Other Information
Acemhöyük	No		
Ahlatlıbel	No		
Alaca Höyük	Yes	Level 5, Level 6	Level 5 completely destroyed by fire; Level 6 destroyed most likely by an earthquake, human remains found in the rubble, the settlement was destroyed at the end of the EBIII, then reestablished in the Middle Bronze Age
Alişar Höyük	Yes	Level 11, Level 6	Level 11- all excavated buildings burnt; Level 6- entire settlement burnt and destroyed
Bademağacı Höyük/Kızılkaya Höyük	No		
Beycesultan	Yes	XIIIb, XIIIa, IX	Level XIIb- destroyed perhaps due to earthquake; Level XIIIa- entire settlement destroyed by fire. After, the architecture and material culture change drastically. Level IX Megaron B burnt down.
Boğazköy-Büyükkaya/Yarıkkaya	No		
Büyük Güllücek / Kaletepe	No		
Çadır Höyük	No		
Camlıbel Tarlası	No		
Demircihöyük/ Sarıket	No		No destruction levels, but the site was abruptly abandoned at the end of the EBIII period
Elmalı-Karataş (Semayük)	No		No destruction levels, but the site was abruptly abandoned at the end of the EBII period
Gâvur Evi Tepesi	No		
Gelveri-Güzelyurt	No		

Table 6.3 Destruction Level Data from Early Bronze II to III Central Anatolia Continued

Site Name	Presence/ Absence?	Level of Destruction	Other Information
Gözlü Kule/Tarsus	Yes	EBII, EBIII	At the start of EBIII, entire settlement burnt down and then rebuilt; At the end of EBII, entire settlement again burnt down, then rebuilt; At the end of EBIII, the entire settlement was burnt down, and rebuilt in a new architectural style into the EB/MB transitional phase
Hacılar Büyük Höyük	No		
Harmanören	No		
Horoztepe	No		
İkiztepe	No		
Kalınkaya-Toptaştepe	No		
Küllüoba	No		
Kültepe-Kaneş	Yes	EBIII: Level 13, 12, Level 11	Level 13: burnt structure; Level 12, burnt temple, Level II: building destroyed by intense fire
Kuruçay Höyük	No		
Maşat Höyük	Yes	EBIII	EBIII: entire settlement destroyed by fire then abandoned for a period of time
Oymaağaç	No		
Resuloğlu	No		
Salur North	No		
Suberde	No		
Yumuktepe/Mersin	No		

Table 6.4: Destruction Level Data from Early to Middle Chalcolithic Southeastern Anatolia

Site Name	Presence/ Absence?	Level of Destruction	Other Information
Arslantepe (Malatya)	No		
Bademağacı	No		
Carchemish	No		
Değirmentepe	Yes	Subphase 3	Central complex destroyed by fire then rebuilt
Domuztepe	No		
Fıstıklı Höyük	No		
Gedikli/Karahöyük	No		
Girikihaciyan	Yes	Half levels	Some houses were burnt without further signs of violence, then the areas abandoned and later reused as dumping grounds
Hallan Çemi	No		
Kalaycık Tepe	No		
Kazane Höyük	No		
Kenan Tepe	Yes	Ubaid Levels	All buildings burnt down at the end of the Ubaid level
Korucutepe	No		
Kurban Höyük	No		
Lidar Höyük	No		
Tepecik/Makaraz Tepe	No		
Tell Amarna	No		
Tell Al-'Abr	Yes	Level 7, Level 5, Level 2	Level 7 destroyed, though the extent of the destruction is not known; Level 5 was abruptly abandoned with materials left in-situ upon floors; Level 2 completely destroyed by fire then rebuilt in the LC
Tülintepe	No		

Table 6.5: Destruction Level Data from Late Chalcolithic to Early Bronze I Southeastern Anatolia

Site Name	Presence/ Absence?	Level of Destruction	Other Information
Arslantepe (Malatya)	Yes	VII, VIa, VIb	Level VII: Tripartite temple destroyed; Level VIA, temples burnt down; End of VIA, the entire palatial district burnt and destroyed, abandoned for a period of time, then rebuilt in a completely new style; Level VIB, end of level, the entire settlement destroyed by fire, all monumental buildings destroyed and never rebuilt. After, the site is abandoned for a period, and reestablished by nomadic populations for a period
Bademağacı	No		
Carchemish	No		
Değirmentepe	No		
Gedikli/Karahöyük	No		
Gritille	No		
Hacınebi	Yes	Phase A, Phase B1	End of Phase A, some buildings in the south were destroyed, others abandoned; Phase B1, some houses burnt and destroyed; Phase B2, no signs of violence
Hassek Höyük	Yes	Phase 5a, 5b	Both phases 5a and 5b settlements entirely destroyed by fire. End of LC, entire settlement destroyed by fire, and a new architectural style built over the remains
Hirbemerdon Tepe	No		
Kalaycık Tepe	No		
Kenan Tepe	Yes	Level 4	Entire site destroyed by fire and the site slowly rebuilt in a similar fashion
Korucutepe	Yes	Strata XXXIII,	Strata XXXII: all architecture burnt at end of phase. Strata LXXII: the entire settlement was

Table 6.5 Destruction Level Data from Late Chalcolithic to Early Bronze I Southeastern Anatolia Continued

Site Name	Presence/ Absence?	Level of Destruction	Other Information
		Strata LXXII	again burnt
Kurban Höyük	Yes	End of LC	At the end of the LC, the entire site was destroyed then rebuilt in a new fashion in the EBI.
Lidar Höyük	No		
Norşuntepe	No		
Oylum Höyük	Yes	LC	A single level was burnt down then immediately rebuilt in the same fashion
Pulur (Sakyol)	No		
Samsat	No		
Tepecik/Makaraz Tepe	No		
Tilbes Höyük and Surtepe	Yes	End of EBI	Small amount of burning at end of the phase
Tilbeshar	Yes	Level IIIA1	Level IIIA, a number of destruction levels then immediately rebuilt. End of Level IIIAI, the entire site burnt down and abandoned
Tilmen Höyük	No		
Shiukh Fawqani	No		
Jerablus Tahtani	No		
Tell Shiyukh Tahtani	No		
Tell Al-'Abr	No		
Titriş Höyük	No		
Tülintepe	No		
Yarım Höyük	No		
Zeytinlibahçe Höyük	No	EBI	Site abandoned at end of EBI and not reestablished until the EBIII

Table 6.6: Destruction Level Data from Early Bronze II to III Southeastern Anatolia

Site Name	Presence/ Absence?	Level of Destruction	Other Information
Arslantepe (Malatya)	Yes	VID	Entire settlement destroyed at end of EBIII, then abandoned for a period of time
Bademağacı	No		
Birecik	No		
Carchemish	No		
Gedikli/Karahöyük	No		
Gritille	No		
Hassek Höyük	No		
Hirbemerdon Tepe	No		
Kalaycık Tepe	No		
Kenan Tepe	No		
Korucutepe	Yes	Phase E	End of Phase 5, entire settlement burnt and then abandoned for a site before being resettled by a new population
Kurban Höyük	Yes	Period III	At the end of EBIII, the settlement was abandoned and later reestablished only on the southern mound
Lidar Höyük	No		
Norşuntepe	Yes	Level IV	Level IV palatial complex burnt down and rebuilt in Level III
Oylum Höyük	Yes	End of EBIII	At the end of EBIII, the settlement was abandoned and later reestablished later in the MB
Pulur (Sakyol)	Yes	Level VIII, IX, X	All three levels were burnt down and destroyed
Tepecik/Makaraz Tepe	No		
Tilbes Höyük and Surtepe	No		

Table 6.6 Destruction Level Data from Early Bronze II to III Southeastern Anatolia Continued

Site Name	Presence/ Absence?	Level of Destruction	Other Information
Tilbeshar	Yes	Level IIIC	Level IIIC: Site abruptly abandoned with materials left in-situ upon the floors of buildings; Level D the site was reoccupied in the same style as before
Tilmen Höyük	No		
Shiukh Fawqani	No		
Jerablus Tahtani	Yes	Period 2A and 2B	Period 2A, end of the phase the site was burnt and destroyed. 2B: immediately reestablished with fortifications, then at end of the period, the site was abandoned until the IA, possibly due to site flooding
Tell Shiyukh Tahtani	Yes	EBII-III	Some signs of burning and destruction, but not well attested
Tell Amarna	No		
Titriş Höyük	Yes	EBIII	At the end of EBIII, the settlement was completely destroyed and abandoned and later reestablished later in the MB
Tülintepe	No		
Zeytinlibahçe Höyük	No		

Appendix 7 : Landscape and Trade Route Data

Table 7.1: Landscape and Trade Data from Central Anatolia

Site Name	Landscape Information	Trade Route Information
Acemhöyük		Lies along the ancient road that led from Konya to Kayseri, a route that remains in place to this day, placing Acemhöyük is a highly strategic spot for trade from its first foundation
Ahlatlıbel	Located 14 km southwest of Ankara	
Alaca Höyük	The site of Alaca Höyük is located in the Bozok plateau of central Turkey, 50 km southwest of the modern town of Çorum. The earliest habitation was settled upon a natural hill. The site is fed by numerous springs, tributaries of the nearby Kızılırmak river, and the land around it is highly fertile. To the north are the mountains of the Pontic ranges, and the land around the site is high in granite rocks as well as rock salt, making for plentiful amounts of natural resources around Alaca Höyük	The site is within a travel route between the Black Sea region and the Central Plateau, within the Eskişehir Plain
Alişar Höyük	Alişar Höyük is located approximately 85 kilometers from the Hittite capital city of Boğazköy and 200 kilometers east of the modern capital city of Ankara. The site lies in the Kanak Su Basin, in some of the most fertile land in central Anatolia, located between the Sumerin Sivrissi and the Çomak Dağ	The site was in the middle of the trade routes between Central Anatolia and Mesopotamia, and was located between Boğazköy and Kültepe-Kaneş, along the trade route between Kaneş and Aşşur, making the location of the site both idea for farming and for trade
Bademağacı Höyük/Kızılkaya Höyük	The site of Bademağacı Höyük is located in the Burdur region, not far from Hacılar. Bademağacı Höyük is located near the historical boarder of Pamphylia, and 51 km from the modern city of Antalya	The site is only 5 km from the Çubuk Pass, one of the better passes through the Taurus mountains, and now part of the Antalya-Burdur highway, placing it in a great position for trade through the mountains.

Table 7.1 Landscape and Trade Route Data from Central Anatolia Continued

Site Name	Landscape Information	Trade Route Information
Bağbası	The site of Bağbası is located nearby the site of Elmalı-Karataş, 7 km. northeast in the Emalı Plain. The site is not large and lies in the relatively flat Elmalı valley, nearby the foothills of the Taurus mountains. It sits on a natural rise, 1157 meters above sea level, not much higher than the surrounding valley. A small stream flows along the northern edge of the site, proving a good source of water for the site.	The site was located on a major trade route through the Taurus mountains
Beycesultan	The site is located five kilometers from the city of Çivril, and along the banks of what was once a small tributary of the Meander River, in "a wide cultivated valley, bordered on both sides by low hills" and nearby the Carian mountains	Large multi-period mound located along "an ancient highway," and located along an ancient roadway between the Aegean coast and the Anatolian plateau. The excavators further hypothesized that the site was originally placed along a natural river crossing
Boğazköy-Büyükkaya/Yarıkkaya	Büyükkaya is located upon a very steep and large rocky outgrowth, thus the name, located along the lower part of Boğazköy. Yarıkkaya is two kilometers north of Büyükkaya, a small rocky outcrop and plateau briefly in 1967 and 1968 as part of the larger excavations at Boğazköy. The site is located in the Budaközü valley, near the modern town of Boğazkale in the Province of Çorum.	Immediately to the south of Büyükkaya lie two different passes through the nearby mountains that lead to the Yozgat and to Büyüknefes valleys, making this site right in the middle of an important trade route between Central Anatolia and the Black Sea coast
Büyük Güllücek / Kaletepe	The site of Büyük Güllücek (sometimes referred to as Kaletepe) is located between Alaca Höyük and Boğazköy in the Çorum Province, approximately 15 km north of Alaca Höyük, located in an open rocky field, nearby small rolling hills	
Çadır Höyük	Çadır Höyük is located upon small terrace. The site is located 10 kilometers southeast from the Phrygian site of Kerkenes Dağ and 13 kilometers northwest from the site of Alişar Höyük, and sits at the junction between the Kanak Su and Eğri Su rivers, in the flat Kanak Su basin, with small rolling hills in the near distance and a number of small streams, which have since been flooded into a sizable lake. It may have been originally situated upon a small natural hill	The valley itself was likely located along a trade route through Central Anatolia since antiquity, and remained in an important location, even up to the Byzantine era

Table 7.1 Landscape and Trade Route Data from Central Anatolia Continued

Site Name	Landscape Information	Trade Route Information
Can Hasan	Can Hasan is located in the Konya plain near some smaller foothills, in south central Turkey, around 13 km NE of the modern city of Karaman. The mounds of Can Hasan lay in a flat plain, with the foothills of the Taurus mountains visible in the near distance	French mentions that the site is located not far from a pass through the Taurus mountains, leading from the Mediterranean, up northwest to the modern city of Mut, along the Sertavul Pass, making Can Hasan possibly located near a major trade route and one of the easier passes through the mountains to the Mediterranean in the Göksu valley
Çatal Höyük West	The mounds of Çatal Höyük lie in a large flat plain, located near the city of Çumra, about 12 km. away, in the Konya Plain	The area is within sight of the Taurus mountains, and like Can Hasan, may have been in the path of the trade route from the south through the Taurus mountains to the west
Demircihöyük/ Sarıket	The site of Demircihöyük is located near the edge of the Eskişehir plain and the start of rolling foothills near the Sea of Marmara. Demircihöyük lies approximately 25 km from the modern city of Eskişehir	The site is directly on the major road that leads from the Anatolian plateau to the western coast of Anatolia
Elmalı-Karataş (Semayük)	Elmalı-Karataş is located in the Emalı Plain in the modern day region of Lycia. The mound is located 2 km. west of the village of Semayük (now known as Bozüyük), and 70 km. from the city of Antalya as the crow flies	The plain is within the travel route through the Taurus mountains from the Mediterranean up through the north to the Anatolian Plateau. The only way in and out of the valley is though a number of small passes though these mountains, leading south to the Mediterranean and north to the Central Anatolian Plateau
Gâvur Evi Tepesi	Gâvur Evi Tepesi is located in the western edge of the Burdur plain, at the foot of the hills that limit the plain	
Gözlü Kule/Tarsus	The site of Gözlü Kule/Tarsus lies in Cilicia, near the modern town of Tarsus	The site lies in a coastal plain, nearby where the Mediterranean meet the Amanus mountains, placing the site at a ideal spot for trade between Northern Syria and Anatolia as well as later maritime trade. Tarsus was likely a major site for trade since the Neolithic
Güvercinkayası	The site itself is located on a small valley area surrounded by high cliffs on three sides and the spot where the Karasu river meets the Melendiz river on the fourth, and is located 1106.08 m above sea level. Güvercinkayası itself was placed in an interesting location, high on a rocky cliff, while most other sides in the region were placed in the valleys along the rivers. The mound itself is quite flat, using the natural cliff top and creating a terrace, making nice use of the natural environment	The site of Güvercinkayası is located in the Mamasun dam lake area, near where the Cilician Gates pass (or Gülek Pass) through the Amanus mountains meets the Melendiz River, and 29 km northwest of the modern city of Aksaray. It is the largest mound in the region, with very nice natural fortifications while being on a major trade route. In Roman times, it was located along the "Pilgrim's Road" and was called the "Migration Road" until the area was inundated under the waters of the Mamasun dam

Table 7.1 Landscape and Trade Route Data from Central Anatolia Continued

Site Name	Landscape Information	Trade Route Information
Hacılar	Hacılar lies in the northern part of the Lycian plain, approximately 26 km. south from the modern town of Burdur, and 1.5 km. from the modern village of Hacılar. The site lies near the western shores of the Koca Çay river, and is nearby Burdur Lake. It is within an intermontane valley, at a high elevation of 940 m above sea level and nearly 100 meters above the water level of Burdur Lake. The Hacılar spring flows near the site, likely the reason for its initial occupation. The mound sits on a natural terrace, with the nearby extramural cemetery found within the valley itself	The site lies right at the edge of a valley, and at the foot of low limestone hills.
Horoztepe	Horoztepe, a cemetery site, is located in the province of Takat, near the modern village of Erbaa, 330 km north of Ankara. The cemetery site is located near a small stream, the Inbat, and is located in a flat, woody area with nearby rolling hills. The site is also a modern cemetery, allowing for only a small area of excavation around the modern tombs. It is located in the Yeşilirmak valley, on a small slope, and has few stones	
İkiztepe	İkiztepe is located in the north-central region of Anatolia, approximately 7 km. northwest of the modern city of Bafra, and near where the Halys (Kızılırmak) River river meets the Black Sea. It lies in the Bafra plain, and with its original location on both the bank of the Kızılırmak river (now 1.5 kilometers west of the site) and the Black Sea (which has since moved 6-7 kilometers to the north of the site in the present day). or the most part, these four mounds are built upon natural elevated tepes, formed by earth deposits from the flooding of the nearby Kızılırmak river, though years of habitation and settlement significantly increased the size of these natural rises. The settlements would have originally been very near the shores of the Kızılırmak river, but due to erosion movement of the river, now is around 1.5 kilometers from the river	The site would have been in a very favorable position for trade routes along the river and up to the lake, making it useful for both land and sea trading, as well as being in a fertile area for farming
Kalınkaya-Toptaştepe	Kalınkaya is located 3 km north of the site of Alaca	

Table 7.1 Landscape and Trade Route Data from Central Anatolia Continued

Site Name	Landscape Information	Trade Route Information
	Höyük	
Köşk Höyük	Köşk Höyük lies in the province of Niğde, near the village of Bahçeli, on a rocky outcrop on the eastern edge of the Bor-Ereğli plain, and is in a very visible position within the plain. To the west of the site are the Karacadağ mountains and to the north are the Masandağ and Melediz mountains. At the foot of the mount lies an ancient spring, still active today, was the source of water for the site	The site lies within a travel corridor through the nearby mountains and was likely originally occupied for its great water resources
Küllüoba	The site of Küllüoba is in the Seyitgazi district in the province of Eskişehir, approximately 35 kilometers southeast of the modern city of Eskişehir. It lies in a large plain, north of the Phrygian Highalnds, and lies on the northern edge of an ancient stream bed than has since dried out	
Kültepe-Kaneş	Kültepe-Kaneş is located in the Kayseri plain, near the foot of the Erciyes Dağı, one of the highest mountains in the Central Anatolian Plateau. The site lies along the Sarımsaklı steam, a tributary of the Kızıl Irmak river, which both waters the site and makes the area around the site highly fertile.	The site is located on an excellent area for trade, and indeed, is known as one of the most important trade routes in Middle Bronze Age Anatolia, and likely, it was a major trade location already in the Early Bronze Age as well. The site is located on an open plain, near the Yayhalı-Develi, Zamantı-Gezbeli-Sirkeli and Tufanbeyli-Ceyhan passes through the Taurus Mountains, putting the settlement in a great area for trade between Northern Syria and the rest of Central Anatolia
Kuruçay Höyük	The site of Kuruçay Höyük is located approximately 16 km from the modern city of Burdur. Kuruçay sit atop a hill, around 4 km from the shores of Lake Burdur. It sits at 960 m above sea level, and 110 m above the lake surface. The site itself rests upon a natural rise within the lower slopes of a set of hills	
Maşat Höyük	The site of Maşat Höyük rises up to 29 meters above the surrounding plain. The site is 20 kilometers south of the modern city of Zile in the Tokat province	

Table 7.1 Landscape and Trade Route Data from Central Anatolia Continued

Site Name	Landscape Information	Trade Route Information
Orman Fidanlığı	The site of Orman Fidanlığı lies six km. from the modern city of Eskişehir, in the Eskişehir Plain, 150 m. north from the bank of the Porsuk river. The area around the mound is hilly, near the Karakayırlar hills. According the the excavator "the distance and configuration must have been somewhat different in antiquity; we can, however, estimate that at the time of settlement the level of the riverbed must have been at least 20 m lower than at present"	
Resuloğlu	This cemetery site was located on a high ridge, which overlooks three small Early Bronze Age settlements contemporary to the cemetery, to the southeast, north and northeast of the cemetery ridge. A spring was located to the west of the cemetery, and was likely the main source of water for the settlements	The settlements are in important location in the Delice River valley, near where the Delice river meets the Kızılırmak river
Salur North	The site of Salur North is located in the Orta region, approximately 45 kilometers west of the modern town of Çankırı. The site is in a valley region, with large hills with high amounts of flint outcrops located to the south of the site, while to the north, the remains of volcanic activity have left large bands of obsidian deposits, both of which are comparatively uncommon raw materials for north-central Anatolia, probably adding to the importance of the site. The site lies in a fertile, rich zone, ideal for agriculture and for the raising of animals.	
Yumuktepe/Mersin	Yumuktepe lies within the modern city of Mersin, located in the plain created between the Jeihan and Seihan rivers in southcentral Anatolia. The site of Yumuktepe itself lies along the Efrenk river, near the Mediterranean coast. Nearby to the north are the Taurus mountains	The site lies in the Calycadnos valley on the coastal plain of Mersin, which leads through one of the easiest passages through the Taurus mountains, the Cilician gates. The site thus lies in a very important area for trade, near both the outlets of rivers as well as along the Mediterranean, being in the middle of the trade route between Northern Syria and western Anatolia

Table 7.2: Landscape and Trade Route Data from Southeastern Anatolia

Site Name	Landscape Information	Trade Route Information
Arslantepe (Malatya)	Arslantepe lies 6 km north of the modern city of Malatya, in the Malatya plain, with the Amanus mountains visible from the site	
Birecik	This cemetery site is located in the Euphrates River Valley, south of the Taurus mountains, and 800 meters southwest of the Birecik Dam itself, the fourth dam constructed by Turkey along the Euphrates It is only 10 kilometers away from the site of Hacınebi Tepesi and 25 kilometers north of Carchemish, with similar styles of burials previously excavated from the Early Bronze Age from those sites. The dam is 45 kilometers east of the modern city of Gaziantep. The site sits approximately 350-500 meters above sea level, and is 30 meters from the western bank Euphrates river. It lies in the river valley, upon a limestone plateau that has been seasonally flooded with clay pluvial fill	
Carchemish	The site of Carchemish was originally founded upon a small naturally occurring rocky outcrop along the shores of the Euphrates river	The location of the site is very strategic for trade along the river and between Northern Syria and Anatolia
Değirmentepe	Değirmentepe was located 22 km east of the modern city of Elazığ, along the road between Elazığ and Bingöl, before it was destroyed in the flooding of the valley. Değirmentepe was located at the northern edge of the Altınova plain, nearby where the Murat Su river exits the plain (Duru 1979:65-68). It was easily mistaken for a natural formation, as it lies along a series of natural ridges surrounding the Murat Su	

Table 7.2 Landscape and Trade Route Data from Southeastern Anatolia Continued

Site Name	Landscape Information	Trade Route Information
Domuztepe	The site is located in the Kahramanmaraş region of southeastern Anatolia, in the northwestern edge of the Fertile Crescent, which continues down into Syria and Iraq, forming the ancient area of Mesopotamia. Domuztepe is at the edge of this, near where the Fertile Crescent ends as it meets the Taurus Mountains and into the Anatolian Plateau. The site itself is set. al.ong the edge of a large alluvial plain with a range of low, rolling hills to the west. The plain itself is flat and often flooding, making for fertile if problematic farmland. The settlement was likely surrounded by oak and pistachio forests and was likely a swampy area up until around 4000 BC, when the area changed over to oak forests, as are still present today	The site sits upon the passage between Mesopotamia and the Anatolian Plateau through one of the most important passes through the Taurus mountains
Fıstıklı Höyük	The site of Fıstıklı Höyük is located along the eastern edge of the Euphrates river floodplain, near the limestone bluffs that mark the edge of the plain, and approximately 4 km south of the modern city of Birecik and 25 km from the site of Carchemish	
Gedikli/Karahöyük	The site of Gedikli, also called at times Karahöyük, is located in the western edge of the Sakcagözı plain, in a marshy area. The site is 23 kilometers from the modern city of Islahiye	
Girikihaciyan	Girikihaciyan was 175 m. in diameter with a height of 3 m. above the surrounding plain, and was situated nearby the village of Ekinciyan. The site likely was fed through some small local springs, but was never a large site and was only occupied in this single period. Northeast of the site are a range of low hills	The site lies at the northeastern edge of the valley between the modern areas of Ergani and Diyabakır, then through into the northern Syrian plain
Gritille	The site of Gritille is located along the right bank of the Euphrates river in Southeastern Turkey, within the Euphrates flood plain, near a series of rolling hills to the north of the site. Gritille is near the boundary between the the Adıyaman and Urfa provinces, where the Euphrates creates a natural boundary between these region. The site itself lies along two natural springs, allowing for a good source of fresh water for the inhabitants. The larger site of Lidar is located directly across the river, and the two sites were often inhabited contemporaneously.	Between the two sites are a number of small islands in the river, which would have been present in ancient times as well, which allow an area for river crossing. The excavators of Lidar Gritille postulate that the two sites were so placed in order to create a controlled area for crossing the river, as no other easy crossings are within a nearby distance. Perhaps the two sites were in fact controlled through a single government

Table 7.2 Landscape and Trade Route Data from Southeastern Anatolia Continued

Site Name	Landscape Information	Trade Route Information
Hacınebi	Hacınebi is located in the Euphrates River valley, settled on limestone bluffs above the east bank of the river, 5 kilometers north of the modern town of Birecik, in the Şanlıurfa province. The site sits upon limestone buffs and along the Euphrates river, also placed it in an easily defended location	The location of Hacınebi places it on the trade route between southern Mesopotamia and eastern Anatolia, as well as along the major crossing point of the river, from the Roman times until the present
Hassek Höyük	Hassek Höyük lies along the eastern bank of the Euphrates river in the Keban region. The site sits upon a ridge over the river, in the river valley with rolling hills in the near distance. It is located 10 km north of the modern city of Samsat	The site is located along a large bend in the Euphrates, near a common crossing point of the river.
Hirbemerdon Tepe	The site of Hirbemerdon Tepe is located along the west bank of the Tigris river in Southeastern Anatolia, near where the Batman Su and Tigris river meet, approximately 30 kilometers of the modern town of Bismil. The site is made up of a High Mound (Area A), an Outer Town (Area B), which lies to the south of the High Mound, on a natural rock formation, and a Lower Town (Area C), which lies northwest of the mound, separate from the rest of the site by a natural rock formation	
Kalaycık Tepe	Kalaycık was located on the eastern shoer of the Karasu River, near where it joins the Murat River in the Keban valley. The mound was built upon a natural rise	
Kazane Höyük	Kazane is located 3 kilometers south modern city of Şanlıurfa, in the northern edge of the Harran plain	
Kenan Tepe	Kenan Tepe is located along the northern bank of the Tigris River, in the Ilısu dam region, approximately 15 kilometers west of where the Tigris river meets the Batman river in Diyabakır Province. The site sits upon a natural terrace above the river	
Korucutepe	The Korcutepe mound was located 30 km east of the modern town of Elâzığ in eastern Anatolia. The site was located in the Altinova valley, a riverine valley near the Murat river, and close to where the Murat River meets the Euphrates. The area surrounding the site is relatively flat, with good agricultural land, and a series of low mountains to the north	This site would have been within a good trade route, between Northern Syria and eastern Anatolia

Table 7.2 Landscape and Trade Route Data from Southeastern Anatolia Continued

Site Name	Landscape Information	Trade Route Information
Kurban Höyük	Kurban was located along the southern bank of the Euphrates river, near where river meets the Anti-Taurus mountains, in the Bozova district of the Urfa province. It lies approximately 60 km northwest of the modern city of Urfa. Numerous small springs can be found around the site of Kurban Höyük, likely one of the original reasons the site was inhabited. The Euphrates river was approximately half a kilometer away from the site at the time of excavations	Nearby at the rolling hills of the Urfa-Gaziantep plateau, with the site in the travel route between northern Syria and Central Anatolia, though the site is far more connected to the northern Syria area than to the Anatolian highlands.
Norşuntepe	Norşuntepe was located 26 km from the modern city of Elazığ	
Oylum Höyük	Oylum Höyük is located along the bed of the Akpınar Suyu, a small seasonal stream in the Kilis Plain. The Resul Osman Dağları mountains are to the north of the site	he mound would have been quite imposing in the prehistoric landscape, and was well located as a trading post between Syria and Southeastern Anatolia, near where the plains meet the mountains
Pulur (Sakyol)	The site of Pulur was located 45 km from the modern town of Elazığ. It was placed on a natural rise, near the source of a small stream, and was not easily visible from the surrounding landscape	
Samsat	This large mound was located along the western shore of the Euphrates river	Near a traditional location for crossing the river in the region
Tepecik/Makaraz Tepe	Tepecik was located in the Keban dam area, approximately 31 km east of the modern town of Elazığ in the plain of Altınova. The site was in a well watered area, there being a number of natural springs in the vicinity. The mound itself is in a very flat plain	
Tilbes Höyük and Surtepe	The site of Tilbes Höyük was located along the Euphrates river, north of the modern Birecik area, 22 km north of the modern city of Birecik	Located along the Euphrates were the river narrows, forming a small *cul-de-sac* that slows the river, making this an ideal place for crossing the river
Tilbeshar	The site of Tilbeshar is located along the Euphrates in Southeast Turkey, in the middle of the Sajur plain, in a small depression surrounded by nearby small hills. The site is approximately 20 kilometers south-east of the modern city of Gaziantep. The site itself was located in the Sajur river basin, allowing for very fertile and well watered land	Tilbeshar was located particularly strategically, being close to the Euphrates and the Sajour rivers, and nearby the Quoeiq valley to the south and the Afrin and Amuq valleys to the west, with connections through the Kweik river and the Afrin river, placing it in an excellent position for trade. To the north and west are the Taurus mountains, while to the south are the large plains that extend into modern day Syria

Table 7.2 Landscape and Trade Route Data from Southeastern Anatolia Continued

Site Name	Landscape Information	Trade Route Information
Tilmen Höyük	Tilmen is located within a plain, with numerous large hills nearby, and with a large amount of basalt stone, 10 kilometers east of the modern town of Islahiye	
Tishrin Dam Sites		
Tell Shioukh Fauqani	The site of Tell Shioukh Fauqani is located along the Euphrates river, five kilometers from the modern city of Djerablous	
Jerublus Tahtani	Jerablus Tahtani lies 5 kilometers south, along the Euphrates river, of the site of Carchemish	
Tell Shiyukh Tahtani	The site of Tell Shiyukh Tahtani lies on the left bank of the Euphrates, across the river from Tell Amarna	
Tell Amarna	The site of Tell Amarna is located 13 kilometers south of the site of Carchemish, along the Euphrates river, and is surrounded to the west and north by the wadi Amarna	
Tell Al-'Abr/ʿAbr	The site of Tell Al'-Abr is located along the eastern bank of the upper Euphrates river, 15 kilometers south of the modern boarder city of Jerablus, at the confluence of the Sejour tributary and the Euphrates	
Titriş Höyük	Titriş Höyük lies 45 kilometers north of the modern city of Şanlıurfa, in a small plain, flanked by small limestone hills and the Tavuk Çay river, a small seasonal tributary of the Euphrates	
Tülintepe	The site of Tülintepe was located in the Altınova valley. Tülintepe was also in an area rich in springs and irrigation. The site was located approximately 21 km east from the modern city of Elazığ, and approximately 4 km from the mound of Tepecik	The site lay on the ancient road between Elazığ and Bingöl, which was the major travel route in the area
Yarım Höyük	The site of Yarım Höyük is located along the western bank of the Euphrates River, approximately 5 kilometers south of the modern town of Birecik in the Gaziantep Province	
Zeytinlibahçe Höyük	The site of Zeytinlibahçe Höyük is located in the Urfa province, approximately 2 km from the modern city of Birecik, and lying along the left bank of the Euphrates River. The site lies in the Euphrates river valley, with the foothills of the Taurus mountains not far away	

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