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This work is dedicated to the many family, friends, and colleagues who helped make it possible.

Above all, this work is dedicated to my wife, Anne Marie, who made it all possible.

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1.0 – Introduction

The idea for this dissertation came to life from reading Herman Genz's 2005 article 'Thoughts on the Origin of the Iron Age Pottery in Central Anatolia'. In this article, Genz considers why the painted Iron Age pottery of Central Anatolia, dating to after the collapse of the Hittite civilization (i.e. after 1200 BC) looks so much like the Middle Bronze Age (MBA) and Early Bronze Age (EBA) pottery (i.e. prior to 1700 BC). The similarity is unexpected because the EBA/MBA painted ceramic traditions seemingly disappeared with the rise of the Hittite state and its more uniform, unpainted¹ ceramic tradition. How did a distinctive, painted ceramic tradition disappear only to re-emerge after 500 years? Genz (2005: 82) has this to say:

Two different explanations can be suggested. The older ceramic tradition may have survived in areas that remained outside of Hittite control, for example in parts of Western Anatolia or to the north in the area of the Pontic mountains. Another possibility is that the earlier pottery traditions may have survived within the Hittite empire, in the more remote rural areas.

Genz is not the first to grapple with this question. Bittel (1937: 40) observed the similarity between the EBA painted ceramics and Iron Age Phrygian ceramics at Hattusa, wondering, likewise, if they were related. Öktü (1973: 141), noting the same similarity, argued that they were related, but did not elaborate on why. Sams (1971: 311ff) argues against the possibility of any kind of connection, citing similarities in geometric motifs with the much earlier Halaf ceramic tradition from northern Iraq and eastern Syria². He uses this observation to suggest that such geometric motifs were too universal to indicate a shared tradition. Özkaya

¹ Hittite painted ware is very rare, which makes separating out painted traditions from Hittite pottery relatively easy. An interesting counter-example is observed by Fischer (1963: 33-34) from Room III of Building C of the Büyükkale, dating to the late Empire Period. This room, called a 'shrine', had a series of sherds from hand-made vessels that had been painted (*ibid.*: Pl. 20.201-204). The painted decoration included geometric designs, but a quick glance clearly shows that this was of a different tradition than those discussed in this dissertation.

² Orthmann (1963a: 81) notes this general similarity as well, though he suggests the tradition is direct, not coincidental, and stems from the Ubaid tradition.

(1995: 140) proposed Genz's first explanation, that peripheral and archaeologically undetected peoples kept the tradition alive and, in the absence of the Hittites, enabled it to flourish again in the Iron Age. Seeher (1998: 236-239) agrees, arguing that it was the northern Gasgaeans who kept the tradition alive. He further notes that, in addition to painted designs, similarities in production methods connect these traditions. Genz (2005: 76, 78) too looks beyond the painted motifs and argues that the typology of the pre-Hittite and post-Hittite painted ceramic traditions is very similar, notably in handles and spouts. He (2005: 82) is, however, dismissive of the Gasgaeans being responsible, explaining that no other form of Gasgæan culture has been identified in Iron Age Central Anatolia. Schoop (2011: 265-267) states that a connection must exist, but is skeptical of both of Genz's proposed explanations. He views the Gasgaeans as newcomers to the area of North Central Anatolia, not a continuation of an earlier, EBA or MBA culture³. Further, he argues that if the painted tradition did exist in the rural countryside, why don't we see more of it at urban centers, with which rural populations would surely have interacted⁴?

Schoop's question is an important problem in its own right, but also reflects a larger gap in Hittite archaeology. The gap is in our knowledge of rural communities (whether they were responsible for the continuation of the painted ceramic tradition or not). These communities have, thus far, been fairly invisible archaeologically⁵ and the Hittite textual record, which does mention them, provides very few clues to aid in our understanding. Thus, we are left with the

³ Though Mielke (2016: 50-51) notes the presence of painted pottery in secure Hittite contexts at Oymaağaç Höyük and argues that it may be Gasgæan.

⁴ Orthmann (1963a: 34-35) remarks that non-Hittite painted pottery is very rare at Hattusa levels 8c-8d (Old Hittite). Painted ware appears in Nordweshang of Hattusa as late as 8b, though these sherds are possibly intrusive from an earlier level (Orthmann 1963: 43). Fischer (1963: 32-33) notes that painted wares appear at Büyükkale IVc, but also sees these as intrusive from an earlier period.

⁵ Though Czichon's (2000, 2003) intensive survey of the area around Hattusa has revealed several small settlements that could very well be rural communities just outside the walls of Hattusa. See Section 2.4.3.2 where I discuss this in more detail.

impact these communities had on larger, more urban settlements, if we are to develop a clearer picture of them.

My research seeks to address our lack of knowledge on the Hittite countryside indirectly by examining possible evidence that rural communities did leave material culture at larger settlements in the form of their painted ceramic tradition. Through this evidence, this dissertation argues that the Iron Age painted ceramic tradition was a continuation of a Late Bronze Age (LBA) painted ceramic tradition that has remained relatively invisible due to its being based in unexcavated rural communities. In the process of demonstrating this, this dissertation examines the role of Çadır Höyük as a large settlement connected at a local level to rural communities and at a regional level to the larger Hittite state administration and organization.

1.1 – Context of Research

This dissertation focuses on the Hittite settlement of Çadır Höyük, a small, walled settlement in the Kanak Su Valley, 60km southeast of the Hittite capital, Hattusa. Çadır rests in an archaeologically rich environment, just off the pathway between two larger Hittite urban centers, Uşaklı Höyük and Alişar Höyük. Around Çadır are numerous smaller archaeological sites that have been identified through von der Osten's surveys in the 1920s and 30s as well as more recent surveys conducted by Summers et al. (1995) and Branting (1996). Chapter 5 provides a thorough discussion of this archaeological landscape. Here it is important to indicate that Çadır existed as a settlement with easy access to both larger urban centers and smaller rural population centers. This location, I argue, placed Çadır in a position where it was closely connected to both kinds of community and thus provides an opportunity to examine aspects of rural interactions with urban life in 2nd Millennium BC Anatolia.



Figure 1 - A view of Çadır Höyük looking north by north-west. Kerkenes can be seen as the mountain behind and to the right. Taken by author, 2015.

Perhaps it is best in this situation to use Hittite terminology to define the communities under discussion. In this case, *ḫalzi* is very likely the Hittite term that would have applied to Çadır Höyük. This is discussed in more detail in Section 5.1.2, but here it is useful to say that according to Hittite texts, there were several settlements designated as *ḫalzi* in the region south of Hattusa. A *ḫalzi* was a settlement that served as an administrative center for smaller towns and farming communities in the *gimra*, or countryside. Many of the communities listed as answering to a *ḫalzi* are mentioned only once in Hittite texts, or only ever mentioned in relationship to their *ḫalzi*. Thus, it is almost certain that these communities were not large, politically significant urban centers, but rather were smaller rural population centers.



Figure 2 - East face of Çadır Höyük, where the archaeological contexts discussed in this dissertation are located. Photo by author, 2015.

It is the interaction between these *gimra* communities and their *halzi* that this dissertation seeks to identify. My research argues that pottery is one way this can be done and demonstrates how an analysis of pottery from Çadır Höyük reveals elements of this interaction. The identification of characteristics of different, contemporaneous ceramic traditions and the types of vessels that represent them, inform us about these urban and rural communities and how they engaged with each other.

1.2 – Theoretical Foundations

In order to explore what can be said about the interactions between urban and rural communities during the Hittite era, I will draw from a line of theoretical arguments put forth by D’Altroy and Earle and the adaptations of those arguments made by Frangipane, Çevik, and

Burgin for Anatolia. In their seminal article ‘Staple Finance, Wealth Finance, and Storage in the Inka Political Economy’, D’Altroy and Earle (1985: 188) complemented Polanyi’s (1968) concept of *staple finance* with the term *wealth finance*, introducing the field of archaeology (and anthropology) to a dichotomy that would have tremendous impact on scholarly views of ancient economies.

A staple finance economy involves the accumulation, storage, and redistribution of staple goods, such as agricultural produce and livestock as well as utilitarian materials such as textiles, tools, and pottery. This emphasis on land, for both agricultural production and pasture for livestock makes land ownership an important component to this system. The staple goods are collected by those in power and then distributed to those who serve them. It serves societies based on agricultural production well given that this production, in essence, becomes currency, paying for service rendered to those with authority. This manner of economic organization can occur on multiple levels, but, of course, archaeologists are generally interested in understanding how it functions at the level of urban center or, larger and more broadly, the state. D’Altroy and Earle (*ibid.* 188) also note that this system can also serve larger, state level entities, such as a kingdom or empire, when these are distinguished by strong political leadership at a regional level.

Wealth finance is characterized by the accumulation, storage, and redistribution of prestige goods, either as raw materials or highly specialized crafted goods. Similar to staple finance, these goods are collected from the population subservient to those in power and then redistributed, though the redistribution may look different. As the prestige goods are often rare and occasionally unique to the region that produced them, they are more frequently traded with

neighboring regions than staple goods. This trade emphasizes a control over trade routes, much the same way staple finance emphasizes control over land.

Another important distinction made by D'Altroy and Earle (1985: 188) is that wealth finance is more commonly found with centralized authority than with decentralized, more autonomous units within a political system, which employ a staple finance approach. This correlation has been picked up and developed thoroughly by Frangipane (1993; 2010; 2012a; 2012b; 2016) who, likewise associates wealth finance with a centralized political system and has used Arslantepe to illustrate what this looks like on the ground.

Frangipane (2012b: 115-116) argues that pre-Hittite Western and Central Anatolia can be characterized by the wealth finance model, as centers such as Troy and Alaca Höyük revealed evidence for the accumulation of prestige goods and have little evidence for control over staple goods via administrative tools, such as cretulae or other sealing practices. Frangipane (2010: 84) also notes the prevalence of defensive architecture surrounding larger population centers and argues that this is evidence of endemic warfare due to competition over trade and territory. Çevik's (2007: 137) analysis comes to the same conclusion, citing, additionally, the lack of evidence for large storage for staple goods, lack of public spaces, and poor control over the hinterland. Şahoğlu's (2005) argument about expansion of EBA trade networks supports these arguments further by illustrating the emphasis on the movement of smaller, more prestigious, and more transportable goods as opposed to the large scale collection of staple goods.

The picture that emerges from these observations is that a series of small kingdoms (or potentates, as Frangipane refers to them) emerged to control the trade of prestige goods across Western and Central Anatolia. When Anatolia enters history, with the arrival of literate Assyrian

merchants at Kanesh after 2000 BC, this is exactly the image that their writings record, both across the Anatolian plateau and at Kanesh itself (this is addressed in greater detail in Chapter 2).

The emergence of the Hittites at the end of the MBA and their consolidation of much of Central Anatolia into a large, multi-polity kingdom, introduced a political model that had not been present in Anatolia before. Despite this novelty, Burgin (2016) shows, through his analysis of the KASKAL texts, that the Hittite kings continued to depend on luxury goods, specifically those with religious value. Burgin (2016: 92) further points out that nearly all Hittite economic-administrative documents dealt with prestige goods⁶. From this, he (2016: 95-96) effectively argues that the Hittite state is best regarded as a continuation of the prestige good/wealth finance paradigm that had characterized Anatolia for more than a millennium. Frangipane (2012: 120-122) argues the same way, suggesting that the pre-Hittite local political traditions imposed themselves on the Hittite state. She further argues that the Hittite ruling class, with its eye towards Mesopotamia and its more staple finance oriented economy, introduced aspects of staple finance, though to a far lesser degree than their eastern neighbors. While this is not directly visible in their texts, we do learn of land management practices that emphasize royal and religious (which, with religion being so closely tied to the state, still means ‘royal’ in a way) ownership of land. Further, there is archaeological evidence for massive storage, though this may not be as straightforward as we think. Chapter 2 continues this discussion further.

Frangipane (2012: 122) argues, in fact, that a synthesis between the two economic models of staple and wealth finance was common to all ‘mature’ Near Eastern states. D’Altroy and Earle (1985: 188) are likewise careful to caution that the staple and wealth finance designations are ultimately simplistic and that in the real world, one would expect varying and

⁶ See van den Hout (2012) for a thorough discussion of this.

complex blends of both. While I agree with Frangipane and Burgin, I am interested here in exploring these models at the local scale of Çadır Höyük. Since control of land and agricultural production is a major factor in assessing ancient economic strategies, my study of rural and urban interactions at Çadır lends itself well to furthering this discussion.

1.3 – Hypothesis and Chapter Summary

The hypothesis driving this research is simple and draws from Genz's second proposed solution to the painted ceramic mystery:

EBA/MBA painted ceramic traditions continued into the Hittite LBA by being relegated to rural communities.

The implications of this hypothesis, if true, are more complex. Central Anatolia was inhabited by a people called the Hattians prior to the emergence of Hittite political dominance. The Hattians are known to us only through Hittite discussions of them and the significant mark they left on Hittite culture⁷. If the emergence of the Hittites drove a ceramic tradition out of Central Anatolian urban spaces, it would very likely have been the Hattian people who enabled that tradition to live on in the countryside. This is, of course, conjectural⁸ and not entirely important for the focus of this research. The famous archaeological caution that pots are not people is certainly relevant to this line of thinking.

A more meaningful implication would be that we have insight into Hittite farmers and their community, albeit in a very limited way. No Hittite rural community has been excavated⁹ and our understanding of how these rural communities interacted with the Hittite state is entirely dependent on Hittite texts. These texts do provide information (covered in Chapter 2), but it is

⁷ One could argue that they are known to us archaeologically as well, but, as I discuss below, this is debatable.

⁸ Though note Kloekhorst's (2019: 246) confidence that late EBA III Hattusa and its environs were Hattic.

⁹ Mielke (2011: 155) noted this eight years ago and the statement still holds true as far as I am aware.

limited to names of villages, headmen, and occasionally populations. Who these people were, how they engaged with the Hittite administrative system, and the ways in which they identified themselves are not truly visible in these texts. To develop a more thorough picture of this population, we must turn to archaeology and examine the above stated hypothesis.

In order to do this, this dissertation is divided into five additional chapters.

Chapter 2 – 2nd Millennium Agriculture

This chapter reviews our knowledge, both archaeological and textual, of agricultural administration in the 2nd Millennium, predominantly at Kanesh for the beginning part of this millennium and then examining the Hittites for the continuation. This chapter provides the framework necessary to understand how rural communities would have been situated around urban centers and how they would have interacted with them for agricultural administrative purposes.

Chapter 3 – 3rd and Early 2nd Millennium Anatolian Ceramic Traditions

This chapter summarizes the arguments and observations that have been put forward regarding ceramic traditions in the 3rd and 2nd Millennium BC. This is a complicated topic that is almost 100 years old and hosts numerous observations and opinions. An in-depth discussion of this topic does not exist, to my knowledge, and so this chapter presents this topic in great detail for the first time. Furthermore, it provides the context necessary to understand the significance of multiple ceramic traditions appearing at Çadır Höyük. This chapter examines the prevailing belief that such a phenomenon is not likely while detailing the very ceramic characteristics that indicate that it is in fact likely, at least at Çadır.

Chapter 4 – The Pottery of Çadır Höyük

This chapter presents, in detail, the painted ceramic tradition that appears in 2nd Millennium contexts at Çadır Höyük. It discusses the pottery in terms of production, decoration, typology, function, and distribution within its archaeological context. The aim of this chapter is to demonstrate that the appearance of this tradition is more likely due to contemporary usage than to archaeological intrusiveness (which is the common argument to explain away the presence of painted traditions in Hittite contexts).

Chapter 5 – The Archaeological and Textual Landscape

This chapter examines Çadır Höyük within the rural and urban communities that make up its broader landscape. This is important to distinguish why rural communities would have interacted with Çadır and what kind of land, and thus, an approximation for the number of communities, Çadır commanded. This chapter also discusses Çadır's likely role in the Hittite state administration. This role is addressed by examining Çadır's position in the archaeological landscape and using texts to narrow down the most likely administrative responsibilities Çadır would have had.

Chapter 6 – Conclusion

This chapter discusses my findings and places them into a larger context.

2.0 – Agricultural Management in the 2nd Millennium - Historical and Archaeological Context

In Chapter One, I discussed how it is best to view D’Altroy and Earle’s categories of economic organization as representing varying blends of a prestige good economy and a staple good focus economy. The recognition of these two types of economic organization is a useful tool for categorizing agricultural management strategies and understanding how they fit into the larger economic agenda of the state which they serve. To this end, this chapter will discuss some historical and archaeological evidence for agricultural management in 2nd Millennium BC Central Anatolia. The focus will be on Kanesh and Hittite Anatolia as these areas have produced the greatest amount of data, both textual and archaeological. This chapter will then discuss how the data fit into the mode of economic organization identified by D’Altroy and Earle (1985) and adapted by Frangipane (1993, 2010, 2012) for Anatolia and addressed recently by Burgin (2016). Beginning with Kanesh, it is the goal of this chapter to delineate the gradual movement away from the EBA centralizing economy focusing more on prestige goods as the political and economic organization within Anatolia coalesced around the Hittite Kingdom and then Empire. This is relevant to the discussion of Çadır Höyük and its ceramic traditions because, as I will argue later, it was the staple finance oriented organization that we see on a local level at Çadır that contributed to the larger shift away from a wealth finance economy.

Additionally, this chapter will situate, as best as possible, the relationship between the farmers of the 2nd Millennium and the state organizations with which they interacted. The Anatolian farmer is not well known to us and until the excavation of a Hittite or MBA farmstead, will remain relatively elusive. This dissertation makes significant, yet still small strides in demonstrating the way in which the Anatolian farmer responded to the political transitions that

characterized the 2nd Millennium. The current chapter reviews our knowledge of these transitions and how they relate to the organization of farming and the economy.

2.1 – The Old Assyrian Trading Colonies

The trade network that the Assyrians established across Anatolia was not new. It lay on a groundwork of older networks that had been in use for probably thousands of years. Evidence for earlier trade networks will be discussed in Chapter 3 (Section 3.2). One distinction of the Assyrian network of the MBA was the introduction of writing to Anatolia and the wealth of information that this provides to us now. The texts from Kanesh reveal the very human nature of the Assyrian and Anatolian merchants who struggled to make a profit and navigated the often tumultuous Anatolian world in which they found themselves. Fortunately for this research, the texts also occasionally make references (direct and indirect) to things unrelated to trade, such as local agricultural activities. From the fragmentary collection of textual references, we can cobble together a rough understanding of how the ancient city of Kanesh managed its agricultural resources and labor. This can then be matched with archaeological evidence to further inform our perception, though it must be noted that archaeological evidence can often be more open to various interpretations than the textual data.

2.1.1 – Assur - Excavation History

The origins of the city of Assur, located on the west bank of the Tigris 99km south of Mosul, are fairly unclear to us as the excavation of EBA and MBA levels at this site have proven difficult. Excavations began in 1903 under the directorship of Walter Andrae of the Deutsche Orient-Gesellschaft (German Oriental Society). The British, who had had great success excavating Nimrud, Nineveh, and Khorsabad, had already examined Assur, but decided against excavating there due to a lack of immediately interesting discoveries. Excavations continued at

Assur through the Deutsche Orient-Gesellschaft until the outbreak of World War II which introduced a 40 year break (Renger 2011: 2, 5-6). Excavation resumed briefly in the late 1980s (Dittman 1990) and a final time from 2000-2001 (Miglus 2003).

The excavations at Assur were unable to access the archaeological levels associated with the Early or Middle Bronze Age very often. This was primarily due to the numerous later levels that rested on top of these earlier levels. Early Dynastic III era (2600-2350 BC) votive statues discovered underneath the later temple of Assur are among the earliest finds at the site and indicate that this temple and thus the city likely date to as early as the Early Dynastic period (Bär 2010: 10; Larsen 2015: 87).

2.1.2 – Rise of Assur as an Independent Political Polity

The first writing at Assur is in the form of votive inscriptions in Akkadian from the Old Akkadian period. They offer little in terms of historical detail but they do indicate that Assur was under the control of the Akkadian kings to the south much as it had likely been under the control of the Early Dynastic kings in the previous era (Larsen 1976: 31). This is further supported by later data such as (unpublished) Akkadian documents, a mace head inscribed with the name ‘Rimuš’ (son of Sargon and king of Akkad), and a spear point inscribed with the name ‘Maništušu’ (younger brother of Rimuš and king of Akkad) (Foster 2016: 63).

Assur begins to appear in southern written sources during the Ur III period (2100-2025 BC) and is described as a seat for military governors (Akkadian *šakkanakku*). One of the first governors, Sarriqum, built a temple at Assur and had an inscription written upon it (Halla 1956: 220). Other governors are known, but little is recounted that can piece together a complex history. It is with the fall of the Ur III Dynasty that Assur finally gained a lasting independence. The earliest datable king of Assur is Erišum, who reigned from 1972-1933 BC. Six kings are

believed to have come before Erišum based on inscriptions found with their names, but there is no evidence with which to date them other than to place them between the fall of Ur III and the reign of Erišum (Veenhof and Eidem 2008: 29; Barjamovic et al 2012: 27). Five more kings followed until Assur was conquered by Šamši-Adad I in ca 1808 BC.

We know these dates because of the office of the *limmu*, which was an administrative job responsible for controlling the economic activities of the city (Larsen 2015: 122-123). This office was held for a year and that year was named after the holder of the office, in what is called the eponym dating system. Thus, the first recorded year (1972 BC) was that of Šu-Ištar, son of Abila, and was known to the people of Assur and recorded in texts as the year of Šu-Ištar. Fortunately for us, the names of these bureaucrats were recorded on numerous lists and in several locations over the years. The discovery of fragments of these lists eventually led scholars to be able to create the Revised Eponym List, starting with Šu-Ištar (1972 BC) and ending with Anāku-ana-Assur (1718 BC) (Barjamovic et al 2012: 94, 97). Merchants at Kanesh would often refer to a calendar year using the name of that year's *limmu*. Because of this, we know that the earliest documents from Assur discovered at Kanesh date to 1928 BC (Derksen 2008c: 111).

2.1.3 – The Old Assyrian Trading Colonies - Structure and Geography of Network

Merchants from Assur began to travel to Anatolia at least as early as the mid-20th century BC and almost certainly earlier. They were using routes and stopping at cities along them that had participated in earlier trade networks that extended at least as far back as the EBA. Şahoğlu (2005) and Efe (2007), for instance, have argued for an expansive over-land trade network that began to reshape the cultural identity of Anatolia beginning in EBA III.

What is most different about the appearance of the Old Assyrians is the written records they kept which, having been recovered archaeologically, inform us of several of their activities.

From these records we know the goods that were traded, the quantities and prices of those goods, the locations through which they travelled, and where they were sold. While less than half of the approximately 23,000 tablets/fragments have been translated and published (Larsen 2015: 190), the picture that scholars are able to create from them has considerable detail.

The Mesopotamian roots of the Assyrian trading system are visible in their terminology. An example of this is the term *kārum* (plural *kārū*), meaning ‘quay’ or ‘harbor’ in Akkadian. Initially, a *kārum* was the district within a city where goods arrived from the river and where storehouses for those goods were often located (Veenhof 2010: 42). The Assyrians, who travelled to Anatolia by land, as well as the native Anatolians, used the term *kārum* simply because this word had come to be more associated with trade than with a geographical part of a city on a river. The term *kārum* has come to mean ‘colony’ now¹⁰, hence the phrase ‘Old Assyrian Trading Colonies’. There was also a smaller version of the *kārum* called a *wabartum* (plural *wabaratum*) which translates literally to ‘place of guests’ but is now generally translated as ‘trading station’ (Larsen 2015: 148).

25 *kārū* and 22 *wabaratum*¹¹ are known from texts during the Old Assyrian trading period. These trading centers stretch from the east side of the Habur Triangle¹² to the western parts of Central Anatolia¹³. Very few of the cities that hosted these depots have been identified in

¹⁰ See Michel (2014) for the problems with this definition and the problem of treating the *kārum* at Kanesh as a static entity throughout its usage.

¹¹ A total of 39 cities with either a *kārum* or a *wabartum* are known. Some *kārū* were downgraded to *wabaratum* over time and the reverse also occurred, thus, the total of 47 (25+22) *kārū* and *wabaratum* documented.

¹² The ancient kingdom of Apum may have been the location of the easternmost *kārum*. While its exact location is debated (Eidem [2008a: 270] argues for Tell ‘Aid whereas Kolinski [2014: 16] argues for Tell Muhammad Diyab) it is agreed that it must be near Tell Leilan.

¹³ The westernmost *kārum* is likely to be that of Burušaddum. Several archaeological sites have been argued to be this ancient city. Three of the more thorough arguments are Acem Höyük (Forlanini 2008: 65), Bolvadin Üçhöyük (Barjamovic 2010), and Konya-Karahöyük (Hakwins 1995: 173; Veenhof and Eidem 2008: 167)

the archaeological record. The ones we are most confident about include the following (from Barjamovic 2011: 403; Veenhof and Eidem 2008: 154-155; Eidem 2008b: 32):

<i>Ancient Name</i>	<i>Modern Name</i>	<i>kārum/ wabartum</i>	<i>Notes</i>
Šehna/Šubat-Enlil ¹⁴	Tell Leilan	<i>kārum</i>	Capital of the kingdom of Apum
Kanesh	Kültepe	<i>kārum</i>	Hub for Anatolian trade
Hattusa	Boğazkale	<i>kārum</i>	Later Hittite capital
Amkuwa	Alişar Höyük	<i>wabartum</i>	
Karahna	Sulusaray	<i>wabartum</i>	
Zalpuwa/Zalpa	Ikiztepe	<i>wabartum</i>	

Figure 3 - Archaeological Sites known to have a *kārum* or *wabartum*

In addition to Kanesh, Old Assyrian texts have also been discovered at Boğazkale, Alişar Höyük, Kaman Kale-Höyük, and Kayalıpınar. There are two other finds of note. The first is a group of spear or arrow heads found near the small village of Hasancıklı, in Kahramanmaraş Province, with the name of Anum-Hirbi written in cuneiform upon them (Donbaz 1998: 178, 181). Anum-Hirbi was a well-known king and the location of the arrowheads bearing his name fits well within the region where his kingdom, Mamma, is believed to have been according to Barjamovic (2011: 207-208).

The second find is the lead impression of a full clay cuneiform tablet from the Old Assyrian Trading Colony (OATC) period. This was discovered in a field north of Büyükhırka Köyü, a town 9km directly NE of Hattusa. In the same field as the lead impression, pottery dating from Classical to Ottoman times was also uncovered. Taş and Ipek (2015: 185-187) argue that the Old Assyrian clay tablet may have been found and impressed onto the lead any time during or after the Classical period. They suggest that it may have been a pendant, which indicates that it likely had moved from its original find spot, though Hattusa, which lay approx. 13.5km along a path, may have been the origin of the tablet. The text itself is broken, but appears

¹⁴ ‘Šubat-Enlil’ was a new name given to ancient Šehna in the 19th century BC, most likely by Šamši-Adad (Eidem 2008a: 296).

to discuss hiding the transportation of silver. Two personal names are given, Šu-Anim and Nakiliat¹⁵, but no locations.

The support the arrowheads provide for the location of the kingdom of Mamma is useful as very little is known concerning the location of the numerous *kārū* and *wabaratum* that were a part of this trading network. Of the six sites listed above, only Kanesh and Hattusa are accepted unequivocally. The remaining four sites are generally, though not unanimously, agreed to be correctly identified with an archaeological settlement. Thus, only 2 of the 39 sites with *kārū* or *wabaratum* mentioned in Old Assyrian texts have been securely identified. If we include the 4 additional sites, we are still left with 33 historically attested locations that have not been convincingly identified in the archaeological record.

2.2 – Kanesh

Because such a large amount of evidence comes from Kanesh and because Kanesh was the center of the trade network in Anatolia, the scholarly discussion of this period is almost exclusively in terms of this city. In this regard, two different chronological phases have been determined, based on a destruction event that occurred at Kanesh. This event happened shortly before 1835 BC and marked the end of what is called the *kārum* II period. This destruction event, which will be addressed in more detail below (see 3.2.3), disrupted trade considerably, but only briefly. Trade resumed sometime after 1832 BC during what is called the *kārum* Ib period (Michel 2014: 79; Veenhof and Eidem 2008: 140).

¹⁵ The names have little context in this document. Šu-Anim is attested as a *limmu* for the year 1969 BC. Given the early date of this *limmu*, it is highly unlikely that the text from the tablet impression is referring to this *limmu*. The name Nakiliat/Nakiliyat is discussed by Popko (1995: 55, 130) as a Hattian deity that, in the Old Hittite period, becomes the name of the Noble River (Hoffner 1998: 39). The name is also attested in a *kārum* II document, kt 87/k 253, from Kanesh (Dercksen 2004b: 156).

At some point in time, likely toward the beginning of the 20th century BC, Kanesh became the hub of a new trade network dominated by Old Assyrians. Kanesh lent itself to this purpose by surviving the societal collapse that characterized the end of the EBA and by being in a location that was well situated on the eastern edge of inner Anatolia, on route to the Euphrates. Kanesh was clearly a stop on earlier trade routes as is made evident by the objects found there from EBA Western Anatolia and Mesopotamia (Özgüç 1986).

2.2.1 – Excavation History

The archaeological mound of Kültepe began to interest scholars as a potential source of cuneiform tablets in the late 19th century. Tablets discovered there by villagers of the neighboring modern town of Karahöyük were published in the *Proceedings of the Society of Biblical Archaeology* (Pinches 1881). The desire for such tablets was particularly strong at this time. Cuneiform documents had been brought back to Europe from the Middle East at least as early as the 17th century, but it was not until the early 19th century that work on deciphering them made any progress. Through the works of Rasmus Rask, Eugene Burnouf and Christian Lassen, Edward Hincks, and Henry Rawlinson, the cuneiform script was fairly well understood by 1846 (Daniels 1995: 83-84). With the first presentation of a translation of the Gilgamesh Epic by George Smith in 1872 (Hoberman 1983: 41), the eagerness to acquire more cuneiform documents rose dramatically.

This eagerness led to Kültepe being excavated by Ernest Chantre in 1893. This was followed by further excavations over the years, but it was not until Bedřich Hrozný began to work there, in 1925, that any successful work was carried out. Hrozný was a philologist who discovered that Hittite was an Indo-European language and thus was able to translate it for the first time. His work on Kültepe was destructive according to standards of later archaeological

methods, but it did find many more tablets which propelled Kültepe into nearly 70 years of methodical excavations (Larsen 2015: 17-22). More controlled efforts began under Tahsin Özgüç in 1948 and carried on until 2005, when the current directors, Kutlu Emre and Fikri Kulakoğlu took over.

2.2.2 – Origins and Development of Kanesh

The earliest evidence for habitation at Kanesh (level 18) dates to approximately 3000 BC and consists solely of miscellaneous evidence for mudbrick architecture. Likewise, little can be said of the following four levels (17-14) which date to 2600-2300 BC (EBA II). We know that during the later parts of this period an increase in pottery from the Upper Euphrates appears with parallels to ED II Mesopotamia (Özgüç 1986: 37-38). It is only after 2300 BC (EBA III) that enough evidence is available to discuss Kanesh more thoroughly (Ezer 2014: 6-7).

At Kanesh level 13 (EBA III) a monumental structure in the south-east quadrant of the upper mound was built. The building has not been excavated extensively and is represented by two parallel walls about 1.6m thick and running at least 48m. E-W. The walls are made of stone, mudbrick, and wood (now disintegrated) and share five connecting walls between them making six compartments. Three of these connecting walls appear to extend beyond the parallel walls in both directions, so it appears this part of the structure was within the building and not exposed to the outside. This long structure was destroyed by fire (Ezer 2014: 7-10, Fig. 1). Ceramic flasks found in this context have parallels in the latest phases of ED III Mesopotamia (Özgüç 1986: 36)

Kanesh level 12 saw the building of a megaron style structure on top of the long structure of the preceding period (though much smaller). Özgüç (1963: 13-14) argued that it was a temple and noted its similarity to megara at Beycesultan and Troy II. He also noted the presence of

depas cups and red vases similar to those found at Troy II as evidence for contact with Western Anatolia (Özgüç 1986: 41).

Kanesh level 11 is split into 11a and 11b and both continue the tradition of building directly on top of the structures of the preceding period. 11b had a large building, possibly another megaron though Özgüç (1986: 34) argued for Mesopotamian influence. Not enough of it remains to understand its shape other than that it was slightly larger than level 12's megaron, over which it rests. This structure was destroyed by intense fire. 11a's buildings are small and disconnected (Özgüç 1986: 31; Ezer 2014: 7, Fig. 1). This change from the preceding periods, where large buildings were the norm, may reflect the general decline in wealth and size that occurred in cities across Anatolia and the Jazirah at the end of the EBA.

Kanesh levels 10 and 9 (ca 2100-1950 BC) saw the center of the mound moved to the NE and the area which held the previous sequence of buildings described above is abandoned. These periods also see considerable regrowth and the building of a *kārum* just off the main mound on virgin soil (Emre 1989: 111). The earliest levels of the *kārum*, IV (Kanesh level 10) and III (Kanesh level 9), have no texts and are much smaller in size than the later levels, II and Ib (*ibid.*: 112).

A large structure identified by Kulakoğlu (2011: 1015) as a palace was built, likely towards the end of Period 9, at the southern part of the mound. This building was two stories, with what appears to be courtyards, living spaces, reception spaces, and storage areas. This palace is currently unexcavated due to a Roman-Hellenistic wall that runs across it and so little more can be said. A second palace, called 'the Old Palace', was built somewhat later to the NE of the area containing the EBA structures. This palace lasted until 1836 BC, when Kanesh

8/*kārum* II was destroyed. It appears to be a conglomeration of 3 buildings, though some of it was destroyed due to the construction of later architecture (*ibid.* 1015-1017).

A final palace was built on top of the Old Palace around 1832 BC (beginning of Kanesh 7, *kārum* Ib) and is called the ‘Warsama’ palace, after the first textually attested king of Kanesh who came to power shortly after the destruction of Kanesh 8. This palace was a single building resting against part of the mound’s defensive enclosure wall. It consisted of a series of rooms (42 on the north side) surrounding a courtyard, an architectural style that was popular among the Hittites, and is so far the earliest Anatolian representation of this layout (Kulakoğlu 2011: 1017-1018).

Texts were found in all three of the palaces of Kanesh 8 and 7 (Kulakoğlu 2011: 1015-1018), but predominantly texts came from archives of merchant families, Anatolian and Assyrian, found in their houses in the *kārum*. The number of documents from *kārum* II surges around 1900 BC and continues until the destruction of the *kārum* and mound around 1836 BC. During *kārum* Ib, documents continued to be written and collected, but never met the volume experienced during *kārum* II (Veenhof 2011: 34; Larsen 2015: Fig. 17). Kanesh 7/ *kārum* Ib was then destroyed around 1719 BC (Günbatti 2008: 117).

The destruction of Kanesh 7/ *kārum* Ib marked the end of significant era of trading and development in the area. There is a *kārum* layer atop Ib, *kārum* Ia, but it has minimal archaeological evidence or texts¹⁶. Kanesh was abandoned around the end of the 18th century BC and would stay that way until the Iron Age (Kulakoğlu 2014: 86).

¹⁶ The latest dateable document from Kanesh dates to sometime after 1710 BC (Kulakoğlu 2014: 86).

2.2.3 – Kanesh Farming – The Texts

Teasing out the details of how Kanesh managed its agricultural resources is only possible once the city enters history. As I detail below, the archaeological record does little to inform on this specific question. Excavation of the EBA levels progresses today, but remains limited due to the overlaying stratigraphy. Our ability to determine storage practices or quantities is limited to those parts of excavated palaces that happen to have magazines/storage. To this point, there are too few of such finds to make confident arguments. Similarly, the MBA has revealed little and so the material record remains fairly silent once again. Our knowledge of the presence and nature of archaeological settlements around Kanesh is weaker than it is for sites such as Tell Brak, though recent efforts have been improving upon this (Kontani et al. 2014; Fairburn 2014). Thus, our understanding of agricultural management practices at Kanesh comes almost wholly from texts.

Studying these texts, Dercksen (2008a: 155-156) suggests that land ownership was primarily in the hands of private individuals and that while there is evidence that the state owned land, it appears to have been in small amounts. This argument is very much made in the absence of evidence, as the documents that have come down to us simply do not address these details. We do know that various government offices existed with titles that indicate they had responsibility over agricultural management. These include the *rabi adrim* - chief of the threshing floor, *rabi kiriātīm* - chief of the gardens, *rabi nuk(i)ribbē* - chief gardener, *rabi ūrqē* - chief of the vegetables, and *rabi še'ē* - chief of barley (Veenhof and Eidem 2008: 220-224). But, these titles appear infrequently and in limited contexts, and so there is little we can do with them¹⁷.

¹⁷ It should be noted that among the 50 types of chiefs identified by Veenhof and Eidem (2008: 220-224), at least nine remain untranslatable due to uncertainty. It is certainly possible that a 'chief of the fields' or 'chief of wheat' exists behind one or more of these titles. This is in addition to the unknown number of office titles that elude us because they have not appeared in translated texts.

Evidence in support of Dercksen's position is found in documents detailing the selling of farmland from one individual to another for silver (Dercksen 2008a: 143), made most clear by a series of plots sold to a Perua, who was a Chief of the Shepherds (Dercksen 2004b: 138).

Another piece of support can be found in texts that discuss the sharing of land between individuals and the giving of land (as a penalty) to a private citizen by a debtor who could not pay his debts (Dercksen 2008a: 87; 2008b: 142-144).

The lack of evidence that the Kanesh royal palace had any part in these exchanges leads Dercksen (2004b: 138) to suggest that three types of land holding existed: free farmer, elite, and royal. Dercksen (*ibid.*: 139) further points out that there is also no evidence of temple ownership of land. While the Kanesh state may not have owned all the land, they did tax land through agricultural goods (Dercksen 2008a: 86; 2008b: 156).

Harvest time was the time for paying debts, indicating that they were paid (at least in part) with agricultural goods (Lumsden 2008: 24). In addition to paying debts, agricultural produce was also obviously used for consumption. We do not have documentation of the amount of grain Anatolians consumed, but we do have documents relating that Assyrian merchants consumed at least 30 liters of grain per man and that the women in their households consumed at least 20 liters of grain per woman per month (Dercksen 2008a: 92-93).

The harvest would have come in from surrounding fields and rural communities that tended to those fields. Documents indicate that Kanesh controlled at least 9 farming villages in the *kārum* II period and at least 18 in the *kārum* Ib period (Dercksen 2008a: 139). The dominant crops produced by the villages were wheat and barley and harvesting season lasted from July to October. Threshing occurred on a communal threshing floor which was also where transactions involving grain occurred (*ibid.*: 144). Finally, we know Assyrian traders purchased, rather than

farmed, their agricultural goods thanks to texts and through archaeobotanical analysis (Veenhof and Eidem 2008: 87-88; Fairburn 2014: 188).

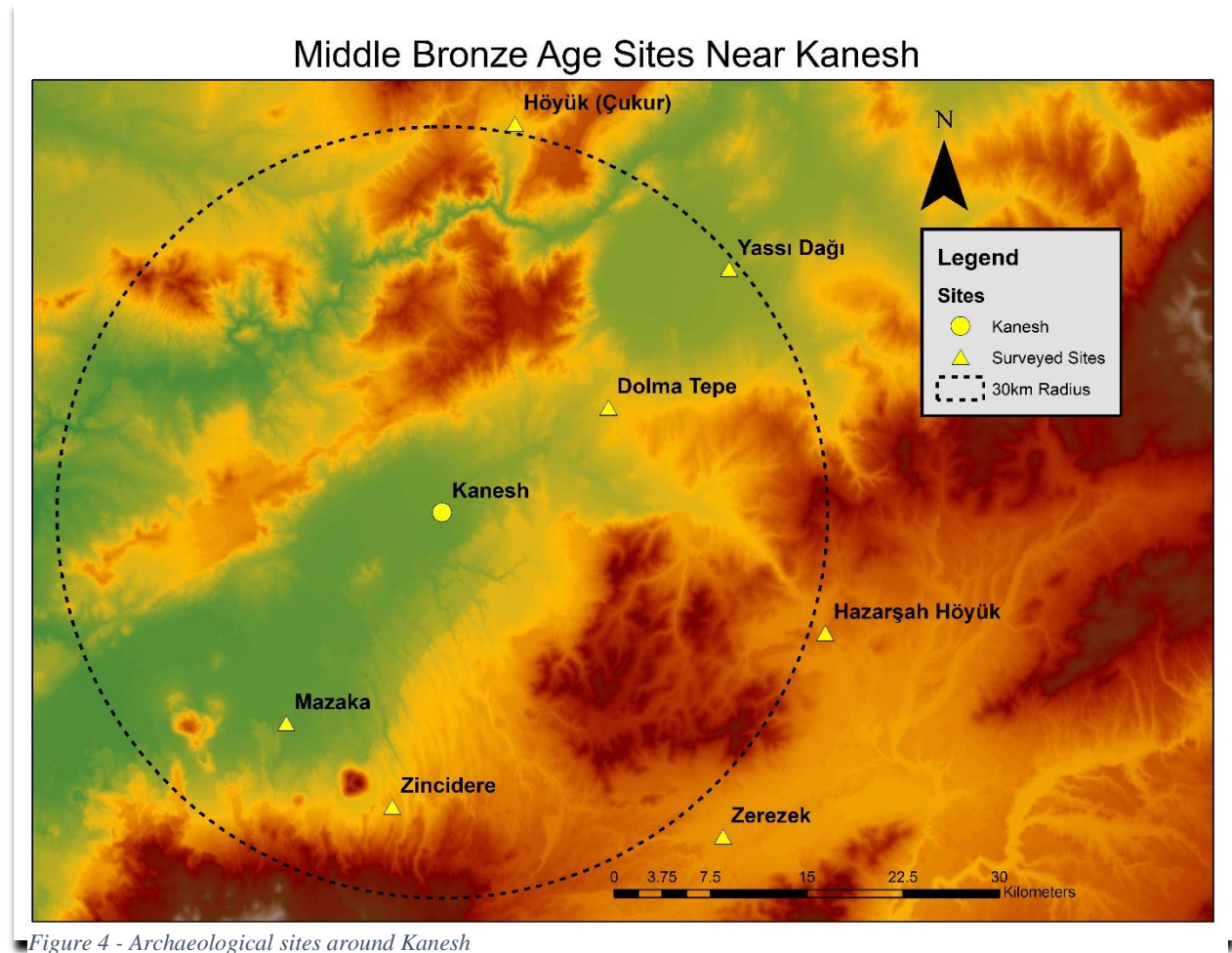
2.2.4 – Kanesh Farming – The Archaeology

In terms of archaeological evidence for storage, Kanesh has revealed no evidence of silos (Dercksen 2008a: 147), nor has the only other well excavated MBA site involved with Assyrian trade, Acemhöyük (Bachhuber 2012: 579). Acemhöyük did have a room in the Sarıkaya palace that was filled with large pithoi (Özgüç 1966: 37) however. This marks the best evidence for non-private storage in large quantities. Individual household storage at Kanesh included pithoi as well (Özgüç 2003: 90), though not as many as in the Sarıkaya. Private household storage is also present at MBA Hattusa (Schachner 1999: 116).

The temples of Kanesh 7 were small and had no evidence for spaces or vessels dedicated to storage. These temples did have several prestige goods, such as metal vessels (copper, bronze, and gold), terra cotta vessels with metal adornment, and statues made from rock crystal (Özgüç 1999: 121-122).

As discussed in Section 2.2.4, Kanesh controlled at least 9-18 farming villages throughout the MBA. The results of five years of the Kayseri Arkeolojik Yüzey Araştırmaları Projesi (KAYAP - ‘Kayseri Archaeological Surface Survey Project’) were recently published by Kontani et al. (2012). The results demonstrated that the number of identifiable archaeological settlements during the MBA dropped by more than half from the preceding EBA. If we examine the number of MBA archaeological sites identified within an approximated day’s travel¹⁸ of Kanesh (see Fig. 4), we see very few. This indicates that many of the farming villages that answered to Kanesh did not leave a noticeable archaeological signature.

¹⁸ For this dissertation, this distance is estimated at 30-35km. See Chapter 5, footnote 21 for more details.



2.3 – The End of Kanesh and the Dark Ages

Kanesh's development was dependent on its ability to maintain its relevance as a hub for trading and maintain its political independence. Ultimately, neither of these conditions were kept. The violent destruction of Kanesh 8 and 7 reflects the political and military tensions that are discussed in the texts from these times. While Kanesh was chief among the many cities involved with the Old Assyrian Trade Network, its supremacy was rivalled and ultimately toppled. A series of conflicts emerge from the texts of the *kārum* II period indicating that the western Central Anatolian city of Purushaddum was consolidating its control over a region encompassing several other cities (Barjamovic et al. 2012: 44). Purushaddum became the dominant city in the west and thus rival of Kanesh, though we have no evidence of direct conflict

between the two centers of trade until later. Another major power, Zalpuwa (mentioned in Section 2.1.3, likely modern day Ikiztepe), most likely did engage in direct conflict with Kanesh, eventually causing the destruction of Kanesh 8/ *kārum* II. This, at least, is according to the Anitta Text (CTH 1), a document written by Anitta, a prince of neighboring Kussara, whose father Pithana conquered Kanesh in the middle of the *kārum* Ib period, but did not raze the city (Barjamovic 2011: 117).

Anitta became king of Kanesh and Kussara after his father engaged in a series of campaigns that brought much of Central Anatolia under his control, including Purushaddum¹⁹. He conquered Hattusa during this time and, indeed, at the site of Hattusa there is a destruction layer and a break in texts that, using the eponym system, has been dated to around 1730 BC (Dercksen 2001: 39). Afterwards he labelled himself a ‘Great King’ (Bryce 2005: 37-39). After Anitta’s reign, texts indicate a Zuzu came to power and he marks the last historically attested king of Kanesh (Barjamovic et al 2012: 40).

The divide between Zuzu and Labarna I, the first historical king of the Hittites, is often called a Dark Age, as there are no contemporary texts to inform us of what occurred. This period spans approximately 1719 BC to 1650 BC. Scholars have tried to fill in these 70+/- years drawing from Hittite texts that refer to events prior to Hattusili I. The texts are unclear and often confusing. What seems to be the case is that following the destruction of Kanesh 7/ *kārum* Ib, the success of Pithana and Anitta crumbled, only to be strengthened again by Labarna I who is somehow related to Hattusili I, either his grandfather (Bryce 2005: 67) or his uncle (Forlanini 2010: 129).

¹⁹ Though note Dercksen’s (2010) argument that the two kings remained equals.

Hattusili I, whose name means ‘man of Hattusa’ was presumably not named ‘Hattusili’ at birth (Beal [2003: 24] notes that he is sometimes called ‘Labarna’) as he established his new capital at Hattusa after he became king. What he was king of is not entirely clear. He calls himself the ‘Man of Kussara’ (Bryce 2005: 69) though we are in the dark as to what kind of power Kussara wielded at this time or where it was. Once established at Hattusa, Hattusili engaged in continued military campaigns in Northern and Central Anatolia and even invaded Syria with the intent of attacking Aleppo, though he withdrew before attempting it (*ibid.* 71-72).

With Hattusili, the Hittite kingdom entered history and did so with a relatively firm control over Central Anatolia. This was the strongest in a series of multi-polity kingdoms that had been forming with greater frequency since the establishment of the Old Assyrian Trading Colonies. The time of EBA and MBA city states came to an end with this development and the ultimate progression toward empire began.

2.4 – The Hittites

The Hittites ruled Central Anatolia from ca. 1650 BC to ca. 1200 BC. Their capital, Hattusa, was first excavated by Ernst Chantre, in 1893. This was followed by excavations under Hugo Winckler and Theodor Makridi Bey from 1906-1907 and 1911-1912. These scholars identified the name of the ancient city after finding and reading cuneiform texts. Kurt Bittel continued excavations in 1931 and carried on till World War 2 halted them in 1939. Bittel continued the work from 1952 to 1977 which initiated an unbroken period of excavation that continues to today. Peter Neve (1978-1993) followed Bittel and was himself followed by Jürgen Seeher (1994-2005) and now Andreas Schachner (2006-present) (Mielke 2011b: 1032, 1034).

Some other significant Hittite urban centers that have also been excavated include Ortaköy (Süel 2008), Kuşaklı Höyük (Müller-Karpe 2002), Maşat Höyük (Özgüç 1982), Alaca

Höyük (Özgüç 2002), Yassıhöyük (de Martino et al. 2010), Çadır Höyük, and Uşaklı Höyük (Mazzoni and Daddi 2015).

Thanks to this extensive amount of archaeological knowledge and the large amount of texts from several sites, we have much more to say about Hittite agricultural management than we do for Kanesh in the preceding period.

2.4.1 – The Founding of Hattusa

I have argued (Cannon Forthcoming) that the founding of Hattusa and its later establishment as the Hittite capital are related to its location in the landscape. Schachner (2017: 29-30) has recently discussed the most current understanding of the settlement of the Budaközü plain, in which Hattusa is located. According to him, the first farming communities appeared after 6000 BC and were small enough to leave minimal archaeological evidence of their presence. Some exceptions include a settlement on the Büyükkaya, Yarikkaya, and the site Çamlıbel Tarlası less than 4km west of Hattusa. Even these settlements indicate periods of interruption which kept their sizes (both vertical and horizontal) small, differentiating them from the more numerous höyüks that characterize south Central and southern Anatolia.

Hattusa likely began as a similarly small farming community, but due to circumstances likely related to the rise in trade that characterized the EBA III, it grew to become more than just a rural settlement. Its location at the northern foot of the Zincirli Dağı range provides it with access to northern EBA settlements, such as Alaca Höyük, Eskiypar, and Büyük Güllücek Höyük. Moving through highly traversable mountain passes to the south give this location access to sites such as Büyüknefes to the SW and Alişar Höyük and ultimately Kanesh to the SE. Thus, Hattusa was well situated at a kind of mountain bottleneck connecting the north to the SW and

SE. As trade routes became more frequented, this location would have seen a significant influx in traffic, as is indicated by the *kārum* that was placed at Hattusa shortly after its founding.

2.4.2 – Hittite Farming - The Texts

Excellent summaries of what we know about Hittite farming practices and management have already been written (Klengel 1986; Klengel 2006; Dörfler et al. 2011; Torri 2016). This section will summarize what Hittite texts tell us and will expand certain aspects that have relevance to the focus of this dissertation.

As far as we can tell, the Hittites did not sharply differentiate agricultural land from non-agricultural land in their vocabulary. They did distinguish between ‘city’ - *happira*- and ‘country-side’ *gimra*-, but further categorizing ‘country-side’ is difficult. Beckman (1999: 163) has noted that the sumerogram A.ŠÀ is the most frequently used term for agricultural land in the Hittite law code. While A.ŠÀ is also used to describe land more generally (Weeden 2011: 160-161), making it similar to *gimra*-, its slightly tighter association with agricultural land leads some to argue that it may represent a slight semantic distinction in this regard.

Despite this ambiguity, Hittite texts allow us to not only determine a significant portion of the agricultural economy and organization, but also to capture glimpses of how farming was viewed at a cultural level. For instance, Bachhuber (2012: 577) observes that most Old Hittite myth revolves around gods related to the health of farming activity. Indeed, a read-through of the Old Hittite myths presented in Hoffner’s (1998) *Hittite Myths* illustrates the dominance of the disappearing god motif. The Storm God, the Sun God, Telipinu, and Hannahanna²⁰ all go missing or are incapacitated in some way resulting in the need to save them. Telipinu is viewed by Hoffner as another storm god, i.e. a bringer of rain, and responsible for cereal cultivation.

²⁰ The goddess Inara also goes missing, but her connection to agriculture is less clear as she is more associated with hunting and the steppe (Hoffner 1998: 111).

Hannahanna's disappearance myth indicates that her displeasure has the power to ruin vegetation both in the field and in storage (Hoffner 1998: 14, 29).

These disappearing and angry god myths would certainly have carried many meanings for the people who told and heard them. Among these meanings would be an etiology for unpredictable environmental conditions that could impact the success of an agricultural season. This specific, god oriented, etiology was at least in part responsible for the many efforts the Hittite people made to make sure the gods received the proper respect. Perhaps the most extensive among these efforts were the festivals, which are also closely tied to agricultural practices.

2.4.2.1 – Festivals

The Hittites practiced numerous festivals that had a variety of foci, but the festivals that were the most common were the spring and autumn festivals. These festivals celebrated the opening of pithoi (*ḫaršiyalli*)²¹ that stored agricultural goods (spring) or the storing of agricultural goods in pithoi (fall) (Archi 2006: 151; Hazenbos 2003: 168). Concerning these festivals, Haas (1994: 675) states:

“Ihr Zweck ist die Aktivierung der den Gottheiten innewohnenden Lebenskräfte zur Erlangung ergiebiger Regenfälle, üppiger Ernteerträge, zur Vermehrung des Viehbestandes und der Jagdtiere, zur Stärkung der charismatischen Kräfte des Königs und zahlreicher Nachkommenschaft des Königshauses.”

“Their purpose is the activation of the life force inherent to the gods for obtaining productive rainfall, lush crops, for the propagation of livestock and hunting animals, to strengthen the charismatic powers of the king and the numerous offspring of the royal house.”

²¹ The Hittite word ^{DUG}*ḫaršiyalli* has been translated as ‘pithos’. This appears to be related to ^{DUG}*ḫarši-* meaning ‘jar’ (Kloekhorst 2008: 316). Interestingly, though most likely coincidentally, *ḫarši-* as a verb means ‘to till’, though it has no etymological connection to *ḫarši-* as ‘jar’. Meanwhile, ^{NINDA}*ḫarši-* is a ‘thick bread’.

Local versions of these pithoi festivals occurred across Central Anatolia, but, in the Hittite Empire period²², state sponsored and organized festivals were also performed. Called *Reisefeste* by modern scholars, these consisted of the king and his retinue traveling across the Hittite heartland visiting numerous population centers for over a month. The fall festival was called the *nuntarriyašhaš* ('haste') festival and the spring was called the AN.TAḪ.ŠUM ('crocus flower') festival. These and other state sponsored festivals (such as the KILAM and *purulliya* festivals) were significant affairs involving a considerable amount of logistical planning. There were, of course, travel and housing and supply plans to be made, but more importantly for this dissertation, a lot of work would have gone into the procurement of food.

Festivals were witness to feasts. We do not necessarily know who, other than royalty and religious leaders, exactly was present or allowed to partake in the feast, though it appears that large groups were often fed (Collins 1995: 85-87; Cammarosano 2018: 155-156, for a different view, see Gilan 2011: 281). We do know, however, the quantities of food prepared for the feast thanks to rations lists which were written up along with many other Hittite texts describing the festival (Schwemer 2016: 9). Presumably many were involved with organizing the procurement of food, but it was the role of office of the AGRIG that has the most relevance to this discussion.

2.4.2.2 – The AGRIG²³

The office of the Hittite AGRIG is thoroughly discussed in Singer (1984). I will only present a brief summary here and will also detail an argument about the origins of the AGRIG.

²² Hutter (1997: 81) and Galmarini (2013: 338) suggest that the spring and fall festivals were created by Suppiluliuma I when he joined several local festivals together into single, travelling festivals.

²³ This Sumerogram also appears in Middle Assyrian documents, with the underlying Assyrian word being *mašennu*. The title is translated to 'head of the storehouse' and replaces an earlier title, *laputtā'um* (Dercksen 2004a: 56, 72).

AGRIGs were in command of storehouses (É^{NA4}KIŠIB) located in specific cities across Central Anatolia. The region around these cities, designated as a *telipuri*, provided the grain to those storehouses (*ibid.* 118). They were responsible for the filling of these storehouses (though this is more of an assumption, as there is no textual evidence attesting to how this was done [*ibid.* 113]) and for providing food from them to Hattusa and for festivals. The list of cities that had a textually attested AGRIG is fairly long; Singer (*ibid.* 114) lists 39 such cities, though he (*ibid.* 103) notes that the Telipinu Proclamation likely listed over 60. What made a city eligible for an AGRIG is unclear as some large cities are missing from this list (e.g. Tahirpa, Zippalanda, Arinna) whereas other cities that do have this office are unlikely to have been significant population centers as they are rarely ever mentioned in other contexts.

Güterbock (1961: 89), discussing the KILAM festival, noticed that, during the festival, the king and queen were able to visit the storehouses of multiple towns in a single day and that at each storehouse, they were greeted by that storehouse's AGRIG. From this, he argued that these visits must be in Hattusa and that each city with an AGRIG had an accompanying storehouse in Hattusa. Singer (1984: 113) argues that the AGRIG of a town was also responsible for the accompanying storehouse in Hattusa.

AGRIGs were generally not drawn from the highest members of Hittite society²⁴. Men of this office were never used as witnesses for royal donations nor were they included in lists of dignitaries. A possible exception to this is a man named Askaliya, who was once the lord²⁵ of Hurma, but was later designated the AGRIG of Ankuwa for uncertain reasons (Singer 1984: 102,

²⁴ It is possible they were regarded as slaves or perhaps something more than slave, but still less than free (Singer 1984: 100).

²⁵ Torri (2016: 41), citing Imparati (1975: 80-86), suggests that EN, the title translated here as 'lord', may actually simply mean 'land-owner'. Thus, Aškaliya was not a noble, but simply an individual wealthy enough to be considered a land-owner. This is more in keeping with the consistency of AGRIGs not being drawn from the higher classes.

105). AGRIGs were assigned to their cities by the Hittite king and once there, were responsible for managing the storehouse of the city which was filled with goods from outlying population centers. Singer (*ibid.* 106) argues that individuals of lower rank would be easier for the Hittite king to control. He further argues that local AGRIGs must have grown in power and/or deceit, prompting a reigning in by the Hittite king Telipinu. Telipinu's Proclamation instructs future kings to have grain stores sealed with their name. This implies, perhaps, that the AGRIGs were stealing grain by manipulating the sealing of it. After the Telipinu Proclamation, AGRIGs disappear from historical and legal texts and are only visible in festival contexts (*ibid.* 105-106).

I believe that it is possible the office of AGRIG is older even than Hattusili I. There is considerable evidence tying the office to Hattian traditions indicating that it was an office inherited by the Hittites, not invented by them (though the term may have been introduced by the Hittites with familiarity to the systems in Mesopotamia). The term for the district that an AGRIG oversaw, *telipuri*, is likely a Hattian word²⁶. This alone means little as the Hittites often adopted Hattian administrative vocabulary (Tischler 1997: 179). Related to this is the usage of the Hattian gentilic ending *-(i)l* in lists of AGRIGs²⁷. This ending was suffixed to an AGRIG's city indicating 'the man of X'. Thus, *Tapikkiyal* 'the man of Tapikka' (Singer 1984: 109, 118). Another clue is the fact that AGRIGs played roles in Hittite festivals of Hattian origin (most thoroughly the KI.LAM festival, but several others as well [*ibid.* 106-109]) but not in Hurrian festivals developed after the increase in interaction between Hattusa and Kizzuwatna in the 15th

²⁶ Soysal (2004: 153) and Tischler (1997: 180-181) argue for this. Tischler summarizes a series of arguments on Hattian vocabulary to make the argument that *telipuri* would have meant 'big country' from '*tili*' tentatively identified by him as 'powerful' and '*wur*' meaning 'land'.

²⁷ Singer (1984: 126) disagrees, citing the same Hattian suffix used for towns outside of the Hattian region. Also, one must consider the Sumerogram used for this office. If it was a Hattian institution, why was a Hattian word not used. Or, if a Hattian word underlies the Sumerogram, why was the Sumerogram introduced?

century BC²⁸. Likewise, no Kizzuwatnean cities have ever been associated with an AGRIG (*ibid.* 1984: 124).

2.4.2.3 – Farmers, Farms, and the Ownership and Working of the Land

The king was viewed as the steward of the gods, in charge of all land (Klengel 2006: 8). In daily life, it appears that farmland was also managed by the temples or the urban center it was associated with (Klengel 2006: 3; Giorgadze 1998: 100). The *Landschenkungsurkunden* (CTH 223) texts reveal several instances of the king taking land from one person or institution and giving to another. The giving of land to temples established them as powerful entities in the Hittite economy. In the Empire period, when land changed hands, documents indicating the number and population of households on that land were included. The populations of these households were supplemented with deportees when necessary to ensure that they were operating efficiently (Torri 2016: 39-40).

Fields were generally rectangular and were measured in IKU units or *gipeššar* units (Klengel 1986: 26). 1 IKU equals 30 *gipeššar* (Hoffner 1997: 104 fn. 335). A Babylonian IKU measures 3,600m² (Rüster and Wilhelm 2012: 85). Assuming this measurement was the same in Anatolia, a *gipeššar* would then be 120m². Hoffner (1998: 322) points out that a *gipeššar* was a linear measurement as well. He further noted that in CTH 239.1, a collection of Empire Phase Cadastral texts, Hittite farms ranged in size between 2,250 to 15,200 square *gipeššar*, with the average being 6,800. The Hittites described their fields by the longer length (GÍD.DA) and the shorter length (DAGAL). The range for longer lengths was 80-590 *gipeššar* and for the shorter lengths 15-120 *gipeššar*.

²⁸ Though it is worth noting that Hattian and Hurrian elements were mixed together in some festivals, indicating that original ‘Hattian’ ritual events could be blended with later Hurrian influences (Klinger 1993: 95-96)

The Hittites practiced dry farming, meaning that no irrigation was introduced to their fields, though they did have irrigated gardens (Klengel 2005: 4). Hittite texts do not tell us much about the maintenance of these dry farmed fields, though it is likely they practiced a two-field system, where each field was cultivated for a year and then left fallow for a year. This was the practice of Ur III Mesopotamia (de Maaijer 1998: 56) as well as that of the early 20th century farmers of the village of Alişar (Morrison 1939: 16), just SW of the archaeological site of Alişar Höyük, which itself is 13km SE of Çadır Höyük. This system meant that in any season, only half of the area available for agricultural production was in use.

Field workers came from either required service or were members of the households that lived on the land. These could include slaves and prisoners of war, but appears to have been sowing, cutting of the grain with sickles, bundling the grain into sheaves to be carted away, the threshing and spooling, and finally the storing. Once the pithoi were opened, women (though, in one instance, also blinded prisoners of war according to the Maşat Texts²⁹) were responsible for grinding the grain (Klengel 2006: 9-11).

Many farms existed outside of the immediate domain of temples and large urban centers. These farming communities formed population centers of their own, presumably of various sizes, many of which are likely represented by some of the lesser attested locations mentioned in Figs. 5 and 6 below (Section 2.4.2.2). For instance, one of the *Landschenkungsurkunden* documents, KBo 5.7 rev. 28-33³⁰, discusses farming households in the towns of Pargalla and in Hanzusa³¹, two locations that are infrequently mentioned in Hittite texts and thus likely to be small

²⁹ More on this in Siegelová 2002.

³⁰ Translated in Bryce (2002: 74) and discussed by Klengel (1986: 28-30).

³¹ Pargalla is mentioned in KUB 19.18 (discussed by Kryszewski 2016: 316-318) as being attacked by the Kaskaeans. Attacks on Hattena and Hanhana are also mentioned. It is possible that Pargalla and Hanzusa were close to these population centers and likely administratively under the control of one of them.

communities as opposed to important, walled urban centers. These rural communities are discussed in more detail below in Section 2.4.3.2.

2.4.3 – Hittite Agricultural Management - The Archaeological Record

This section will discuss the archaeological evidence for Hittite management of agricultural resources. Much has been written (Neve 1969; Seeher 2000; Bachhuber 2012; Burgin 2016) about the storage facilities at Hattusa and what they may imply and so this will be discussed only briefly here. The current section will focus more on the archaeological evidence for rural communities that served larger population centers and how they fit into the over-arching system that developed alongside the emergence of Hittite political control of Central Anatolia.

Our archaeological knowledge of the Hittite farmer and his space is limited, but with recent surveys discussed below, we are well positioned to begin to understand how the Hittite landscape was utilized by farming communities and they in turn supplied larger urban centers. An organizational system, much like that described by Siegelová (2001) who based her observation on texts, emerges from the archaeological record. Siegelová (*ibid.* 195) argued for a tri-partite division of Hittite state administration, with Hattusa as the center, regions controlled by palaces as the middle tier, and individual communities answering to those regional palaces as the bottom tier. This is a break from the MBA system discussed above, where centers like Kanesh appear to have controlled the individual communities without intermediary. This, of course, reflects Hattusa's ability to establish dominance over several major urban centers and turn them into intermediaries, but it also reflects a growing dependence on larger urban centers and a reduction in the autonomy of the rural community.

2.4.3.1 – Evidence of Storage

The many and fairly uniform pithos magazines³² (Neve 1969: 9) surrounding Temple 1 (the Great Temple) may have served as the Hattusa storehouses for the AGRIGs representing outside cities³³. Seeher (2000: 287) notes that 110 pithoi were discovered in these magazines. Archi (2015: 14) points out that, for the KILAM festival, it was the duty of the participating cities to provide food for the Goddess of Arinna at her temple, which Archi argues is Temple 1. Perhaps this is the site where AGRIGs, having brought their food to the Great Temple magazines, stood outside of their respective storehouses to greet the king and queen (see section 2.4.1.2)³⁴.

In addition to temple magazines, Hattusa also had massive grain silos. 11 silos were discovered in the Büyükkaya, in the NE corner of the city and have been dated to the 13th century BC. The silos were dug into the ground without a lining and had stone floors. The largest, Nr. 8, has an opening that measures 12x18m. These pits could be sealed off, making them air tight and potentially preserving the grain for decades (Seeher 2000: 268, 270, 272). Minimal evidence for the kind of cereal stored in these silos was recovered, but the small amounts indicate some kind of barley storage (Dörfler et al. 2011: 111-112).

³² Very few plant remains were found in these magazines. The small amount that was recovered consisted of naked barley (*Hordeum vulgare*) and naked wheat (*Triticum aestivum*) (Hopf 1992).

³³ Though note that the temple ‘Building C’ at Kuşaklı Höyük also has storage magazines and at Uşaklı Höyük, the recently discovered Building II, possibly a temple, has what appears to be storage magazines very similar in size and shape to those of Hattusa (D’Agostino and Orsi 2016). Clearly such magazines were common to temples and not necessarily a unique feature designed to accommodate AGRIGs. That said, neither Kuşaklı nor Uşaklı appear yet to have anywhere near the volume of magazines that is found at Hattusa.

³⁴ A less likely possibility is the storage complex 300m south of Temple 1. This complex held 32 magazines of fairly uniform size and dates to the 16th century BC. (Seeher 1999: 332-334). The grain found in this complex included two-rowed hulled barley (*Hordeum distichum*) – found in 4 compartments, and einkorn (*Triticum monococcum*) – found in 1 compartment (Neef 2001: 336-341). Dörfler et al. (2011: 111) have argued that the cereals from this storage building were likely grown locally as their characteristics indicate that they were grown in soil much like that found in the immediate environs of Hattusa. They also argue, again based on the characteristics of the grains, specifically their size and the presence of weed seeds, that the fields that grew these cereals were poorly maintained.

Fairbairn and Omura (2005: 15-16) argue that these silos are referred to in Hittite texts as ÉSAG, drawing from Hoffner's (1974: 34-37) discussion of this term³⁵. They also discuss their finding of similar silos at Kaman-Kalehöyük. Such silos appear elsewhere, including Kuşaklı Höyük (Dörfler et al. 2000: 367-378) and Alaca Höyük (Çınaroğlu and Genç 2003: 279-288). At Kaman-Kalehöyük, the use of these kinds of pits extended back to the EBA and continued to be used into Ottoman times, but the largest pits appear in the Hittite levels³⁶ (Fairbairn and Omura 2005: 16-17, 21). This movement towards large, centralized storage of cereals is paralleled in Schoop's (2009: 152) observation that at Hattusa the household use of pithoi declines between the 16th and 15th centuries BC in favor of the much smaller long-necked jars, more suitable for middle-range storage needs. This indicates that individuals increasingly depended on the state, as opposed to themselves, for storing agricultural goods.

This centralizing of agriculture goods under state supervision, albeit at a distance, aligns with another phenomenon observed by Glatz (2007: 234ff; 2009: 132), Gerber (2008: 203), and Kealhofer (2005: 147-148). These scholars note that small EBA and MBA sites in Central Anatolia became absorbed into large sites in the LBA. This phenomenon will be discussed in greater detail in Chapter 5, but here it is worth noting that this process of consolidation into larger urban centers would have placed a different kind of stress on rural populations that fed these cities. Specifically, it would have centralized the attention and movement of agricultural goods to larger population centers which were more easily monitored and accessed by the Hittite state. Because of the need to send agricultural goods to these population centers, small, independent farming communities were likely less common than farming communities attached

³⁵ Hoffner (1974) used the term ARÀḪ, which was the correct reading at the time (Fairbairn and Omura 2005: 16).

³⁶ Evidence for the particular type of cereals stored was not uncovered (Fairbairn and Omura 2005: 19).

in some way to an urban center. The effort of transporting goods would have demanded too much effort from communities far away from urban centers.

2.4.3.2 – Evidence of Rural Communities

Czichon (2003) has identified numerous small villages and/or activity sites surrounding Hattusa that stand as good candidates for farming communities (see Fig. 7) attached to urban communities. One of these, Kocakayası, is located 2.5km NE of Hattusa and 1km north of a stone platform that has been argued by Czichon (2000: 271-272) to be the remains of a Hittite period granary. Kocakayası is well within the 3-5km radius argued by Wilkinson (2003: 116-117) as an estimate for likely cultivated space by inhabitants of EBA urban settlements in the Jazirah, which also practiced dry farming. Additional sites identified by Czichon are further than this, some as far as 5 or 6km away, but it is still very likely that they were growing crops in support of Hattusa and its massive granaries. This indicates that Hattusa, a much larger than average urban center for Central Anatolia, had a particularly large extent of cultivated land around it. A comparable example of this can be seen at Tell al-Hawa, where, Wilkinson (2003: 121) argues, farming communities as far as 10km away fed into the main urban center.

Texts give us very little information on how or if such a system of rural communities feeding into urban centers operated in Hattusa. Texts do tell us, however, that numerous small population centers existed, far more than have been uncovered in the archaeological record. This indicates that most of these population centers have left little to no archaeological signature and were thus likely small, unfortified, and not built on höyüks. Kryszewski (2016: 29ff) identifies 38 place names mentioned in Hittite texts (see Fig. 5) that were likely approximately within a single day's travel from Hattusa. These place names consist of the major urban centers of Arinna,

Tahurpa, and Tawiniya, the numerous smaller population centers³⁷ that have been associated with these three (what Kryszewski calls ‘local clusters’), and additional settlements that have not yet been associated with a larger urban center, Haitta, HARnassa, and Imralla. Because of Kryszewski’s focus on these three settlements, the immediate vicinity of Hattusa is not discussed, meaning that there could be, in fact, more than 39 population centers within a single day’s travel.

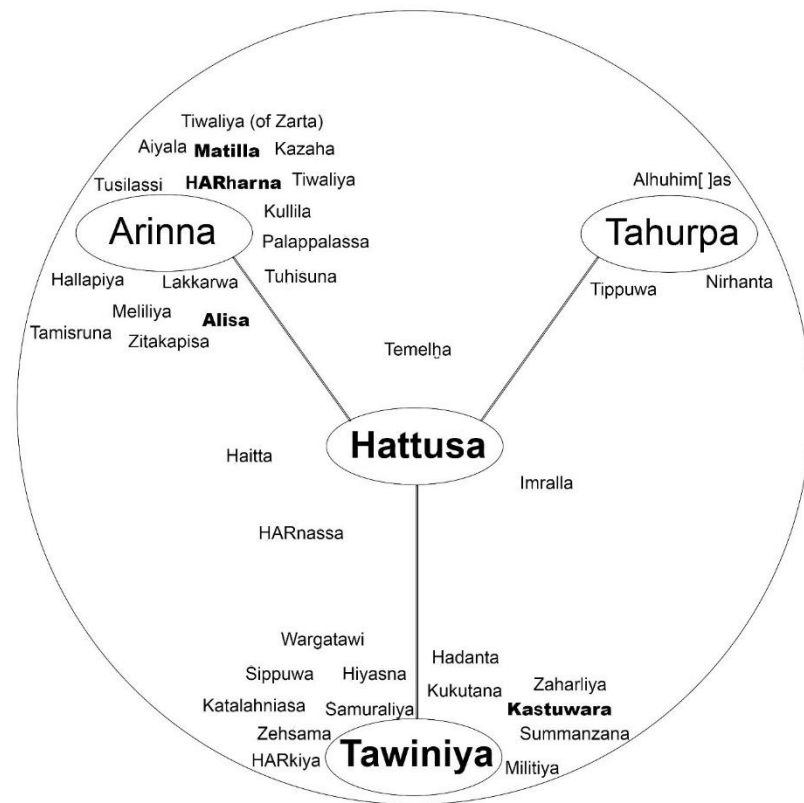


Figure 5 - Schematic diagram of all settlements likely to exist within a single day of Hattusa (following Kryszewski 2016: 29ff). Names in bold are settlements assigned an AGRIG (see Section 2.4.1.2) according to Singer's (1984: 114-115) list.

The Land Grant of Sahurunuwa (KUB 26.43, specifically obv. 32-34) allows Kryszewski (2016: 58-59) to further break down the relative geographic setting of the population centers in Arinna, which had the largest local cluster. The Land Grant discusses how Arinna's population

³⁷ Note, the Hittites appear not to have distinguished between large cities and smaller villages, using the designator 'URU' for cities and for villages in their texts (Mielke 2011b: 154).

centers are clustered together, indicating a three-tiered arrangement, with Arinna at the top, Alisa and Palappalassa at the second tier, and all other locations clustered around and responding to these three larger settlements (see Fig. 6).

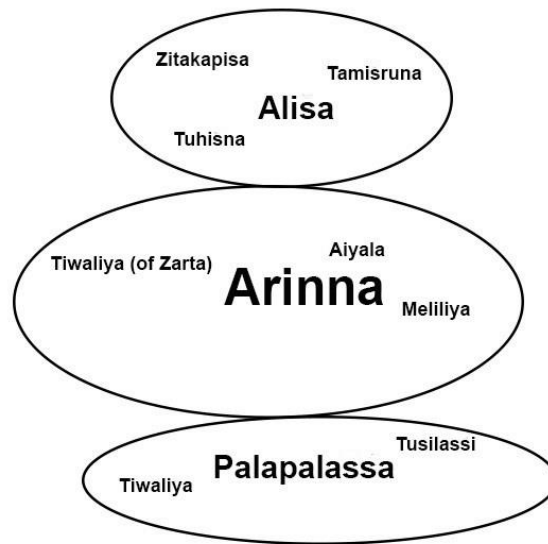


Figure 6 - The Districting of Arinna's Sphere of Influence

In this organization, it is likely that the third-tier settlements were very small and possibly rural communities entirely dedicated to farming. As will be illustrated below, it seems very unlikely that these third-tier settlements would not have been large enough to leave any kind of archaeological signature.

We can take this textually oriented geography and see how it compares to the archaeological geography using Czichon's study mentioned above. The distance that an individual can cover in a day depends on many factors, not least of which is the mountainous terrain surrounding Hattusa. If we assume, generously, that an individual can cover 30km in a day of walking (this measured in a straight line, not the zig-zag that would have been necessary to traverse the hills and valleys of this region) and thus place a circle around Hattusa with a

radius of this distance (see Fig. 7), only three excavated archeological sites would fall within this circle, Alaca Höyük, Eski yapar, and Yassıhöyük.

An additional 15 Hittite sites that have been found through various surveys are also present³⁸, Tahirbat³⁹, Kaletepe⁴⁰, Baltasarılar Höyük (Bişek Höyük)⁴¹, Türkmensarılar Höyük⁴², Yılanlıtepe⁴³, Güllük Kale⁴⁴, and Çeşka Kalesi⁴⁵.

Czichon (2003) found 26 Hittite sites within the vicinity of Hattusa (see Fig. 7) alone based on sherd scatters. Notice how Czichon's sites cluster at the northern and western edges of Hattusa, where the Budaközü River emerges from the mountains. This region would have been more suitable for farming than the more mountainous areas east and south of Hattusa. Also, the density of the clustering close to the city contrasted to the sparseness at a further distance indicates that these activity areas were supporting the city as opposed to being independent communities or communities supporting a different large settlement.

All told, 41 locations (archaeological sites and places with evidence of habitation and/or activity) have been identified in the archaeological record surrounding Hattusa. While the closeness to the number 39, suggested by Kryszewski is at first intriguing, it must be emphasized that a majority of these locations are closest to Hattusa and thus not necessarily to be associated with what Kryszewski has observed textually. Furthermore, several of these sites, especially those identified by Czichon, were likely too small to merit mention by Hittite scribes. If each of the four large excavated sites were to receive a survey with the kind of intensity of Czichon's, it is

³⁸ Note that the results of Czichon's (2003) survey are not included here as they will be discussed in greater detail below. They examine the immediate vicinity of Hattusa, approx. 12km radius,

³⁹ Sipahi and Yıldırım 2010: 453.

⁴⁰ Gerber 2008.

⁴¹ Gerber 2008; Strobel et al. 2006: 368; Czichon 2003: 436.

⁴² Gerber 2008.

⁴³ Gerber 2008; Fales et al. 2009.

⁴⁴ Gerber 2008.

⁴⁵ Gerber 2008; Fales et al. 2009.

very likely that they too would reveal several additional small settlements and activity areas. A further exploration of this very likelihood around Çadır Höyük is addressed in Chapter 5.

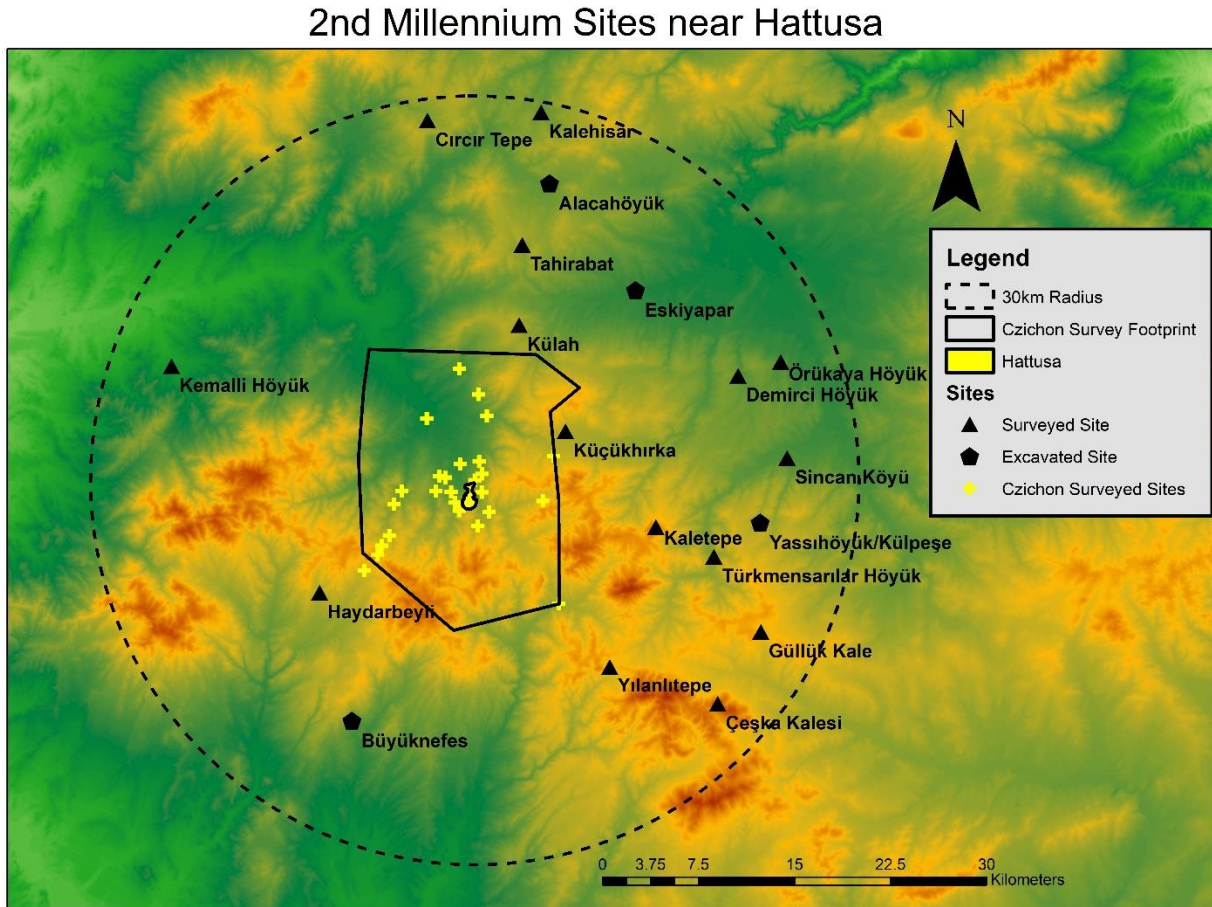


Figure 7 - Surveyed sites within 30km of Hattusa.

2.5 – Discussion and Conclusion

As discussed in Chapter 1, Frangipane (1993, 2010, 2012) argues that Western and Central Anatolian societies of the EBA engaged in a (often violent) competitive wealth finance economy that developed from trade networks. When we consider the data from Kanesh relevant to agricultural management, though limited, we can see a continuation of this tradition into the MBA. The existence of pithoi storage in individual homes argues against a highly redistributive

system as is more consistent with staple finance economies. Likewise, the generally private ownership of land indicates that the king's emphasis was not on controlling agricultural goods.

The impression we get of farming at Kanesh was that it was generally done by private, independent individuals. They paid taxes to the state which the state kept in storage, though it seems unlikely that this storage was for redistribution to the broader populace. It may have been kept for the specialist/administrative/mercantile populations tied to the urban center (Bachhuber 2012: 580). Small temples at Kanesh with only prestige items indicate that temples were not involved with storage (and possibly land ownership) and were second to the palace in terms of importance (if size can be used as an index).

The management of agricultural resources then appears to be fairly *laissez-faire* as long as taxes and debts were paid. This is in keeping with Frangipane and Çevik's discussions of centralizing societies. Frangipane's (2010: 84) description of EBA Western Anatolian centralized societies fits well with the evidence from Kanesh:

“The second type was that of western Anatolian societies with political/military type leaders who seem to have managed small territories and who were probably viewed ideologically in terms of their role as defenders and representatives of the community. Interference by these elites in the basic production system of the general population appears to have been virtually non-existent, whereas elites may have played a very important role in protecting the trade routes for raw materials and in supporting craftsmen.”

Çevik's (2007: 134) call for a simple, two tier settlement pattern in centralized societies also appears to be met by Kanesh. At times, the Anatolian cities may have exerted political control over one-another, but these holds were tenuous. Furthermore, in these instances, there is no evidence to assume that the newly conquered cities would have turned to some kind of specialization not already met by the craftsmen of their conqueror. More likely they paid a

tribute. Though we are not certain of what kind of tribute that would be, agricultural goods are a reasonable guess.

The matter of the Hittites is more complex, both because the Hittites established strong political control over multiple polities, and because the amount of data we have from this time is greater, both archaeologically and textually (this is not as true in terms of quantity, but certainly true for quality given the wide range of textual genres covered in the Hittite corpus). The Hittites continued along the trajectory created at least as early as Pithana and Anitta who conquered cities and then maintained lasting political dominance over them. Anitta's title of 'Great King' and his consistent campaigns indicate that it was his intention to maintain this control. There is plenty of evidence prior to this of cities fighting with one-another, but little evidence of cities exerting continued political control. The only possible counter example is that of Purushaddum, which may have exerted some kind of lasting control over some cities in the west.

It is clear that the Hittites were interested in centralizing agricultural goods at the capital and at AGRIG storehouses cities, but it is not clear in what quantities. Burgin (2016: 92) argues that the grain silos at Hattusa were for emergencies, not redistribution. This combined with the likelihood that they were local grain, not grain brought in from elsewhere, indicates that the collection of grain from outlying cities was almost exclusively to fill the AGRIG storehouses for use in rituals and festivals. It also indicates a more wealth finance oriented economy as the burden of caring for staple good redistribution was left to regional powers.

Glatz (2007; 2009) has argued that the Hittite kings, especially those of the Empire period, utilized different methods to maintain their political dominance over the regions under their control. She cites monuments, administrative technology, and pottery specifically. To Glatz, these highly visible media had distinctive characteristics that invoked a designation of 'Hittite'

and thus served as reminders of the political system that accompanied being ‘Hittite’. The act of collecting agricultural resources, both at the local level and at Hattusa, was itself likely an expression of symbolic power. The agents managing the collection and storage of these goods were AGRIGs whose powers were specifically curtailed to prevent distraction from the true source of authority at Hattusa.

The transition from kingdom to empire in Central Anatolia was gradual and even debatable, depending on how one defines terms. One way to starkly contrast these two periods is to recognize the significant innovation that appears in festivals. Old Kingdom festivals, such as the KI.LAM festival, occurred in a single place. The empire *Reisefeste*, such as the *nuntarriyašhaš* and AN.TAḪ.ŠUM, however travelled for several weeks. This process of traveling to major cities (mostly ones that would have contained AGRIG storehouses) was a way to further utilize the collected grains through feasting without requiring the difficult task of sending them to the capital. Additionally, these trips reminded the people of the king’s political and ideological authority, while also reminding them of his role in providing them with food and the good will of the gods.

We can see throughout the 2nd Millennium a process of complicating Frangipane’s centralized society through evidence for the management of agricultural resources. Kanesh fits the model well and represents a continuation of the EBA Anatolian way of life argued for by Frangipane and Çevik. The Hittite Old Kingdom begins to change this way of life, though predominantly, it remains recognizable. The difference is one of scale, not type. With the development towards empire we see an even greater scale emerge and perhaps as an answer to this, a more aggressive form of symbolic propaganda layered within the *Reisefeste*.

At this point, it is important to note that considerations of wealth and staple economies are best done in terms of a spectrum and not a dichotomy. D'Altroy and Earle (1985: 188) remind us that this model of economies is heuristic and any example will actually be a mix. I prefer to think in terms of a spectrum because it is in alignment with D'Altroy and Earle's perspective of mixing, and offers greater language for discussing how this mixing of economic strategies changed over time.

This chapter delineated the arguments and evidence for considering MBA Anatolia as a predominantly wealth finance oriented economy. The rise of the Hittite state kept much of these characteristics, but slowly began to shift further down the spectrum towards the staple finance economy. We see this at the beginning with Glatz, Gerber, and Kealhofer's observation that local farming communities and settlements were being abandoned in favor of larger, centralized settlements. This local coalescence, that ultimately coalesced on a regional scale into the Hittite state, imposed a degree of administrative and political control over Central Anatolia that it had never known before. This control continued the wealth finance orientation of its predecessors, but the complexity of managing the logistics of so many population centers began to impose more staple finance strategies. We see this in the state control over AGRIGs. As stated above, the role of regional authority over redistribution fits with the wealth finance model, but the overarching state control over the AGRIGs is a nod towards staple finance. The state, while still mostly staying away from redistribution itself, imposed a greater control over the infrastructure of redistribution and codified the rules applying to the regional agents of redistribution. We see this also, and later, with the *Reisefeste*. These events acted as state sponsored redistributive acts almost in disguise. The feasting involved, while sourced from local farms, was dictated and 'offered' by the central state.

My examination of Çadır Höyük will demonstrate its role as a local and regional actor and how this contributed to the staple finance ‘pull’ that I am arguing characterized the Hittite state as it continued through the LBA. To understand this at the most granular level possible, I must turn contextualize the data I will be using. The following chapter will address this.

3.0 – 3rd and 2nd Millennium Anatolian Painted Ceramic Traditions

This chapter will address the archaeological evidence for the emergence and geographic distribution of EBA painted wares in Central Anatolia. This review will serve as a context for the development of Alişar III Ware, the latest example of these traditions and likely most closely related to the painted wares contemporaneous with Hittite ware. Chapter 4 will present the evidence for painted wares at Cadır Höyük and will draw on the framework presented here to contextualize it.

A review of this nature is additionally valuable in that currently existing discussions (Steadman 2011; Düring 2011) are brief and rely on only a few sources, or have become outdated (Orthmann 1963b; Öktü 1973). When a larger synthesis is developed, it becomes clear that our understanding of EBA painted wares is inconsistent because the defining characteristics of these wares are not agreed upon. Perhaps more accurately, the terms we use are not as definitive as scholars sometimes believe as the ceramic evidence presents a more complicated picture. My synthesis here does not attempt to introduce a better categorization; rather, it attempts to present the data and interpretations of that data more clearly. The solution to this issue would make for valuable research and would necessitate visiting numerous museum collections throughout the Anatolian Plateau to examine and classify these ceramic traditions anew.

The discussion of this problem is important to this dissertation because, as I argue more thoroughly later, the painted ware traditions that define the EBA continue to be used in Hittite times. As discussed in Chapter 1 - Introduction, this has long been suspected, but never before been demonstrated as thoroughly as it is here. In order to understand the significance of these painted wares appearing in Hittite times, it is important to know where they came from and how

they can help us understand the political and economic nature of those times. This, in turn, is important as it serves to inform us of what the survival of this tradition in the Hittite record implies (this discussed more thoroughly in Chapter 6 – Conclusion).

3.1 – Hand-Made Early Bronze Age Painted Wares

The surveys and excavations of von der Osten at Alişar Höyük and its environs (1926-1932) are responsible for the identification, labelling, and chronology of most Central Anatolian EBA ceramics that we still use today, albeit with some modifications. Scholars (Öktü 1973; Gorny 1990; Schoop 2011) have wrestled with placing von der Osten's work into a chronological framework that fits with data from other sites. Von der Osten's excavation techniques and his publications introduce both uncertainty and ambiguity. This is primarily due to the lack of detailed data relating to stratigraphy and the fact that he and his colleagues changed their interpretations throughout subsequent publications (see Schoop 2011: 163 and Steadman 2011: 245-246).

Excavations at Kültepe have been the most useful and influential in the effort of making sense of the ceramic sequence and relationships, though several other sites such as Hattusa (Fischer 1963; Orthmann 1963a), Alaca Höyük (Gürsan-Salzman 1992), and Büyüknefes (Gerber 2003) have contributed as well. The works of Omura and Efe have additionally been of great value in bringing the western region of Central Anatolia into this discussion.

Here I will summarize the work of 90 years of scholarship on this topic. For this summary, I treat surface characteristics as more indicative of ceramic tradition than I do form typology. One reason for this is that many typological forms appear throughout multiple chronological and geographic divisions, whereas surface treatment is more chronologically and geographically sensitive (Genz 2005: 76). Another is that surface decorations are often better

(though more ambiguously) discussed by the archaeological literature and (often) more easily identified in photographs.

3.1.1 – EBA II Red Burnished Wares

I begin this discussion with the EBA II (2650-2300 BC) as this is the first period where excavation has produced enough information to begin classifying ceramic traditions. Our knowledge of the preceding EBA I ceramic traditions in Central Anatolia is particularly weak (Gerber 2008: 199; Düring 2011: 264, 266). For the EBA I, we can generally talk about fairly homogenous red and black burnished ceramic traditions that spread across a majority of Anatolia, with a few exceptions to the south east, such as Tarsus and the Upper Euphrates region (Mellink 1989: 321).

For the EBA II, with respect to surface treatment, burnishing is the most prevalent form of decoration. Burnished wares appear in Anatolia in the Middle and Late Chalcolithic¹ and are likely a response to and skeuomorph, or replica, of metal vessels that begin to appear more frequently at this time (Efe 2007: 252; Fidan et al. 2015: 63). Burnishing remained a significant part of Anatolian ceramic production until the Late Bronze Age, where it disappeared almost entirely with the rise of the undecorated ‘Hittite’ or North Central Anatolian (see Glatz 2009: 129) drab ware. Why burnishing became less popular over time may be a reaction to the introduction of the potter’s wheel, which became the dominant form of ceramic production in Central Anatolia at the beginning of the MBA (Mielke 2017: 123) and allowed pottery to be produced much more quickly. As burnishing is a slow process, keeping up with the increased output may have been too difficult to continue. Shortly after the appearance of the wheel, the

¹ Omura (2002: 61) argues that the Kizilirmak River was a cultural boundary in the Chalcolithic as indicated by pottery. Alişar Höyük style Chalcolithic pottery is found within the Kizilirmak, but not without.

Hittite state emerged as the dominant political power and with it came a highly standardized ceramic repertoire which spread across Central Anatolia.

The pottery of EBA II Anatolia had recognizable regional variants (Smith 1953: 44; Özgüç 1963: 4-7; Orthmann 1963b 68-69, 72; Öktü 1973: 141-142; Thissen 1993; Efe 2003; Gürsan-Salzman 1992: 262-263; and Yakar 1985: 239). Through sites with the red burnished 'Alışar Ib ware', Orthmann identifies the Alışar-Kültepe area as one region (see Fig. 8), which he indicates extended as far east as Karahöyük in Elbistan (Orthmann 1963a: 69),

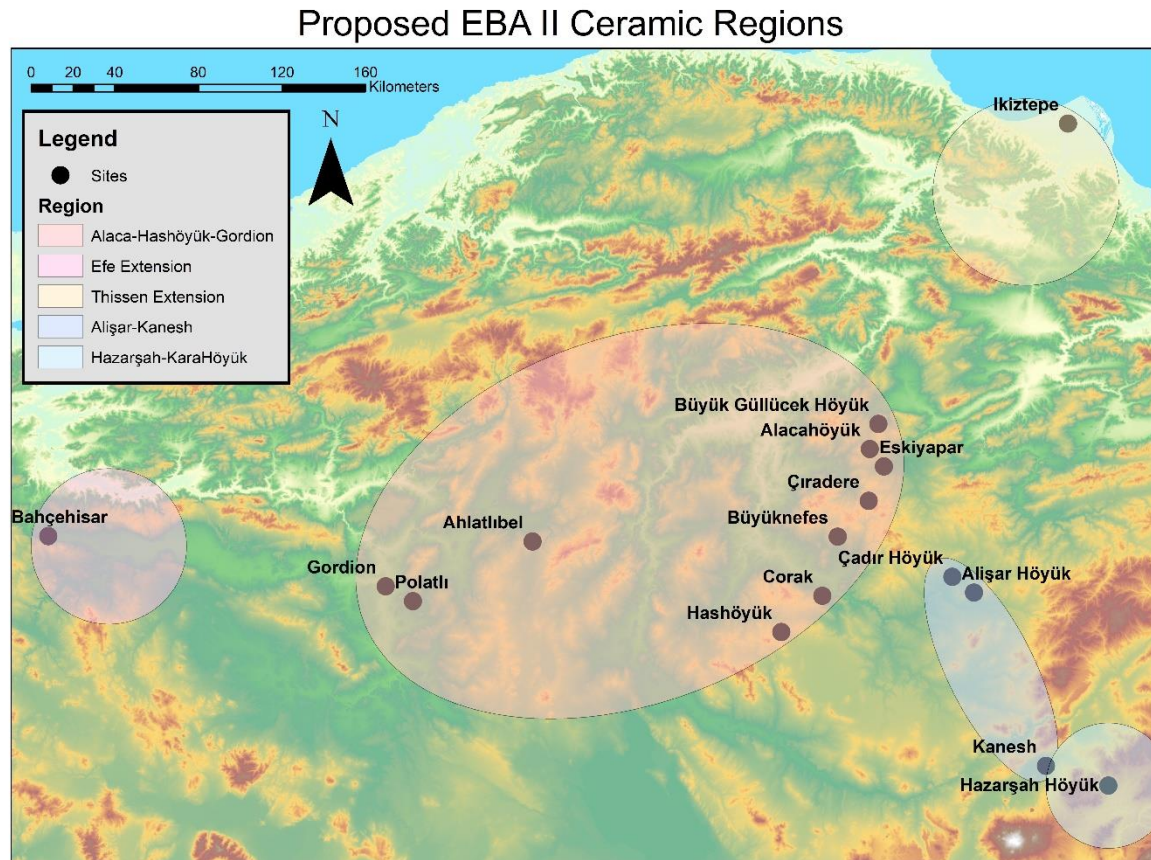


Figure 8 - Proposed EBA II Ceramic Regions

though evidence for this is less solid than for other sites. Alişar Ib ware was sometimes painted with linear designs² in patterns that appear again in later traditions (Intermediate Ware and Alişar III Ware) though in increasingly complex designs.

Drawing on sites with a different red burnished ware tradition, specifically vessels with a red burnished exterior and black burnished interior, Orthmann also argues for a second region to the north and west of the Alişar-Kültepe region³ (see Fig. 8). This second region is large and better understood archaeologically than the first. It includes Alaca Höyük, Büyük Güllücek Höyük, Eskiypar, and Çıradere to the north and Ahlatibel, Polatlı, Gordion, Büyüknefes, Çiçekdağı, and Hashöyük to the west and south-west (Hachmann 1957: 65; Gürsan-Salzman 1992: 168; Orthmann 1963a: 72)⁴. Efe (2003: 91-92; 1994: 18-19) has argued for an even larger cultural region, extending it at least as far west as Bahçehisar and Thissen (1991) has argued that this tradition exists even further north, along the Black Sea coast at İkiztepe^{5,6} (see Fig. 8).

These two cultural regions had distinct material culture in the preceding Chalcolithic as well (Schoop 2011: 164; Omura 2002: 59). As mentioned above, there is little we can say about the material culture of these two regions for the EBA I, but it is reasonable to believe it would have been distinct then as well. When the archaeological record is well (or at least better) understood, these regional differences are consistently recognizable. This is true for the different Early Bronze ceramic traditions that appear after EBA II. As will be discussed in detail below, the geographic distribution of EBA II/III Çıradere and its later iteration, Delice Ware, adhere to

² See von der Osten 1937a: Pl. III.

³ Several of the sites in this second region are also distinguished by the presence of fingernail impressed wares (Koşay and Akok 1947: 154; Orthmann 1963a: 34-35, 70; Strobel and Gerber 1999: 303-304; Gerber 2008: 199-200; Strobel and Gerber 1999: 303-304; Gürsan-Salzman 1992: 192, 262-263; Omura 2001: 48; Omura 2003: 272).

⁴ Özgüç (1963: 5) calls this the 'Büyükgüllücek culture, though it appears this label has not been taken up by others.

⁵ Orthmann (1963a: 74) considered this possible as well.

⁶ Thissen 1993: 209-210 goes so far as to compare the LC/early EBA pottery of İkiztepe, Büyük Güllücek, and Alaca Höyük to traditions in the Aegean.

the Alaca-Haşhöyük-Gordion Region, while the roughly contemporary Intermediate Ware and its later iteration, Alişar III Ware, adhere to the Alişar-Kültepe region (see Figs. 14 and 15). During the dominance of North Central Anatolian (NCA) pottery, which began in the MBA, such regional ceramic distinctions collapsed under the political control of the Hittite state and its highly standardized ceramic repertoire. Later, in the Iron Age, these geographic cultural distinctions return in a roughly analogous state (Şerifoğlu 2015: 218).

The geographic distribution of two related red burnished ware traditions introduces several questions. It must be considered in light of Düring's (2011: 273-274) observation (based more on ceramic typology than on surface decorations) that EBA II Anatolia witnessed a convergence of ceramic traditions and that this convergence was driven by the development of a culture of drinking and long-distance trade. Indeed, the appearance of foreign goods from the east (Mesopotamia and the Jazirah) at Kültepe is first noticed in this period (Mellink 1963: 175; Özgüç: 1986: 36-37; Massa and Palmisano 2018). Efe (1994: 5, 18, 22, 24) views this convergence as a cultural separation from Western Anatolian sites such as Troy and Beycesultan and a slow turning towards Central Anatolia, a process which reached its peak at the end of the EBA and beginning of the MBA. Like Orthmann, Efe (1994: 19) recognizes the ceramics from the region around Kültepe as slightly different from the north and western region, and, like Düring, he distinguished it through typological characteristics such as the presence of flattened rims and sharply carinated walls.

Bringing these observations together produces a distribution of ceramic traditions that is represented in Fig. 8. This map shows a kind of bi-section of Central Anatolia (red colors to the NW and blue colors to the SE), with the Alaca-Haşhöyük-Gordion convergence representing a

region merging with Central Anatolia but with historical and continued ties to the west and the Alişar-Kültepe convergence represented by more eastern ties, in terms of trade.

At the dawn of EBA III, evidence indicates that the regions of Anatolia began to trade with one-another at an even greater frequency (Şahoğlu 2005: 340 – discussed more thoroughly in Section 3.2). It is early in this period that foreign goods from Western Anatolia, most notably *depas* vessels, first appear in Kültepe (Mellink 1963: 175), for instance. The two ceramic regions discussed above had a shared border along Zincirli Dağı range that is situated on the modern border between Çorum and Yozgat Provinces. By the end of the EBA III, the city of Hattusa was founded within these mountains at a location that was well situated to access pathways to the north and SW (providing access to the Alaca-Haşhöyük-Gordion region) and SE (providing access to the Alişar-Kültepe region) (Cannon Forthcoming). The emergence of Hattusa at this time and location is almost certainly related to the increase in interactions between the Alaca-Haşhöyük-Gordion region and the Alişar-Kültepe region.

Evidence indicates that EBA Hattusa was built on virgin soil. Prior to the founding of Hattusa, the surrounding Budaközü Plain was inhabited by small farming villages that appear to have been short-lived (Schachner 2017: 30). One of these sites that had a longer occupation, Çıradere, has provided important data for understanding the pottery for the second half of the EBA.

3.1.2 – Çıradere Ware

In 1939, inhabitants of Çıradere, a modern village about 6.5km east of Hattusa via road, came to the Boğazköy (now Boğazkale) market with some painted ceramics they had found in a field. This prompted a cursory exploration by excavators, but World War II prevented any

further examination until 1953. Excavators visited the site once again in 1954 and it was in this year that the most thorough work was completed (Hachmann 1957: 62).

The pottery from Çiradere was published by Hachmann in 1957 and was predominantly dated to the Chalcolithic and EBA (see Fig. 9 below), though some NCA⁷ and Byzantine sherds were also found. Hachman (1957: 65) dates a break in habitation at Çiradere to the end of the EBA II through ceramics. His dating is likely a bit early, as will be discussed below, but the recognition of the break is important. There is a near absence of the ware types from Çiradere at Hattusa, which was likely uninhabited during in the early EBA III. Likewise, the wares common to EBA III Hattusa were not found at Çiradere (Hachmann 1957: 65), indicating that the settlement at Çiradere was abandoned sometime before and perhaps because of the emergence of Hattusa as the dominant settlement in the Budaközü Plain.

Hachmann identified seven pre-Hittite ware types at Çiradere and arranged them chronologically as follows:

<u>Ware Name</u>	<u>Period and Comparanda Locations/Levels</u>
Bi-Chrome Ware	Chalcolithic
Finger Nail Ware	Late Chalcolithic ⁸
Black Ware	Late Chalcolithic - EBA I (Alişar 1a/14-12M)
Red Slipped Ware	EBA I
Red Ware (Çiradere Ware)	EBA II (Alişar Ib/9-8M, Alaca III/8-7)
Stitch Decorated Ware	?
Blue-Grey Ware	?

Figure 9 - Chronology of Hachmann's ceramic types from Çiradere.

Hachmann's Red Ware is generally the ware described by archaeologists today as 'Çiradere Ware'. Hachmann (1957: 65) compares Çiradere Ware with the red burnished wares

⁷ The NCA wares at Çiradere have led Czichon (2000: 273) to suggest that the site was turned into a Hittite outpost at some point.

⁸ Hachmann (1957: 66) guessed this ware to be Late Chalcolithic. Fingernail incised pottery appears in Anatolia at least as early as the Early Chalcolithic (Steadman 1995: 19).

from Alişar⁹, Alaca Höyük, and Büyüknefes, though he stresses that the Alişar pottery (Alişar Ib Ware) is the least similar and the pottery from Alaca Höyük and especially Büyüknefes is the most similar in terms of ornamentation.

Çıradere Ware is handmade, with sand temper and occasionally vegetal or mica temper (Öktü 1973: 115). It is known in the following three decorative styles¹⁰ (Öktü 1973: 125):

Type 1: Yellow-brown to brick-red slip with red-brown or dark brown paint

Type 2: Brown to brown-red slip with paint in black

Type 3: Cream colored slip with brown paint

Çıradere Ware builds on the linear painting known from earlier red burnished ware, though the frequency of painting is higher and the designs become more complex. The lines are distinguished by being uneven, at times, and getting thicker at the ends (Öktü 1973: 127). This is a useful distinction as the other traditions that are discussed below appear to place emphasis on keeping the lines straight or zigzagged, a uniform width (this excludes lines that are used for metopes), and parallel to one-another.

Çıradere Ware first appears at Alişar Höyük in the latest layers of Level 7M¹¹ and Alaca Höyük in Level 5 (Gürsan-Salzmänn 1992: 262). Gerber (2003: 227) dates the Çıradere Ware found at Büyüknefes to EBA III. Hachmann's earlier estimation should not have as much weight as the stratigraphy at the site of Çıradere is not as well understood as that of the other sites considered. That Çıradere Ware emerged early in EBA III seems reasonable.

The development of Çıradere Ware from the Alaca-Haşhöyük-Gordion red burnished ware tradition appears to have been paralleled by the emergence of Intermediate Ware from the Alişar-Kültepe Alişar Ib Ware tradition. As Fig. 14 illustrates, both traditions stayed roughly

⁹ As does Gerber 2008: 233.

¹⁰ Hachmann (1957: 62-63) recognized only two styles, both of which appear to be included in Öktü's Type 1.

¹¹ See von der Osten 1937a: Pl. 4.5. It is not labelled as Çıradere Ware in this volume.

within the cultural regions defined above (Fig. 8), though Intermediate Ware appears to have spread beyond these borders in some instances.

Alaca Höyük	Hattusa Büyükkale/ Nordwesthang	Alışar Höyük Mound/Terrace	Kültepe Mound/ <i>karum</i>	Period	Year BC
		13-10	18	EBA I	3000-2650
8-7		9-8	17-14	EBA II	2650-2300
6-5	V	7-5	14-12	EBA III	2300-2000
4	IV	4	11-10	MBA	2000-1600

Figure 10 - Site Stratigraphy for the Early and Middle Bronze Ages.

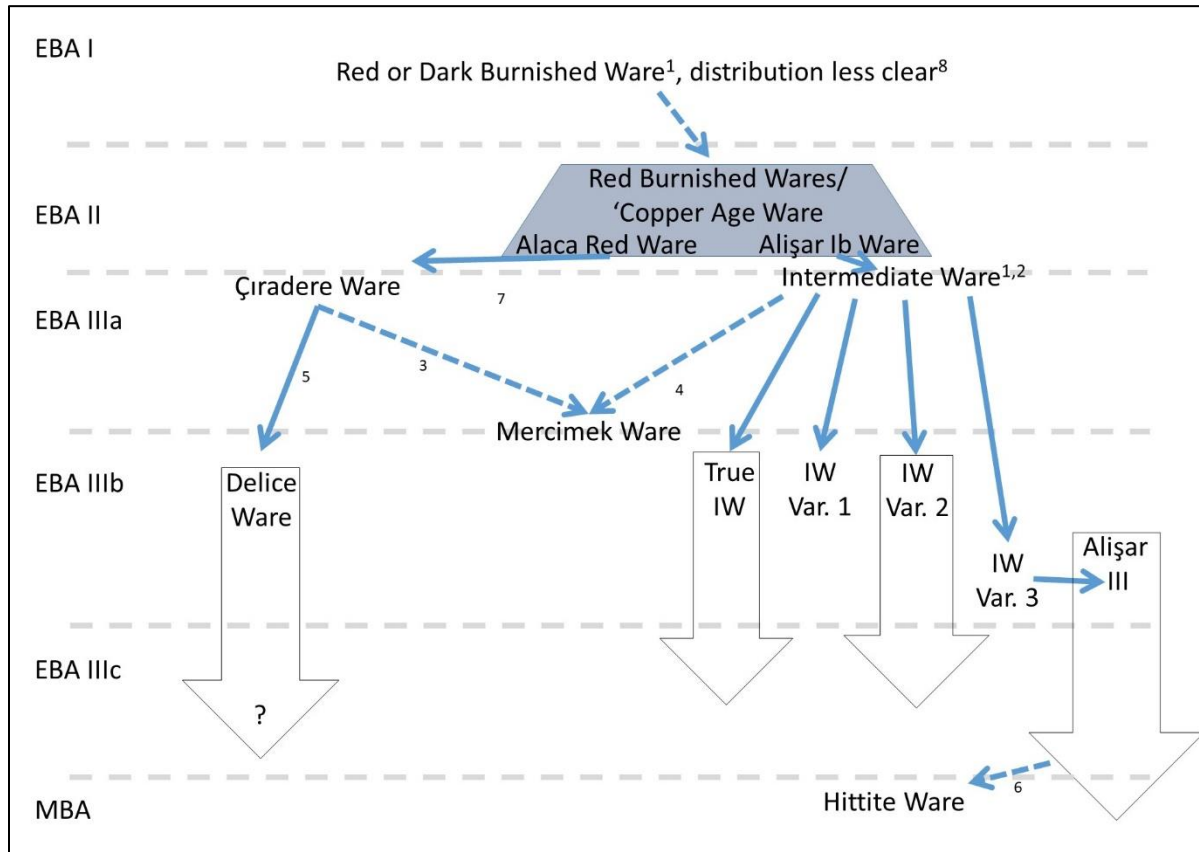


Figure 11 - Timeline of Ceramic Traditions.

Dashed lines indicate disputed connections. Numbers indicate sources, which are listed below. 1 – Mellink 1963: 175, Orthmann 1963b: 19, 2 – Öktü 1973: 83, 3 – Öktü 1973: 130, 4 – Gerber 2003: 229, Strobel and Gerber 2003: 224, 5 – Omura 1991a: 286-287; Omura 1992: 550, Gerber 2003: 229, 6 – Schoop 2009: 150, 7 – Gerber 2008: 233, 8 – Efe 2003: 89.

3.1.3 – Intermediate Ware and Alişar III Ware

Intermediate Ware and Alişar III Ware are part of a broader tradition generally called ‘EBA Painted Ware’, but also ‘Cappadocian Ware’. Cappadocian Ware was the term given to Alişar III Ware when it was found with Old Assyrian Trading Colony tablets at Kültepe, back when these tablets were called ‘Cappadocian’ (Sagon and Zimansky 2009: 250). Intermediate Ware is sometimes called ‘Cappadocian Ware’ as well, though this ware was not originally included under the designation.



Figure 12 - Intermediate ware as identified by Osten (1937a: Fig. 232).

Intermediate ware emerged in Central Anatolia at the beginning of the EBA III (Kültepe 13, Alişar 7M/13T) and was most common towards the middle and end of this period (Mellink 1963: 175). It is almost certainly a descendant tradition from the earlier Alişar Ib Ware (Sagona and Zimansky 2009: 199). Intermediate Ware is so called because it was viewed by Schmidt (1932: 194) as being an intermediate stage between Alişar I and Alişar III¹². Schmidt referred to it as ‘Early Alişar III’ pottery, but von der Osten (1937: 220, 236) later labelled it as ‘Intermediate Ware’.

This ware is physically characterized by being handmade and having a sand and vegetal temper. Öktü (1973: 115-116) points out that Çiradere ware tends to be better fired, better smoothed, has less plant temper, and has a more uniform wall thickness than Intermediate Ware. These observations may indicate that Çiradere Ware, in general, was better made than Intermediate Ware. As for surface decoration, Öktü (1973: 85ff) identified four types of Intermediate Ware.

True Intermediate Ware: yellowish-brown paste, usually slipped, with violet-brown painted decorations

Variant One: Like True Intermediate Ware, though not slipped, sometimes supplemented by plastic elements, such as grooves and knobs

Variant Two: Like True Intermediate Ware, though brighter paste and occasional cream slip

Variant Three: More like Alişar III Ware, reddish slip with dark black-brown painted decorations

¹² Alişar II designated a period originally thought to precede Alişar III, but was later identified as following Alişar III (Gelb 1935: 2). Thus, the sequence goes Alişar I, Alişar III, Alişar II, with Intermediate ware acting as an intermediary tradition between Alişar Ib and Alişar III wares.

The painted decorations on Intermediate Ware are mostly limited to triangles, diamonds, cross-hatching, zigzagging lines¹³, and clusters of lines in parallel. Most zigzag patterns are limited to 2-5 parallel lines. Patterns with more than five lines are known¹⁴, but these usually use as many lines as necessary to fill a certain space. Checker-board patterns are also known¹⁵, but are rare. Triangles appear, but always solid filled¹⁶.

Öktü (1973: 140) argues that Alişar III Ware developed from Intermediate Ware Variant 3, which is the latest of the Intermediate Ware variants. Alişar III Ware's earliest appearance at Kültepe is at Level 11 (Ezer 2014: 15) and it remains in use at this site until Level 8. Like Intermediate Ware, it is handmade with sand and vegetal temper, though at Kültepe Level 8, wheel thrown variants have been uncovered (Özgüç 1999: 112). Often this ware was not well burnished with matte surfaces preferred. It was moderately to lightly fired (Ezer 2014: 11; Emre 1989: 117).

Alişar III Ware was first discussed by von der Osten and Schmidt (1930: 255-264) after their 1927 field season at Alişar Höyük. At that time, von der Osten called it 'Period III Decorated Ware' as it appeared most frequently in Period¹⁷ III, which is equivalent to levels 6 and 5 on the mound (6M-5M) and 12 on the terrace (12T) (EBA III) (Gorny 1990: 44). Alişar III Ware has been described by its Schmidt (1932: 196) as follows:

As in the case of the early Alişar III ware¹⁸, the vessels were handmade and smoothed with polishing-stones. The surface colors are grayish white, shades of brown (most frequently buff), and red shades. Many of the plain fragments cannot be distinguished from Alişar I vessels.

The type ware has painted decoration, usually strictly geometric designs in straight lines. Curvilinear elements, such as semicircles, undulating lines, and

¹³ See von der Osten 1937a: fig. 232.5 and 232.6

¹⁴ See Öktü 1973: fig. I-G/14

¹⁵ Öktü 1973: fig. I-D/08

¹⁶ Von der Osten 1937a: fig 232.3

¹⁷ Sometimes called 'Stratum' in the early Alişar publications, see Schmidt 1932.

¹⁸ This is what Schmidt called Intermediate Ware.

scrolls, are less frequent... The colors of the decorations are dark brown, gray, or black, with the addition of brown-red or red in trichrome designs.

Von der Osten later (1937a: 236, 240) called it 'Early Bronze Age Ware' and identified three types, Öktü (1973: 126) added a fourth type:

Type 1: red slip, poorly polished, brown-black painted geometric designs

Type 2: yellowish-buff slip, poorly polished, brown to black or dark red to brownish-red painted geometric designs

Type 3: red and cream polychrome slip, the cream slip in panels with black-brown painted frames, dark brown and brownish red painted geometric designs

Type 4: red-brown slip with a black-brown paint

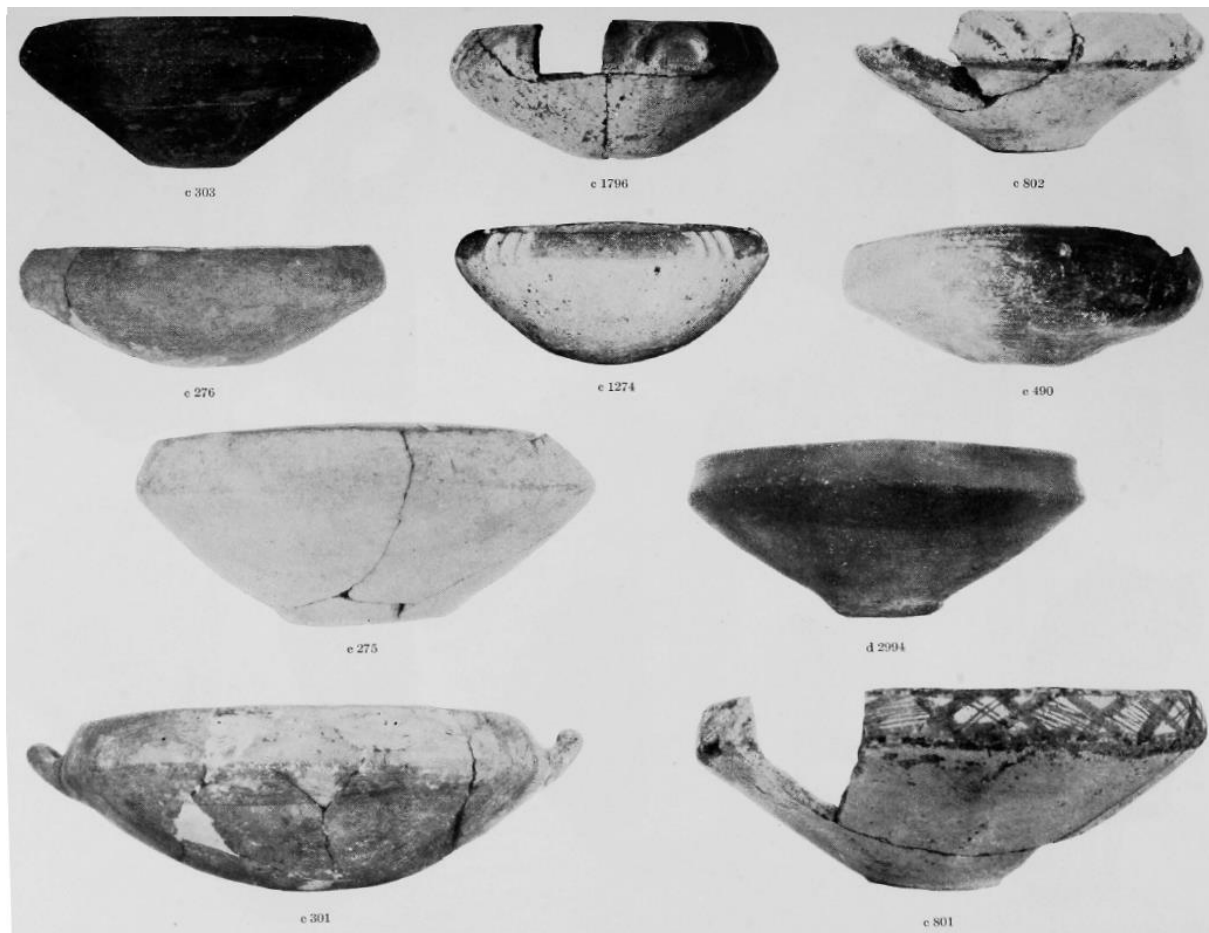


Figure 13 - Alişar III ware as identified by Osten (1937a: Fig. 237).

In terms of painted decoration, Alişar III Ware continues all the motifs known from Intermediate Ware, but adds new ones and increases the complexity by introducing a greater number of different motifs on individual vessels. Two decorative characteristics of Alişar III Ware highlight the difference between this tradition and Intermediate Ware. These are the occasional use of two colors of paint¹⁹ and the usage of metopes to set off different patterns²⁰.

The use of metopes demonstrates a higher interest in dividing patterns and by dividing patterns, allowing the introduction of more types of patterns without having them run together. Intermediate Ware also made use of multiple motifs for a single vessel²¹, but these were often limited to two or three. Alişar III Ware can have multiple motifs represented on a single vessel more frequently and can have four or five different designs separated off by thickened line metopes²².

Alişar III Ware is best documented at the sites of Alişar Höyük and Kültepe. Its appearance at Hattusa, the site that straddles the two ceramic culture regions, is worth examining further. Alişar III Ware is present at Hattusa in small enough quantities that excavators believe the vessels are imports, not local manufacture (Orthmann 1963b: 68-69; Orthmann 1963a: 78, Fischer 1963: 33). Fischer (1963: 32) elaborates by explaining that the Alişar III sherds from Hattusa look exactly like those from Kültepe, so much so that he does not believe they could have been made locally. He does also note that some Alişar III sherds do appear a bit different, especially with their lack of mica temper. These, he suggests, may be locally produced. Orthmann (1963b: 21-22) further observes that the Alişar III tradition is less varied at Hattusa than it is at contemporary Alişar and Kültepe. Bowls dominate the assemblage, which happens to

¹⁹ See von der Osten 1937a: Pl. 6

²⁰ See Schmidt 1932: Fig. 259

²¹ Ezer 2014: Fig. 12

²² See von der Osten 1937a: Fig. 239 c 1808

be true for Alaca Höyük as well, and the painted patterns on these bowls are simpler than those found at Kültepe and Alişar, using less complex geometric patterns and only one color of paint. Orthmann (1963b: 23) also notes that the Alişar III Ware from Hattusa looks more like the later stage Alişar III Wares at Kültepe.

Öktü (1972: 98, 142) has argued that the Alişar region represents the core of the EBA III Intermediate Ware tradition. The origin of Alişar III Ware is likewise believed by Emre (1989), Özgüç (1949) and Bittel (1950) to be at Kültepe. It is also found at numerous other locations (see Fig. 15). Regional differences between these sites have been identified by some (Öktü 1973), but dismissed by others (Emre 1989: 117). Kelly-Buccellati's (1974: 44) brief mention of Alişar III-like sherds from EBA II Korucutepe is noteworthy. She suggests they may be a local variant of Intermediate Ware, but her description of hatched triangles and red paint on a cream colored background indicate that the sherds were more similar to Alişar III Ware. The dating of these sherds is problematic if one is to consider them part of the same tradition and may instead be indicative of a more eastern origin to the EBA painted wares of Central Anatolia.

Physical Characteristics

At Kültepe 10 and 9, Alişar III pottery is hand-made and has a coarser fabric than its Hittite successor. It is plant tempered, though also rarely grit tempered. It can have buff, yellowish buff, red, and cream slipping and is usually not well polished. Firing temperatures are usually moderate to light and ornamentation is usually matte finish, with burnishing rare (Emre 1989: 117).

Forms

For Kültepe 10 and 9, five forms are identified. These are:

Bowls

Carinated shoulders and flat bases

Ornamental band running around the rim with occasional vertical painting continuing down the body.

Cups

High handles (projected above orifice) join the carinated shoulders at the rim

Band of solid color at the orifice, both inside and out

Bands of geometric ornamentation on the body

Jugs

Everted rims

High, cylindrical necks

One handle extending from shoulder to middle of the neck

Decorated with geometric designs

Drinking cups

Jars

Large neck flaring at top

Ovoid body with 2-4 horizontal or vertical handles

Flat bottoms

Entire body painted with geometric motifs

3.1.4 – Delice Ware

Delice Ware was first identified by Omura during his surveys in the late 1980s. This ware is handmade and characterized by a thick burnished, light yellow-orange slip which appears on the interior and exterior of the vessels. The color of the paint varies from brown to black with

some vessels having a reddish tint. The fabric is plant and grit tempered and the most common vessel forms are bowls, cups, and jars (Omura 1991b: 280).

Omura (1990: 298) points out that Delice Ware is different from Alişar III and Intermediate Ware in terms of paint, slip, and rims. He (1991: 287) further observes that Delice Ware is different from Çıradere Ware in terms of firing and slip, with Çıradere Ware being better fired and having a reddish brown or orange slip. However, Delice Ware's similarities to Çıradere Ware in terms of typology (especially the thinness of the walls) and style of decoration lead Omura to believe that they are part of the same tradition and may be contemporary.

Delice Ware painted motifs are like those of Çıradere in that shapes, such as triangles and diamonds, are rare, but multiple not quite parallel, diagonal lines are common. Crosshatching is rare except for occasions when different sets of diagonal, parallel lines meet²³. Also, less attention is paid to making the lines perfectly parallel and uniformly thick²⁴ than is characteristic to Intermediate and Alişar III Ware.

Omura (1991b: 287) argued for an EBA II dating for Delice Ware based on its similarity to Çıradere Ware, though this ignored the potential issues with such an early dating for Çıradere Ware (see Section 3.1.2). Omura (2003: 272) later argues for an EBA III date using the stratigraphy from Alaca Höyük as a guide, though no publication has discussed the presence of Delice Ware at Alaca.

3.1.5 – Other EBA Painted Wares

Brown (1967: 133-134) identifies two types of pottery that he argues are imitations of Alişar III Ware found at Ozan Höyük (#63 on Fig. 15). These are Ozan Ware and 'Pseudo-Cappadocian' Ware. He argues that neither can be true Alişar III Ware as the preceding ceramic

²³ See Omura 1991b: Fig. 2.8, Fig. 4.2.

²⁴ See Omura 1991b: Fig. 2.6.

tradition was not that of the Alişar-Kültepe region (i.e. Alişar Ib Ware), but rather pottery with either black or buff colors. He sees in Ozan Ware influences from Syria and Arslantepe as well. The typology of Ozan Ware shows some similarities to that of Alişar Höyük²⁵, but is generally different. The painted motifs, consisting mostly of cross-hatching²⁶ do indeed appear very similar to Alişar III motifs, though the variety is absent (likely because of the small sample size). The presence of metopes²⁷ are perhaps even more indicative of Alişar III influence. Ozan Ware is hand made with sand temper. The lack of vegetal temper marks a difference from most Alişar III Ware examples.

‘Pseudo-Cappadocian’ Ware, originally identified by Özgüç (1949) does have vegetal temper (as well as sand) and is likewise handmade, though some sherds indicate that vessels were finished on the wheel. Typologically, ‘Pseudo-Cappadocian’ Ware is more like Alişar III Ware than Ozan Ware is²⁸. Not enough of the painted motifs were published to determine how closely they fit to known Alişar III motifs.

Öktü (1973: 135-136) cautiously suggests that these wares were the result of contact between the Elbistan Plain and Central Anatolia, whereas Orthmann (1963a: 81) tentatively argues that the painted traditions of this region may be descendants of earlier Ubaid traditions.

Another painted ware is Mercimek Ware, which has a reddish-brown slipped surface with dark brown paint²⁹ (Gerber 2008: 200). Gerber (2003: 229) argues that it comes from the Intermediate Ware tradition whereas Öktü (1973: 130) sees it as a kind of Çiradere Ware. It is known only from the site of Mercimek Tepe, in Yozgat and Büyüknefes (Gerber 2003: 229). Not

²⁵ See Brown 1967: Fig. 14.127 and 134

²⁶ See Brown 1967: Fig. 15.161, 163, and 164

²⁷ See Brown 1967 :Fig. 15.170

²⁸ See Brown 1967: Fig. 17.176, 180, 182

²⁹ See von der Osten 1937a: Pl. IV.8

enough sherds have been photographed/drawn to determine patterns in this ware's motifs, but parallel lines are ubiquitous and chevron patterns appear as well³⁰.

Omura's surveys have determined other forms of painted wares that he has designated as different from the aforementioned traditions. These include painted wares found at Polaltli and Gordion, which he explains are similar to what he found at Kutahan and Söğütlü and may not be Alişar III, as has been argued elsewhere³¹ (Omura 1994: 323-324). He (2016: 160-161) notes that at Corak and Gök, a ware similar to Alişar III and Intermediate Ware in terms of painting, but similar to Çıradere Ware typologically, was uncovered. This ware had a thicker slip than any of these traditions leading Omura to believe it was separate from them. Similarly, Omura (1996: 154) identifies another painted tradition at Karaağızlı, which he considers to be a tradition of its own.

3.1.6 – EBA Painted Ware Geographic Distribution

Omura (1991b: 286) notes that Intermediate Ware and Alişar III ware show a near complementary geographic distribution with Delice Ware. The few sites to have both Alişar III and Delice Ware include Kaman Kalehöyük, Hanyeri Höyük, and Corak. These sites rest close to the border shared by the two traditions. Similarly, Çıradere Ware also has a near complementary distribution with Intermediate Ware, with which it was roughly contemporaneous. These distributions support Omura's (1991b: 286-287) argument that Delice Ware is a part of, or a continuation of the Çıradere Ware tradition. The distribution of Delice Ware appears to both map onto that of Çıradere Ware well and to maintain the complementary geographic setting with Alişar III.

³⁰ See Gerber 2008: Fig. 11.

³¹ See Orthmann 1963b, Pl. 99.

Distribution of Çıradere and Intermediate Wares

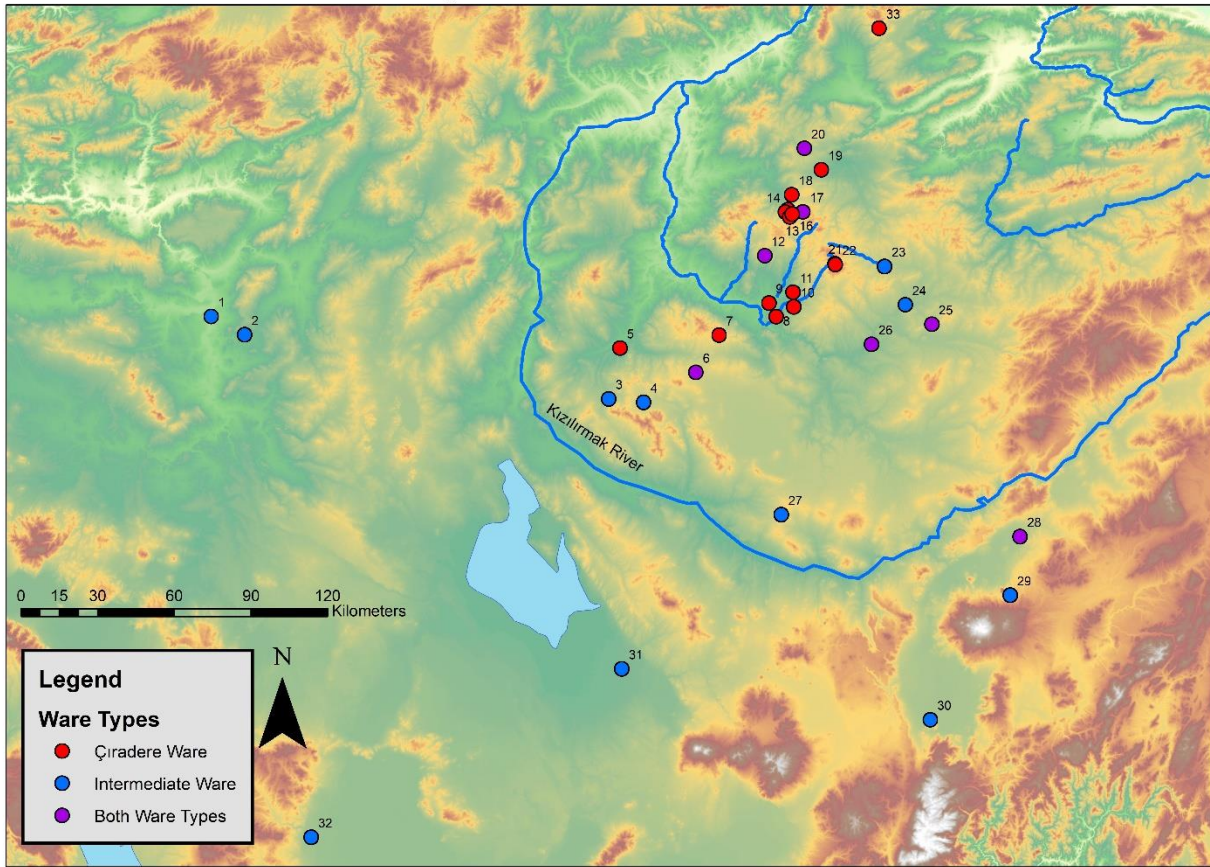


Figure 14 - Distribution of Çıradere and Intermediate Ceramic Traditions.

1 – Gordion, 2 – Polatlı, 3 – Kaman Kalehöyük, 4 – Kızlar Höyük, 5 – Hanyeri Höyük, 6 – Haşhöyük, 7 – Çorak, 8 – Karaboğaz, 9 – Siviritepe, 10 – Eminoğlu, 11 – İğdecik, 12 – Büyüknefes, 13 – Czichon Site #29, 14 – Korumkaya, 15 – Hattusa, 16 – Kayalı Boğaz, 17 – Çıradere, 18 – Emirler, 19 – Eskiyaar, 20 – Alacahöyük, 21 – Mercimektepe, 22 – Çengeltepe, 23 – Uşaklı Höyük, 24 – Çadır Höyük, 25 – Alışar Höyük, 26 – Battal West, 27 – Suluca Karahöyük, 28 – Kültepe, 29 – Zincidere, 30 – Eğriköy, 31 – Acemhöyük, 32 – Karahöyük, 33 – Kütüklü Höyük, *Not Shown* – Tarsus (Intermediate Ware and possible Çıradere Ware)

The distribution of the wares discussed in this chapter generally adhere to Orthmann's two regions, discussed in Section 3.1 and presented in Fig. 8. The spread of Çıradere Ware (see Fig. 14 for the following site identification numbers) represents only a small portion of the Alaca-Haşhöyük-Gordion region. This tradition stays close to the border between this region and the Alışar-Kültepe region. It should be noted that the Çıradere sherds at Eskiyaar (#19), Alaca

(#20), Kültepe (#28), Kütlüklü Höyük³² (#33), and Tarsus³³ (not shown) are likely imports and not local manufacture due to how few were recovered at these sites. In this regard, Çiradere might be viewed as a localized variant of the Alaca-Haşhöyük-Gordion cultural ceramic repertoire. The presence of Çiradere sherds at Hattusa may be misleading. As Hachmann noted (see Section 3.1.2), very few sherds were uncovered within the confines of Hattusa proper. Furthermore, Czichon has found Çiradere sherds at small sites surrounding Hattusa (Emirler #18, Korumkaya #14, Kayalı Boğaz #16, Czichon Site 29³⁴ #13), indicating that this tradition was common in the area and produced by smaller communities. The appearance of Çiradere Ware at Hattusa is not because the founders of Hattusa made or used it, but because this pottery was so prevalent in the Budaközü Plain prior to the settlement of Hattusa and was likely already on the ground.

Gürsan-Salzmänn (1992: 25) discusses the discovery of Intermediate ware at Alaca Höyük in Level 5 (Alişar 7M-6M and Kültepe 12 [Gürsan-Salzmänn 1992: 267]) and Level 4 tombs. He (1992: 262) also mentions the discovery of Çiradere ware. Both wares were uncommon at Alaca, indicating they were likely imports. Likewise, the appearance of the later Alişar III Ware is rare, mostly limited to bowls, and the small amount has not been associated with good contexts and thus is difficult to date³⁵ (Koşay and Akok 1966: 201, Pl. 48 k 124; Orthmann 1963b: 21-22).

³² Yıldırım and Sipahi (2002: 309) describe the ceramics found at this site as like those found at Çiradere, Alaca Höyük, Kayapınar, and Pazarlı, without providing further description.

³³ Çiradere Ware at Tarsus consists of a single rim sherd with a similar painted pattern.

³⁴ This location was not given a name but is described by Czichon (2003: 349) as a field with Chalcolithic, EBA, Hittite, Iron Age, Roman, and Late Byzantine pottery.

³⁵ The general lack of EBA geometric painted wares at Alaca Höyük is particularly interesting, given that the earlier Chalcolithic pottery had incised decorations that are clearly part of a similar tradition (see Koşay and Akok 1947: Pl. 34 Fig. a and b; Koşay and Akok 1966: Pl. 62 fig. 4-26).

The distribution of Intermediate Ware is both considerably wider than that of Çiradere and more focused on the SE, which places it within the Alişar-Kültepe region, as expected. The extent of Intermediate Ware is, in fact, curiously large, appearing as far away as Karahöyük (#32 – 315km SW of Alişar) and Gordion³⁶ (#1 – 282 km W of Alişar). It is appealing to view these findings as evidence of trade or imitation, not local tradition. The appearance of Intermediate ware at Alaca-Haşhöyük-Gordion region sites (Haşhöyük #6, Büyüknemes #12, Çiradere #17, Alaca #20) likewise is likely due to trade or imitation. The absence of Intermediate Ware at Hattusa (#15) is to be expected. The founding of Hattusa in the late EBA III occurred after Intermediate Ware began to lose popularity in the region and, unlike Çiradere Ware, it was never truly popular in that region in the first place. The settlement of Hattusa was roughly coincident with the rise in popularity of Alişar III Ware, though as I have discussed above (Section 3.1.3), the limited presence of Alişar III Ware at Hattusa indicates that it saw little local production.

The distribution of Alişar III Ware (see Fig. 15 for following site identification numbers) has much in common with Intermediate Ware, though the geographic distribution has grown to cover much of the eastern and the entire southern half of the Kızılırmak Basin. To the west, Alişar III appears to stop at Gordion (#1), like Intermediate Ware. To the east, however, Alişar III Ware appears to follow the Kızılırmak as far as Karayün-Höyük (#62), 176 km E of Alişar Höyük, and then appear again as far east as Arslantepe³⁷ (not shown), 300km SE of Alişar Höyük, and Korucutepe³⁸ and Norşuntepe (both not shown), 380 km SE of Alişar Höyük³⁹.

³⁶ EBA geometric painted wares do not appear in Western Anatolia (Düring 2011: 272).

³⁷ The pottery of Arslantepe VI C (EBA II) and VI D1 (EBA III) (see Persiani 2008: Fig. 1 and 2) share many similarities with Intermediate Ware in terms of painted motifs.

³⁸ Griffin (1974: 81) argues that Alişar III Ware found at Korucutepe is an import or an imitation.

³⁹ Öktü (1973: 135), citing Bittel 1934, mentions the discovery of Alişar III Ware at Tilkitepe (he refers to the site as Şamramaltı) 710km E of Alişar Höyük.

Distribution of Delice and Alişar III Wares

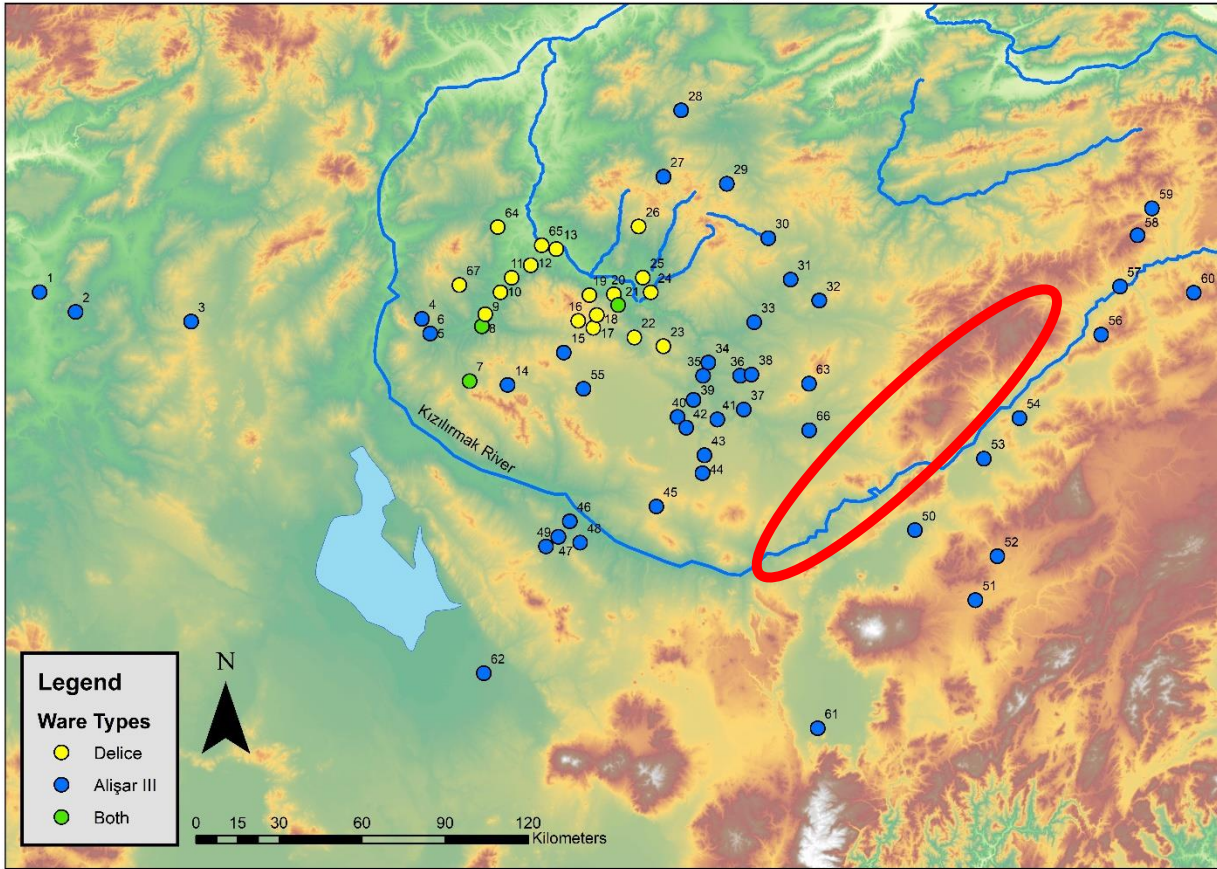


Figure 15 - Distribution of Delice and Alişar III Ceramic Traditions

1 – Gordion, 2 – Polatlı, 3 – Bayram, 4 – Yaşçayır Höyük, 5 – Höyük-Armuğlu, 6 – Alaman Mevkii, 7 – Kaman Kalehöyük, 8 – Hanyeri Höyük, 9 – Acı Ağzı, 10 – Küçükale, 11 – Kadı, 12 – Ayvalı, 13 – Gök Höyük 2, 14 – Kızlar Höyük/Sofular, 15 – Hashhöyük, 16 – Kırđök Gök, 17 – Gök Höyük, 18 – Çukur Argaç, 19 – Höyük-Safalı, 20 – Höyük-Cepni, 21 – Corak, 22 – Küllü 1, 23 – Mülazım, 24 – Karaboğaz, 25 – Sivritepe, 26 – Büyüknefes, 27 – Hattusa, 28 – Alacahöyük, 29 – Yassıhöyük/Külpeşe, 30 – Uşaklı/Kuşaklı Höyük, 31 – Çadır Höyük, 32 – Alişar Höyük, 33 – Battal West, 34 – Yukansazlık, 35 – Sarıkent, 36 – Kamışlağılı, 37 – Yanıkdeğirmen, 38 – Kül I, 39 – İncebucak, 40 – Karaçayır, 41 – Hacımusa, 42 – Samsun, 43 – Kocadere, 44 – Pazarıcı, 45 – Suluca Karahöyük, 46 – Cavuşlu, 47 – Işın, 48 – Sağmal, 49 – Karayer, 50 – Kültepe, 51 – Zerezek, 52 – Hazarşah Höyük, 53 – Sarıoğlu, 54 – Yeniçubuk-Höyük, 55 – Kül Höyük, 56 – Kahvepınar, 57 – Kayalıpınar, 58 – Kalkankaya, 59 – Gerdekkaya, 60 – Tatlıcak Höyük, 61 – Eğriköy, 62 – Acemhöyük, 63 – Çayırılık, 64 – Kültepe, 65 – Yeniyapan, 66 – Çomaklı, 67 – Kavurgalı, **Not Shown** – Tekeköy (Alişar III Ware), Arslantepe (Alişar III Ware), Norşuntepe (possible Alişar III Ware), Korucutepe (possible Alişar III Ware), Pulur Höyük (Alişar III Ware), Karayün-Höyük (Alişar III Ware), Ozan Höyük (Alişar III Ware), Karahöyük (Kahramanmaraş - Alişar III Ware).

As Fig. 15 indicates, many sites where Alişar III Ware was present cluster along the Kızılırmak as it turns NE. This string of sites begins with Kültepe (#50) and continues along the river for 171km (as a crow flies), stopping at Karayün-Höyük⁴⁰ (#62). Immediately north and

⁴⁰ This, of course, reflecting the limit of survey, not (necessarily) the geographic limit of Alişar III Ware distribution.

north-east of this string of sites is a space in which no Alişar III Ware or Intermediate Ware has been uncovered, marked with a red oval on Fig. 15. This gap in the distribution of painted ceramic traditions is not the result of a lack of survey or lack of sites (though the mountainous terrain likely reduced the number of sites somewhat), as Omura's (1991a) 1989 survey season covered much of this space and few Alişar III ceramics were reported⁴¹.

Within this red oval, Omura's (1991a) excavation identified three EBA sites that stood out from the rest as being larger than average. These are Zank (Omura's site #33, 185m in diameter), Eskiçeşme (Omura's site #30, 190m in diameter), and Çokumağı (Omura's site #11, 170m in diameter). Each of these sites is approximately the size of Cadır Höyük (180m in diameter according to Google Earth).

The presence of these sites indicates that the scale of urban centers in this region was not as high as that in the regions to the north (the Alişar Höyük mound is 223m and the Yoğunhisar mound, which is an oval shape, is 288m long according to Google Earth) and to the south (the Kültepe mound is 563m and a mound identified by the Kontani et al 2012, labelled 09-130, is 295m according to Google Earth). While simple mound size is not an ideal metric for determining an urban center's size (as the entirety of the mound was not necessarily inhabited at any given time), it is often used to estimate which archaeological sites were likely to have had greater regional influence (e.g. Glatz 2007: 271-272). Following this model, the region under discussion may have been out of touch with the burgeoning trade networks that were emerging at this time as these trade networks would have been driven by the development of large urban centers that served as more fruitful commercial stopping points and would have had great

⁴¹ A possible exception is Çayırılık (site #26 in Omura [1991a]). While Omura did not describe the pottery from this site as Alişar III Ware, he did provide a drawing of some of it (Resim 6.8) and the painted motifs match those of Alişar III Ware. This is not a particularly significant exception as Çayırılık is close to the cluster of sites (25km east of #36 – Kamışlağılı) and not within the gap marked with the red dotted line in Fig. 15.

resources to protect trade routes. An implication following this assumption is that trade routes would not have crossed this region. This will be discussed further in Chapter 5.

The sites of Eğriköy (#65) and Acemhöyük (#66) appear farther from the core area of Alişar III Ware. Both sites were significant settlements during the Old Assyrian Trading Colony period, with Eğriköy potentially matching Kültepe in size. Eğriköy appears to have been founded towards the end of the EBA, likely in reaction to the rise in trade that was emerging from the east as this site was situated with easy access to Kültepe (Kontani et al 2014: 101-103, 105).

Acemhöyük appears to date a little earlier, with pottery comparable to that of EBA II Tarsus present in the deepest sounding (Mellink 1983: 431). The founding of Acemhöyük may likewise be tied to taking advantage of the rise in trade. The recent discovery of a crystal weight, dating to 2250 BC, with an as yet undecipherable cuneiform inscription supports this (Çirkin 2017), as it is likely not a local production. Acemhöyük's importance for MBA trade is clearly demonstrated by the many seals and bullae found at the site, though no *karum* has been identified yet.

Another location that may indicate trade was an important factor in the distribution of these ware types is found at a Delice River crossing near the modern-day town of Yerköy. Yerköy straddles the river where the Turkish highway D785 represents the last major Delice River crossing until Aşağıhsangazili, 49km north where highway E88 crosses. Several smaller crossings are present south of Yerköy.

5.5km SW of Yerköy is the town of Çiçekdağı, which contains the archaeological settlement Corak (#21 on Fig. 15). This settlement had Delice Ware, Alişar III Ware, and a third type similar to Alişar III and Intermediate Ware, though no evidence for the earlier Çıradere or Intermediate Ware traditions has been uncovered. Across the Delice River, 13km NE of Corak,

is Sivri Tepe (#25), which has a lower quality form of Delice Ware that also bears resemblance to Alişar III Ware (Gerber 2008: 201). Corak and Sivri Tepe are located close to the cultural border of the two ceramic traditions and they saddle the Delice River. Perhaps, like Hattusa, they served as important nodes for trade, likely controlling the crossing of the Delice River at this location. Sivri Tepe, now completely eroded, sat on the highest point in the southern Bişek River valley as it feeds into the Delice River. Such a position would have enabled this site to command the Bişek River valley and through it trade seeking to cross the Delice from the east. Less has been published about Corak, though it too was presumably well situated to control trade coming from the west.

Gerber (2007: 21), drawing from the cluster of Iron Age sites identified in his survey, argues for an Iron Age road that extended east out of Yerköy, up through Sivri Tepe and further past Oren Sehri. It is interesting that the modern Turkish highway also makes use of this crossing as well. Except for two sites, Küllü 1 (#22) and Mülazım (#23), Corak and Sivri Tepe represent the SE border of the Delice Ware extent. That this border aligns with a historic river crossing is likely not a coincidence.

Mercimek Tepe (#21 on Fig. 14), which has no Alişar III Ware, but a ware similar to both Alişar III and Çıradere (Mercimek Ware, see Section 3.1.5) is, like Sivri Tepe, located at the border of the Delice and Alişar III ceramic traditions. Also, like Sivri Tepe, it has a painted ceramic tradition that is somewhere between the traditions of the two culture regions discussed at length.

3.2 – Making Sense of Painted Ware Distribution and Bronze Age Trading Networks

As discussed above, the distribution of these EBA painted ware traditions seems to correlate with developments in trans-Anatolian trade networks. The MBA Old Assyrian trade

network is well known and likely responsible for the breadth of the Alisar III tradition, as vessels of this tradition were either carried along the route or adopted by settlements on the route. Thus, we might begin to see ceramic distribution as an index for trade routes. Indeed, in Barjamovic's (2011) geographic reconstruction of Anatolian kingdoms participating in the Old Assyrian trading routes, he likewise views the area marked off by the red dotted circle in Fig. 15 as not having a trade node or kingdom, though we must assume that a roadway passed through the area in order to connect Kültepe to Alişar Höyük.

The Old Assyrian network almost certainly built on the Anatolian Trade Network, an EBA trading route argued for by Şahoğlu (2005). Massa and Palmisano (2018: 82) note that a point of consistency between the EBA and MBA trade networks, connecting the Aegean to Mesopotamia, is that the hubs of trade stayed mostly the same (i.e. Knossos, Acemhöyük, Alişar Höyük, Alaca Höyük, Kanesh, Ebla, Tell Brak, Mari, Assur, and Ur). From this, they agree that the trade routes likely were similar as well. Şahoğlu (2005: 340, 343-4) argues that the appearance of a more uniform material culture across Central and Western Anatolia, the rise of palatial and administrative complexes, and textual data from Mesopotamia (specifically the 'King of Battle' text), all point to an increase in connectivity, wealth, and trade in Anatolia. He (2005: 354) dates the emergence of the Anatolian Trade Network to the late EBA II, when we begin to see more clearly distinct ceramic traditions (see Fig. 11).

3.3 – North Central Anatolian ('Hittite') Ware

NCA coexisted with Alişar III Ware for the early part of the MBA and eventually replaced painted wares from large urban sites across Anatolia. Here, I will discuss briefly the emergence of NCA Ware as a product of the traditions that preceded it.

Efe (1994: 7-8) sees NCA red slipped and burnished ware as an indigenous tradition descended ultimately from the EBA II red burnished ware tradition. Schoop (2009: 150) agrees⁴², arguing that the transition from Alişar III wares to NCA wares is technological and not social or demographic, that is, NCA ware is not a new ceramic tradition (brought by a new people, for instance), but an indigenous tradition adapted to new technology in the potter's wheel⁴³. Schoop (2011: 264-265) also argues that the emergence of predominantly wheel made pottery marked a shift from household production to specialist production. He observes that at this time there was an increase in higher quality ceramic vessels, indicating that pottery may have begun to serve as a status symbol. This lasted throughout the Hittite kingdom period, but it declined around the time of the rise of the Empire period, perhaps giving way to imports such as Red Lustrous Wheel Made Ware.

The pottery of the Hittite kingdom and later Empire represents a continuation of a ceramic repertoire from the beginning of the MBA. This pottery is called more variously 'monochrome', 'Hittite' and more recently 'North Central Anatolian' (see Glatz 2009: 129). The style makes its appearance at Kültepe at least as early as the *karum* IV period, where it was less common than Alişar III Ware. By *karum* III, NCA Ware is more common, with Alişar III Ware making up approximately 25-30%⁴⁴ of the assemblage (Emre 1989: 112). By *karum* II, Alişar III

⁴² As does Özgüç (1963: 15) and Emre (1963: 99).

⁴³ The potter's wheel is already at Arslantepe by Level VII (mid 4th Millennium BC) (Frangipane 2012: 22-23) and appears at Troy IIb (late EBA II) (Efe: 2007: 51). Efe (2007) argues that Central Anatolia sees the potter's wheel later because it was not a part of what he calls the 'Great Caravan Route' connecting Troy with SW Anatolia, the Konya Plain, and Tarsus.

⁴⁴ This oft-cited statistic is based on a single season of excavation, 1960 (Beran et al. 1961: 19). It is further based on a sample size of less than 100 sherds. Finally, the area of *karum* IV that was exposed was far smaller than that of *karum* III (Gerber 2008: 233). These factors do not eliminate its usefulness, but they do highlight both a general uncertainty about the transitions between the Alişar III and Hittite traditions and the need for more thorough statistics on this matter.

Ware is very limited, though does occur more frequently in some houses than in others (Meluzin 1969: 13).

NCA Ware first appears at Hattusa at the Büyükkale Vc level, on the mound at Alişar in level 5 (possibly as early as 5bM) and in level 12 on Alişar's terrace. These levels are just before or perhaps slightly overlapping with *karum* IV (Gunter 1980: 71-72; Gorny 1990: 41) meaning that the style traveled west across Anatolia fairly quickly. We do not know yet when the earliest NCA Ware appears at Çadır, though it is reasonable to assume that this would have happened at roughly the same time as it did at Alişar given the proximity between the two sites.

Early NCA Ware from *karum* IV and III was always wheel-made. It has a reddish-buff colored paste, was grit tempered, and well fired. Most surfaces are dark red slipped and brightly polished, though some are wet-smoothed (Emre 1989: 112).

Typical forms of Hittite pottery found at *karum* IV and III are the following (Emre 1989: 112, 116):

Bowls (most popular)	- IV and III
Deep bowls	- IV and III
Drinking cups	- IV and III
Jars with lids	- IV and III
Teapots	
without basket handle	- IV and III
with basket handle	- III
Jugs with spouts (much more common in <i>karum</i> II)	- III
Small cups	- III
Cups	- III

Beak spouted pitchers	- III
Rhytons	- III

As early as 1937, NCA Ware was recognized to have changed little over time, making seriation difficult if not impossible (Bittel 1937: 40). The works of Müller-Karpe (1988) and Parzinger and Sanz (1992) were the first to emphasize that chronological value came not from gradual change in shape, but rather, through gradual changes in frequency of vessel types and surface decorations. Recent work by Schoop (2006, 2009, 2011) and Mielke (2010, 2017) has begun to improve on these methods and produce results (based primarily off of Kuşaklı Höyük at this point), though the process is still at an early stage.

3.4 – Conclusion

While the work of scholars like von der Osten, Orthmann, and Özgüç has provided us with most of what we know of the EBA II and III, it is important to recognize that their work is now considerably outdated and in many instances poorly published. This is unfortunately especially true of sites like Alaca Höyük, Ahlatlibel, and other sites in the northern part of the Alaca-Haşhöyük-Gordion Region (Düring 2011: 295). This state of affairs makes it difficult to test the 50, 60, and 70 year old arguments that were made by these scholars. Orthmann's distinction of the two different regions in the EBA II is based on a few, poorly described differences in ceramic traditions. This is not to say that it is likely untrue, more that a far more nuanced understanding awaits further excavation of these sites and analysis of their pottery.

It is especially important to note the observations of surveyors like Omura, Strobel, and Gerber, as their work has begun to illustrate how broad terms, such as Alişar III Ware or Çiradere Ware, may be problematic. The evidence on the ground indicates that local traditions were varied and while they adhered to many common characteristics, such as vegetal temper or

specific patterns in motifs, claiming that they are simply ‘Delice Ware’ or ‘Alişar III’ ware likely overlooks valuable patterns in their regional distribution.

Unfortunately, as this time, the data is not available to examine these local variations with any resolution. Instead, we must work within the broad confines determined by the terms that are used. While admittedly flawed at the start, the pursuit of this research has great value in that it can still identify patterns, especially patterns of geographic distribution, that may in turn allow future scholars to focus on specific areas which have more potential for revealing the nature of these local variations.

The broad spread of Alisar III ware is indicative of the increase in trading networks that emerged in the EBA II and III and have been discussed by Efe and Şerifoğlu. That this ware spread so far as opposed to the contemporary Delice Ware indicates that the Alişar-Kültepe region was more involved in these trade networks, a belief that is strengthened by the development of the Old Assyrian Trading colony, with Kültepe as the center. As discussed above (see Section 3.1.1), evidence for increased long distance trade begins with objects coming from the east and only later demonstrates that objects are coming in from the west as well.

As mentioned in Section 3.1.6, several sites stand out as having either traditions present or traditions that appear to be somewhere between those already defined. These sites, Corak, Sivri Tepe, Mercimek, Kaman Kalehöyük, and Hanyeri Höyük, are all situated near the border between the Delice and Alişar III Ware core areas. That these would have been locations where people from different cultural regions came together is to be expected and appears to be born out by the ceramic traditions that they have revealed.

As discussed before, further evidence for the role of trade in the distribution of these traditions is visible at the more distant locations where they have appeared. As trade networks

became better developed and more used, the movement of vessels of different painted ware traditions increased, sparking imitation in some instances, but ultimately providing material evidence for the geographic spread of trade. This is revealed in the greater expanse of the Alişar III Ware distribution compared to that of Intermediate Ware. It is likewise revealed in the greater expanse of Alişar III Ware compared to Delice Ware, which was lacking the same kind of access to Kültepe and the quality/quantity of goods that this center was able to acquire.

That Alişar III Ware appears to stay near major rivers such as the Kızılırmak, the Delice, and the southern Delice tributaries (not major perhaps, but with access to Delice), is additional evidence that these natural pathways were utilized to cross the landscape. This may, in part, explain the dearth of Alişar III Wares in the region marked with a red oval in Fig. 15 As the larger mounds discussed above indicate, the region was perfectly habitable, but not necessarily as accessible.

The development of the Hittite state was the end result of this centuries long trajectory of increasing interaction among the numerous regions of Central Anatolia and beyond. The Hittite state, one that was built around a political center with the ability to wield power over numerous polities, represents a new phenomenon that put a stop to the trade that preceded it and enforced a more uniform material culture. The extent of this uniformity has not been truly tested, however, as all case studies in Hittite archaeology focus on large urban centers that would have had influential Hittite elites in political control. The spaces in between these centers is unexamined, thus far, and, as this dissertation will illustrate, has the potential to reveal that the hand-made painted traditions that preceded the Hittites continued and, like its EBA ancestors, was more complex than one would expect.

4.0 – Pottery from Çadır Höyük

The purpose of this chapter is primarily to examine whether the Painted Ware uncovered in Slope Trench 7 (ST 7) and Slope Trench 2 (ST 2) was stratigraphically intrusive to the 2nd Millennium contexts at Çadır Höyük discussed in this chapter or was contemporary with the material found in these contexts. This distinction is important because (as discussed in the Introduction) a Central Anatolian painted ceramic tradition that is contemporary with North Central Anatolian ware has been hypothesized, but this hypothesis has not been tested. Were such a tradition to exist, it would provide new insights on the nature of urban and rural populations in Hittite Anatolia. This, in turn, would have a significant impact on our understanding of how the Hittite state administrated these populations. A secondary purpose is to examine the Painted Ware, identify its characteristics, and determine if patterns emerge that enable us to understand better its creation and use. As this chapter will demonstrate, a painted ceramic tradition did coexist with the Hittite NCA ware. This painted tradition was diverse and had many features that this research argues correlate with the spatial layout of rural communities and their involvement with the rural center at Çadır Höyük.

4.1 – The Contexts of Discovery

Here, I will discuss what we know concerning the spatial and chronological contexts of the pottery analyzed for this research.

4.1.1 – Spatial and Chronological Context

The pottery under study was excavated out of two 10m x 10m trenches labelled ST-2 and ST-7 (see Fig. 16) during the 2015 and 2016 field seasons. The excavator was Dr. Stefano Spagni for both of these seasons.

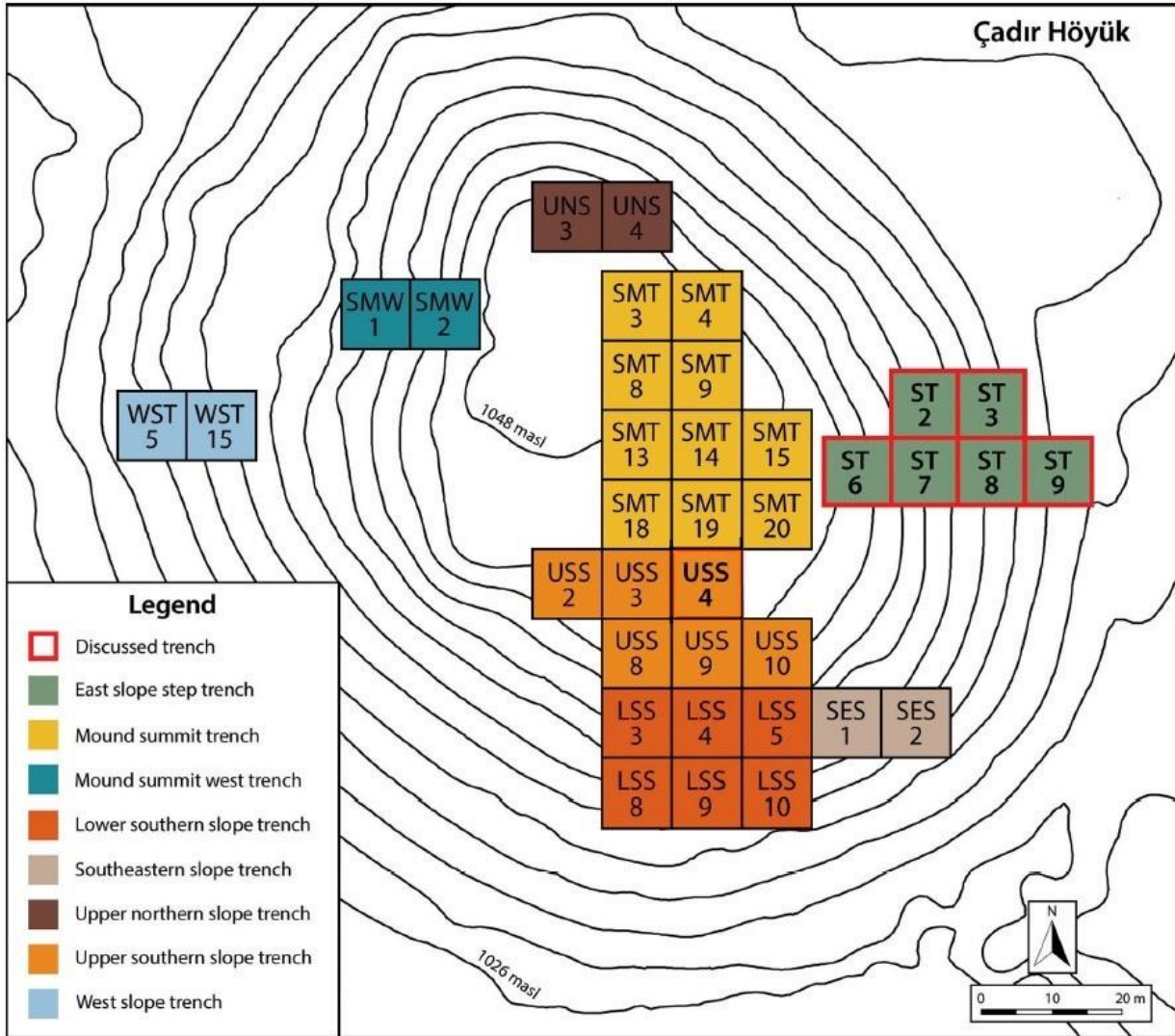


Figure 16 - Excavated Trenches at Çadır Höyük.

Excavation of the Step Trench began in 1994 when Ron Gorny's Alişar Regional Project opened up a 2x20m step trench running from east to west. These were within what are now labelled ST 8 and ST 9, but were referred to as 800.930 and 800.940 by Gorny's team. Old Assyrian Trading Colony and Hittite material were identified at this time (Gorny et al. 1995: 75, 79-80). During the 2001 season, Gorny's team returned to these small trenches, labelled the area 'Area 1', and expanded the size of the trench in ST 8 (800.930) in pursuit of a large, 4m wide,

Hittite era casemate wall¹ (Gorny et al. 2002: 110-111). Gorny's team had determined that a sequence of walls had been built in the area from at least as early as EBA III (Gorny 2006: 31; Steadman et al. 2013: 126). McMahon and Steadman's team clarified this in 2014, better identifying an earlier, Phase B, 2m wide casemate wall, initially identified by Gorny's team in 2002 and directly underneath the Phase C Hittite Empire casemate wall. A Middle Bronze Age wall was identified under the Phase B casemate wall as well (Steadman et al. 2015: 97, Fig. 8).

Excavation of ST 7 (800.920) and 6 (800.910) began in 2004 in an effort to look inside the 4m wide casemate wall identified in ST 8. This effort revealed two rooms in ST 7, the northern one with a hearth and also a pit containing an 8-knobbed pot, an inscribed bone inlay, and a piece of a bone flute (Gorny 2006: 34, 49-50, Fig. 8 and 9). The rooms were built on top of a foundation, itself built on top of earlier architecture discussed below. Gorny's team initially dated the rooms to the Old Hittite period (1680-1500 BC), based on a stamp seal, pottery, and carbon dating (Gorny 2006: 34, 50, Fig. 10). McMahon and Steadman's team have updated this, pushing the rooms to late Old Hittite or perhaps a transitional period (1500-1400 BC) prior to the Hittite Empire period (Ross et al. 2019: 22). The floors of the rooms were covered with burnt mudbrick, argued by excavators to be the collapse of the room. Mudbrick steps² connect the level of these two rooms to the lower level of the street or possibly to courtyards between the rooms and the casemate wall (Steadman and McMahon 2017: 104).

In 2009, leadership of the excavation went from Gorny to McMahon and Steadman and in 2012, ST 7 was expanded and the relationship between the 2 rooms and the 4m casemate wall, identified in 2001 in ST 8, was more securely identified (Steadman et al. 2013: 128). It was also noted that the casemate wall continued into ST 2, which was opened in 2013, and continued into

¹ Labelled ST 8 F20 (Steadman et al. 2013: 127-128).

² Labelled ST 7 F68 (Steadman and McMahon 2017: 104).

ST 3, also opened in 2013, where a wall tower was identified (Steadman et al. 2015: 96-97). The space between the rooms and the casemate wall appears to be a road or an alley (Steadman et al. 2013: 129).

In 2015, the rooms, labelled as part of chronological ‘Phase C’, were removed to expose the Old Hittite layer beneath them (Steadman et al. 2017: 226), which was labelled ‘Phase B’.

<i>Approximate Phasing Dates</i>	
Phase B	1700-1500
Phase C	1500-1200

Within the Phase B casemate wall, McMahon and Steadman’s team identified the foundations of a large,

Old Hittite structure, and a possible forecourt or entry room³. The structure also had two courtyards⁴. The size of the structure cannot be determined as it runs into the mound and its purpose remains uncertain, though an infant burial, found under the SE corner of the structure, may be associated with it, perhaps as a foundation offering (Steadman et al. 2017: 226-228). Another foundation offering may have been identified in a tri-pod bowl, which was buried, upended, just east of the SE corner of the structure (Steadman and McMahon 2017: 105). Little else emerged from the courtyard area to indicate its purpose, though a carved ivory flying bird was uncovered (Steadman et al. 2015: 98).

³ Labelled as ST 7 F76

⁴ Dividing wall labelled ST 7 F54 (excavation notes).

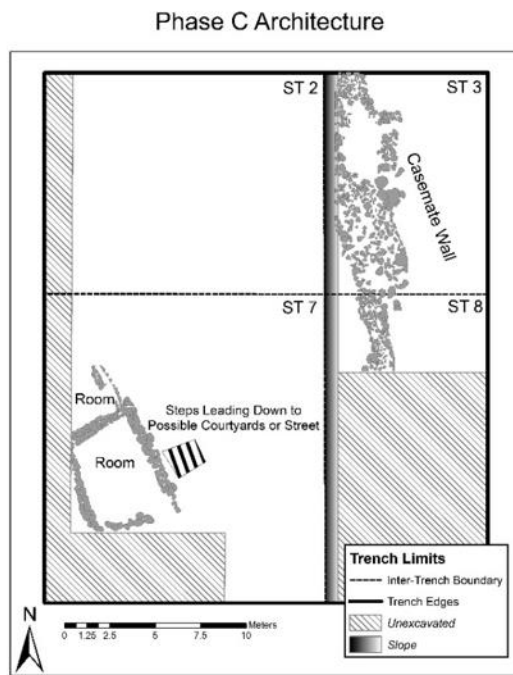


Figure 17 - Phase C Architecture

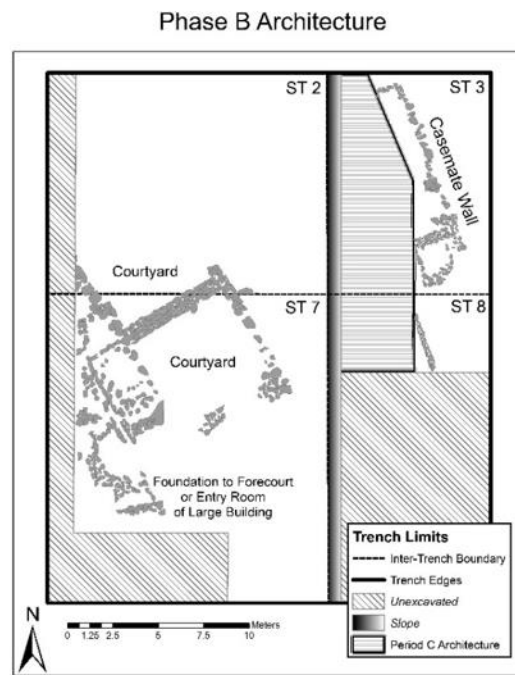


Figure 18 - Phase B Architecture

4.1.2 – Social Context

As illustrated in Figs. 64 and 66 (Section 4.3), the most prevalent vessel type is plain ware, indicating that dining was the most common activity that made use of ceramic vessels in these spaces. Cooking and storage vessels also appear, but in far less frequency. For Phase B, it becomes easy to imagine that the two courtyards attached to the massive building were dining spaces for people associated with the activities for which the massive building was used. The size of the building and the foundation deposits⁵, if accurately identified as such, indicate that this large building and the associated courtyards were not private, domestic spaces. The presence of the carved ivory bird, while not helpful in determining the purpose of the space, continues the argument against a modest domestic space and makes an elite space possible.

⁵ According to Hittite texts, foundation deposits tend to be statues, though vessels with food can also be included (Beckman 2010: 78, 88-89).

The two rooms of Phase C have slightly more data. These appear to be the living spaces, based on the hearth, though little else can be determined. The distribution of vessel types for both periods in these spaces is roughly equal (see Fig. 60 and Figs. 63 and 65).

4.2 – The Data

I examined sherds collected during the 2014-2016 field seasons. The sherds came from 67 archaeological contexts (features and loci – see Fig. 61 for a list of those features and loci that contained painted wares) from trenches ST 2 and ST 7. 21 contexts were from ST 2 and 46 were from ST 7. For these final two seasons, 6938 sherds (229.5 kg) were analyzed by the author and 1284 (18.5%) were kept for closer study. Of the total number of sherds, 684 sherds (9.9% by count and 6.22% by weight⁶) were identified as being more closely related to the Alişar III (A3) tradition than the NCA tradition. This identification was based primarily on painted surface decoration and vessel typology. Both of these identifying features are discussed in detail below. Because these sherds are clearly different than the NCA tradition, yet showed characteristics (discussed below) that distinguished them from the A3 tradition, this dissertation will label them generally as the ‘Painted Ware’ tradition for the sake of differentiation.

The prevalence of Painted Ware in a well-secured Hittite context merits further investigation. The association with already identified painted traditions, such as those discussed in Chapter 3, was difficult for two reasons. The first is the already discussed (Section 3.3) lack of consensus regarding what different traditions look like. The second is the large variety of fabrics, tempers, and decoration styles that were uncovered in the Step Trench. This diversity of features

⁶ As these Alişar III type sherds were predominantly cups and bowls, their collective weight would be expected to be lower than the weight of NCA sherds, given that NCA sherds included a far higher proportion of storage and cooking vessels, which, on average, weigh more. Not all sherds identified as part of a painted pottery tradition showed actual painted decoration. Many sherds were included in this category based on the quality of their fabric, which matched that of sherds that did show painted decoration. These fabric qualities will be discussed below.

indicated that a broader range of ceramic production practices were represented in the painted pottery from the Step Trenches. Such diversity is not discussed in any publication examining EBA painted traditions, with the closest example being Öktü's identification of only four Alişar III styles (see Section 3.1.3). The presentation of painted sherds from Çadır Höyük given here addresses these many variations and details them thoroughly.

4.2.1 – The Painted Ware of Çadır Höyük

This section provides a macro-analysis of the physical characteristics of Çadır Höyük's Painted Ware tradition from early 2nd Millennium contexts found in ST2 and ST7. These characteristics, form, surface decoration, and fabric qualities, show differing levels of variability. Formal features are the most consistent and are, in fact, quite similar to the published EBA typologies from Alişar Höyük, Hattusa, Kültepe, and, to a lesser degree (due to limited data), Uşaklı Höyük.

The characteristics found in surface decoration, i.e. painted designs, slips, and burnishing, show considerable variability both internally and when compared to published assemblages from external sites. This variability makes it impossible (at this time) to categorize trends in surface decoration more broadly, as it is rare for two or more sherds to share all of the same features. A focus is placed on the painted designs used as there are some patterns that emerge, though these are at best preliminary.

The make up the various fabrics introduces perhaps the most interesting detail of this macro-analysis. At least three fabrics bearing different paste recipes are present. The most common fabric I label here as 'Red-Grit Paste'. This is so named due to dark red stone or possible grog inclusions that appear among the sand temper of this fabric. The second most common fabric has less distinctive sand inclusions and occasionally has mica inclusions. I have

labelled it here as simply ‘Sand Paste’. Finally, the third fabric addressed here is one with vegetal inclusions and is labelled here as ‘Chaff Paste’.

Each of these three fabrics show much variety in terms of the temperatures and conditions of the firing part of their production process. This will be discussed in greater detail below. For now, it is important to note that within the sherds under study there are distinguishable groups that appear to have been fired under different conditions (based on the different colors of their paste). This indicates one of two possibilities. The first is that each distinguishable group was fired in the same kiln at the same time and that firings done within this kiln were inconsistent from one to the other, thus allowing for the diversity of results. The second is that the different groups were fired in different kilns that produced consistent results. These slightly different results are then responsible for the different color found in the paste of these sherds.

A third possibility, of course, is that both above possibilities occurred. It is likely, however, that even if this was the case, one of these two firing scenarios was more responsible for the results discussed below.

4.2.2 – Forms

Typologically, the painted sherds from the Step Trench match closely with the handmade forms known from EBA contexts at other sites. Based on rim sherds, eight different types have been identified from the Çadır assemblage, though more than half of these sherds fit into one type. These are close mouthed bowls with carinated rims, labelled type ‘A’ and having 12 sub-types (4 of which have only 1 example and so are considered a ‘type’ for convenience and do not stand as an argument for the expectation of other examples). The second most common type, labelled ‘B’, represents vessels with out-flaring, rounded rims. There are five sub-types in this

category. Type ‘C’ is made up of a few rims of closed mouth bowls, but these are rare. Most are the rim types with only a single example. These have been labelled C2-H for discussion, but are not viewed by this dissertation as their own type.

Type A - Closed Mouth Carinated Bowls

The painted assemblage from Çadır Höyük is dominated by carinated, inverted rim bowls⁷ (see Fig. 19). These vessels make up 35 (56%) of the 63 painted rim sherds that were discovered. This kind of bowl appears at Alişar during EBA II⁸ and continues in use for the rest of the EBA. It does not appear in Iron Age contexts.

These bowls are also commonly represented in publications from other sites and are common among the EBA painted vessel types at Hattusa (Orthmann 1963b: Pl. 18), Alaca Höyük (Koşay and Akok 1966: Pl. 102), and Alişar Höyük (von der Osten 1932a: Fig. 237, 248). Thus, the closed mouth, carinated bowl is the most common *painted* vessel of the EBA for Central Anatolia as well as the 2nd Millennium contexts for Çadır Höyük.

At Çadır, there is considerable variety in terms of how these bowls were decorated, in terms of both painted design and surface treatment. Most (32/35, 91%) have burnished exteriors and just under half (17/35, 49%) have both slipped and burnished exteriors. Similarly, interiors are frequently burnished (29/35, 83%), though less frequently slipped and burnished (13/35, 37%). Rims always have a painted design on the exterior surface that stops just below the top of the rim where it is either met by a thicker band of paint covering the rim. These rims are always painted on the interior as well, always with a band running along the interior rim in the same color as the band on the exterior rim. Paint color for these rims is almost always (31/34, 89%) brown/black (roughly Munsell value 8.5Y 4/1), with dark brown red (2.5 YR 3/6) being the

⁷ As is the case at Hattusa, Alaca Höyük, and Alişar Höyük, see Section 4.1.3.

⁸ See von der Osten 1932a: Fig. 175.

exception (4/35, 11%). Slip colors are perhaps the least consistent characteristic, with white being the most common (10/35, 29%), but various shades of orange, pink, brown, and tan also present.

The fabric type (discussed in more detail below, 5.2.4) is also varied, with all three fabric types present and numerous sub-types present. 18/35 (51%) are red-grit paste, with 8 of the 11 sub-types represented. 4/35 (11%) are of the chaff paste and 13/35 (37%) are of the sand paste.

4.4 – Bowls

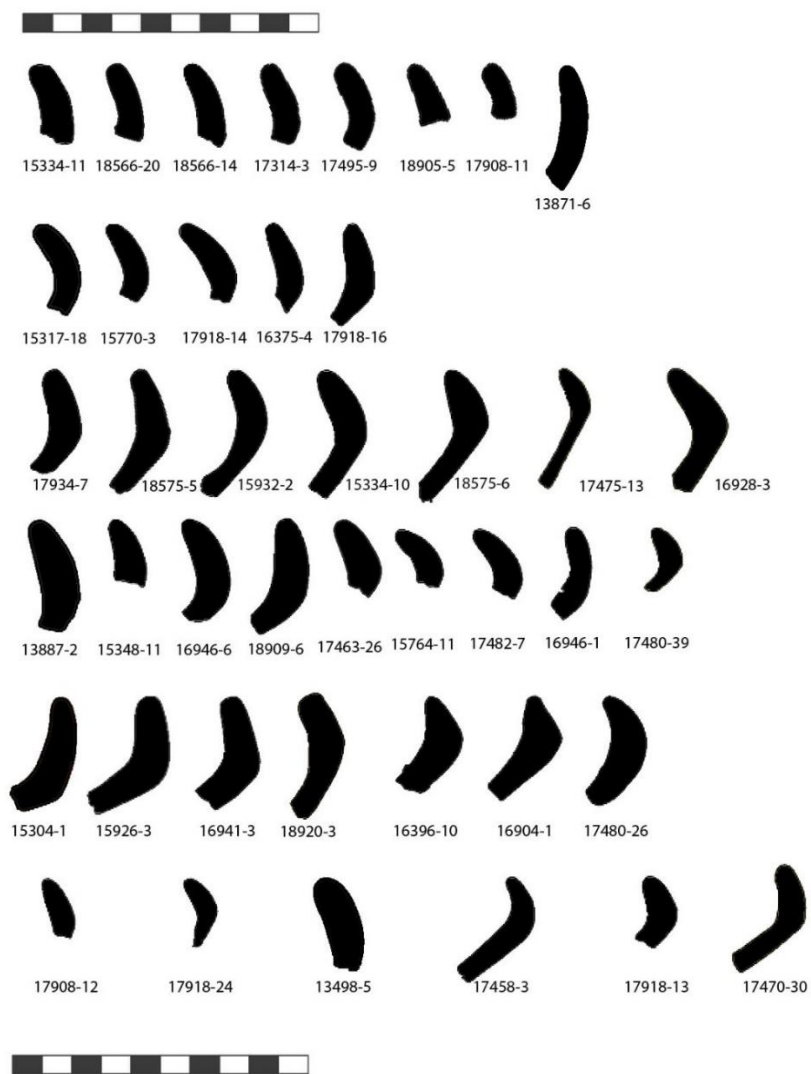


Figure 19 – Painted Bowls



Figure 20 - Bowl from Phase B, Trench ST-7 (Field Catalog Number 17934)



Figure 21 - Bowl from Phase C, Trench ST-7 (Field Catalog Number 15932)

Vessels with Out-Flaring Rims

The second largest category is small storage vessels, labelled B1-5 (see Fig. 20). These simple, out-flaring rims appear at the earliest layers of Alişar⁹ in the Chalcolithic. These forms

⁹ See von der Osten 1937a: Fig. 82.54 and 82.58 for earliest finds of this type.

are also known at Iron Age Hattusa (see Genz 2004: Pl. 16.1) though similar vessels with everted rims (see Genz 2004: Pl. 16.7, 9) are more popular. This is a simple form with a narrower neck, making spilling more difficult, and an out-flared rim which may have facilitated pouring out the contents with better control. These shape of these vessels may have also facilitated group drinking through the use of straws¹⁰. All of the B subtypes have close comparanda in von der Osten's (1937a) publication of the late EBA pottery from Alişar¹¹.

Fifteen Painted Ware examples are known from Çadır, though they appear in several different sizes and one cannot be certain that they were all used for storage. The vessels labeled 'B1' are likely to be storage vessels given the thickness of their rims. The other types, separated from B1 due to their size (B2 and B3) or the angle of their mouth (B2 and B5), may have had different purposes.

The rim and neck of these vessels are usually burnished on the exterior (12/16, 75%) and often slipped and burnished (7/16, 44%). The top of the rim is most often (14/16, 88%) painted on the interior and exterior sides. The paint on the rim is usually a black or brown, though dark red is present on two rims (vessel numbers 17480-40 and 17908-14). With one exception, the paint on the rims is the only place where these sherds are painted. B-type rim sherds are otherwise unadorned. The exception is 17336-4 which has black horizontal lines beneath the rim and a black zig-zag line beneath those. Other surface decorations show considerable variety, though white slip is the most common (5/16, 38%).

¹⁰ For a Hittite discussion of this practice, see KBo 13.64 obv. 12-14 and KUB 9.28 iii 22-24.

¹¹ For B1 see von der Osten 1937a: Fig. 176.67. For B2 see von der Osten 1937a: Fig. 176.64, 49, 60, and 53. For B3 see von der Osten 1937a: Fig. 176.47 and 70 and Fig. 177.17. For B4 see von der Osten 1937a: Fig. 176.67. For B5 see von der Osten 1937a: Fig. 176.52.

In terms of fabric, this category also shows variety, with all three fabric types represented and several sub-types. In total, 13/16 (81%) show a different fabric type or sub-type. 4/16 (25%) are chaff paste, 6/15 (38%) are red-grit paste, and 6/16 (38%) are sand paste.

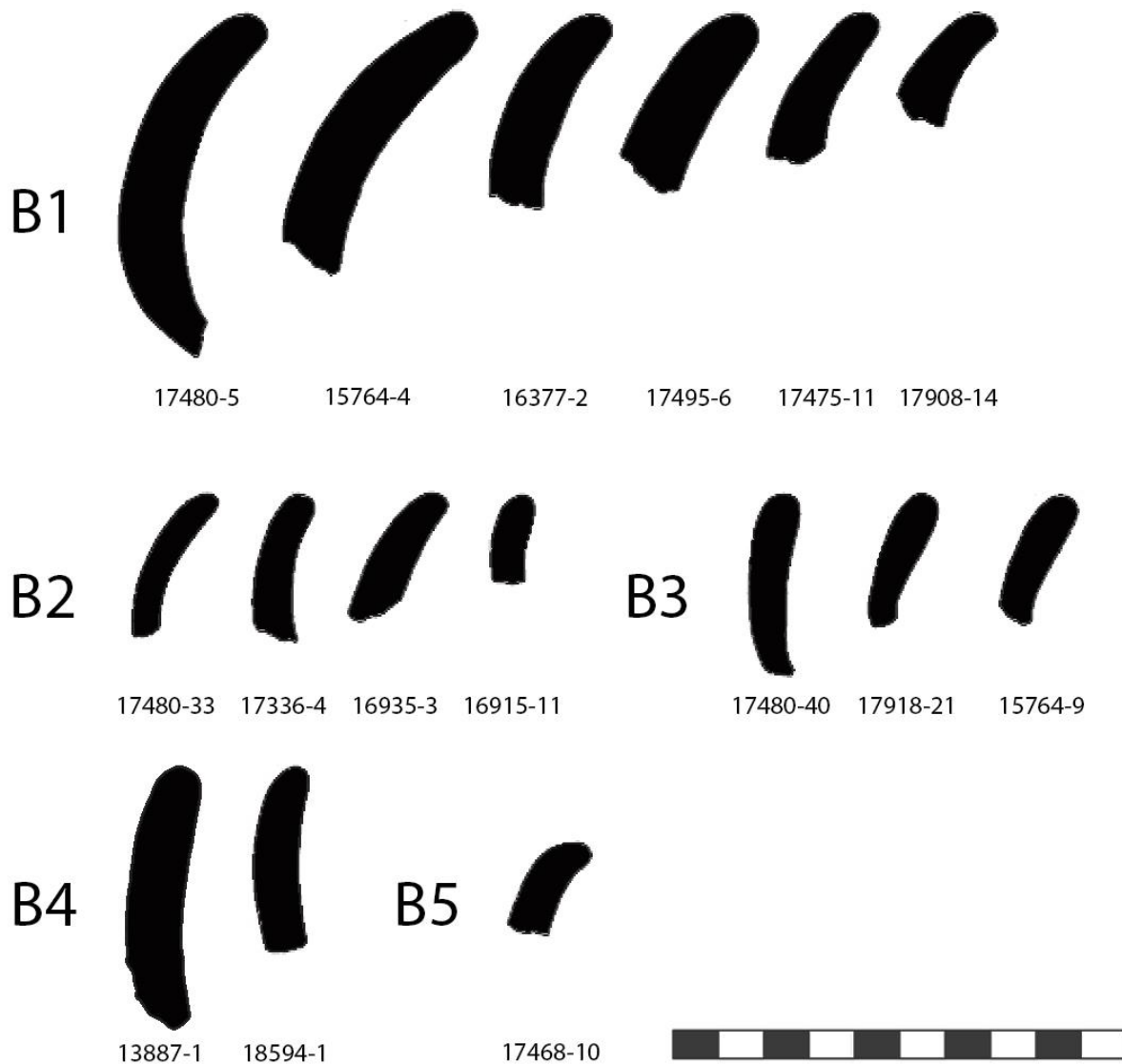


Figure 22 - Type B Bowls

Type C – Closed-Mouth Bowls

This type is the least cohesive. The bowls represented here are closed-mouth, like Type A, but not carinated (see Fig. 21). They may not necessarily even constitute a single separate typology, but with only three examples, it is not possible to present these rims as a more fully

formed category. Type C vessels do not have clear comparanda in von der Osten's EBA Alişar publications and in fact, may be more similar to Hittite wares, specifically Hittite pointed rim vessels¹², though these are more open-mouthed. Pointed rim vessels are rare generally among Hittite pottery and absent from the Hittite assemblage at Çadır Höyük, so the similarities may be coincidental. A somewhat similar pointed rim vessel was found at Uşaklı Höyük via survey¹³, but it too was more open-mouthed and it is not dated. The Uşaklı rim and Hittite pointed rims were not painted.

Other Types

All of the Other Types (see Fig. 21) belong to the C Phase, except for Type H, which is an odd shape and dates to the B Phase. Type H is somewhat similar to an Alişar III vessel found at Hattusa¹⁴, but also an Iron Age vessel also from Hattusa¹⁵. Type D fits in well with finds from EBA Alişar¹⁶. It represents the only small vessel of the painted tradition at Çadır Höyük. Type F appears similar to straight walled pots known from EBA Alisar¹⁷ and Type G may be a smaller version of these vessels¹⁸. Type E does not readily lend itself to easily identifiable comparisons.

¹² See Fischer 1963: Pl. 89.774 and 772.

¹³ See D'Agostino and Orsi 2015: Fig. 3.58.

¹⁴ See Orthmann 1963a: Pl. 17.2/142.

¹⁵ See Genz 2004: Pl. 53.6.

¹⁶ See von der Osten 1937a: Fig. 176.40.

¹⁷ See von der Osten 1937a: Fig. 178.14-15.

¹⁸ See von der Osten 1937a: Fig. 178.8.

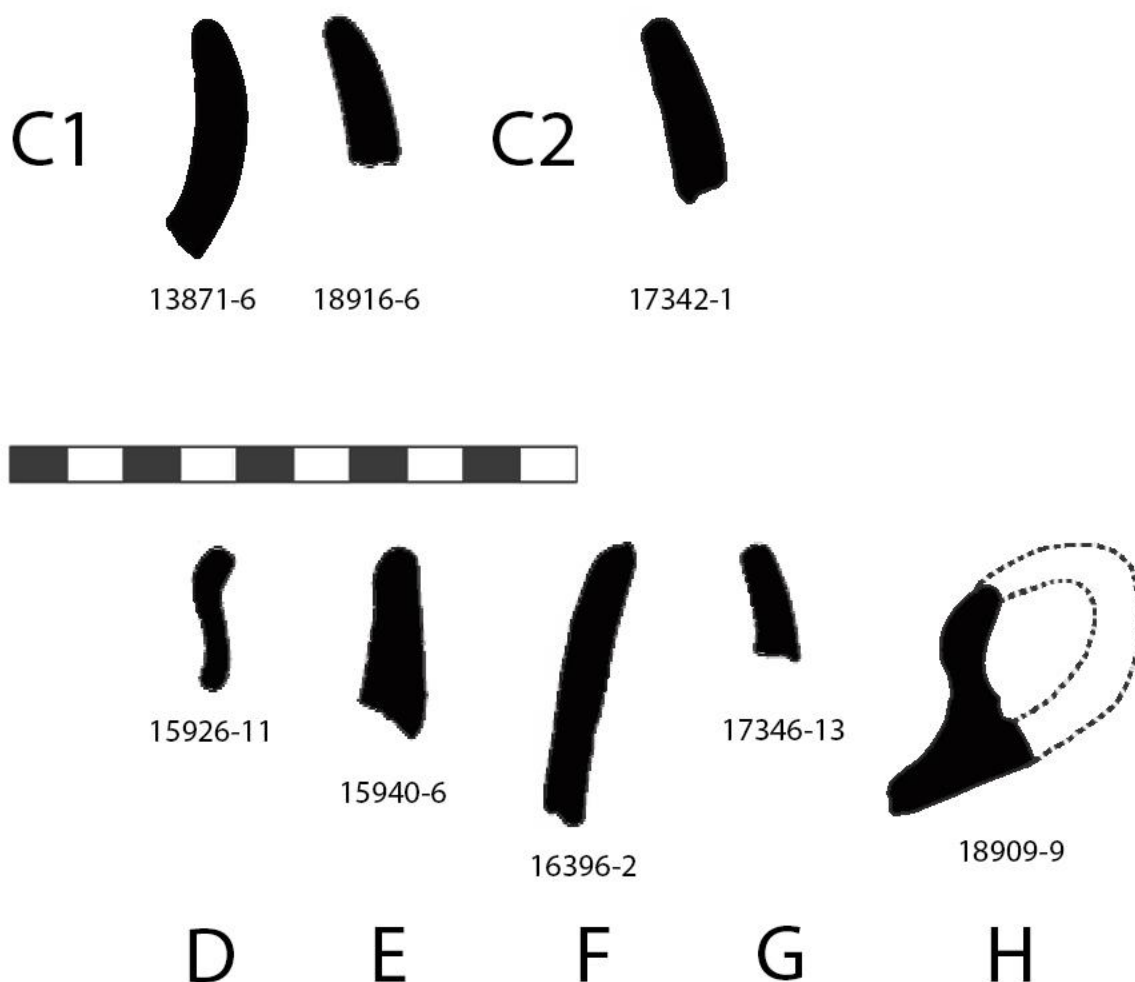


Figure 23 - Type C-H Vessels

The morphological features of the vessels from Çadır appear to be the most conservative component of ceramic vessels for this site. Forms such as B1 continue for over 1000 years and the closed mouth carinated bowls are likewise a form that sees many centuries of use. This stands in contrast to other features, such as surface decoration and painted design, which seem to change and become more diversified through time, as will be discussed in more detail below.

4.2.3 – Painted Geometric Decorations

This section presents an analysis of the painted designs found on the Step Trench sherds under study. Most of these sherds did not have enough surface area preserved to determine the

entirety of the design chosen.¹⁹ The following discussion recognizes the limitations presented by this missing data and attempts to discuss possible broader patterns in design nonetheless.

With a few exceptions, the most basic element of the painted designs is the line, with horizontal lines being the most common. Two sherds with an exception (16941-19 and 15926-2, see Fig. 22) are predominantly linear, with small, curved spiral designs appended. Such designs are known at Kültepe,²⁰ Alişar,²¹ and Hattusa,²² though are less common. Another sherd (15764-20, see Fig. 22²³) appears to have what may be a tear-drop shape bordered by lines and decorated with dots. This sherd is unique in that it is one of only three polychrome painted sherds from this study (the other two do not have enough surface to determine the painted design). It is also unique in its usage of dots, as this is very rare within the collection under study.



Figure 24 - Designs with curved elements

Another exception to simple, linear ornamentation is found in solid shapes. These include filled in triangles, lozenges (diamond shapes), and rectangles. Filled in triangles are the most common (see Fig. 23), followed by lozenges, and then a single instance of a filled in square. The filled in lozenges (16906-1 and 17463-32, see Fig. 24) and square (15310-7 see Fig. 24) were all part of a checker-board/cross-hatch pattern. This may indicate that, to the painters, these were not different shapes (as we view them today), but the same design, simply at a different angle.

¹⁹ This assumes that most designs were repeated across the vessel as is indicated by complete vessels found at other sites. The concept of an ‘entire design’, expressed here, refers to the ability to determine one full instance of a design that is repeated.

²⁰ See Öktü 1973: Pl. 26.I-G/17.

²¹ See von der Osten 1937a: Fig. 239.c1808 and c1007.

²² See Orthmann 1963a: Fig. 5.2/148.

²³ Note all design drawings are schematic. They were traced from the originals, but straightened for ease of presentation.

Filled in triangles were likely not viewed in this way as they do not appear in checker-board/cross-hatch patterns at Çadır Höyük nor in the published sherds from other sites.²⁴ Filled in triangle patterns from other sites indicate that they are more often associated with a zig-zag pattern. They also tend to have their base at the bottom and their apex above this. The sherds from Çadır with filled in triangles are not whole enough to determine this orientation, but the connection to zig-zag patterns is visible (15345-14 and 17908-24, see Fig. 23).



Figure 25 - Designs with triangles

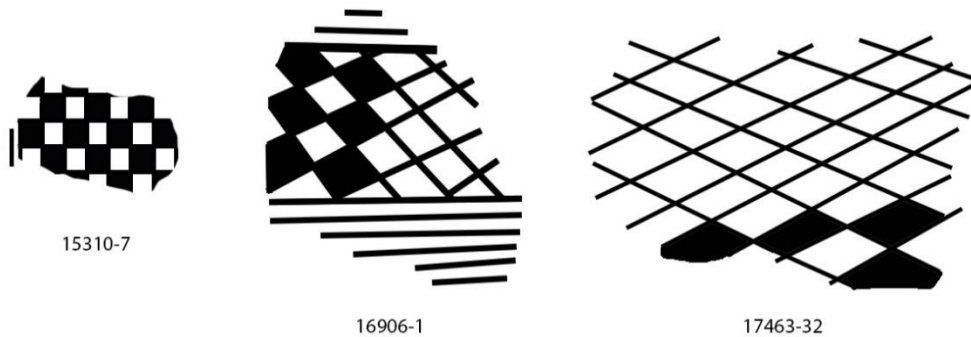


Figure 26 - Designs with squares and lozenges

The remaining designs can be understood as the repeated use of a simple line with variety appearing in the angle, width, and number of lines. Paralleled horizontal lines (see Fig. 25) are the most common, often appearing alone, but also appearing with other designs (dotted line indicates a rim).

Generally, only one or two thicknesses of line were used on a sherd. Thicker lines are used as frames, indicating a division between design types or between a design type and empty

²⁴ Though filled in triangles do appear within squares, see Orthmann 1963a: Pl. 15: 2/124.

space (13498-13 and 17475-37, see Fig. 26 below). Öktü (1973) called these ‘metopes’ and so this term will be used here as well.

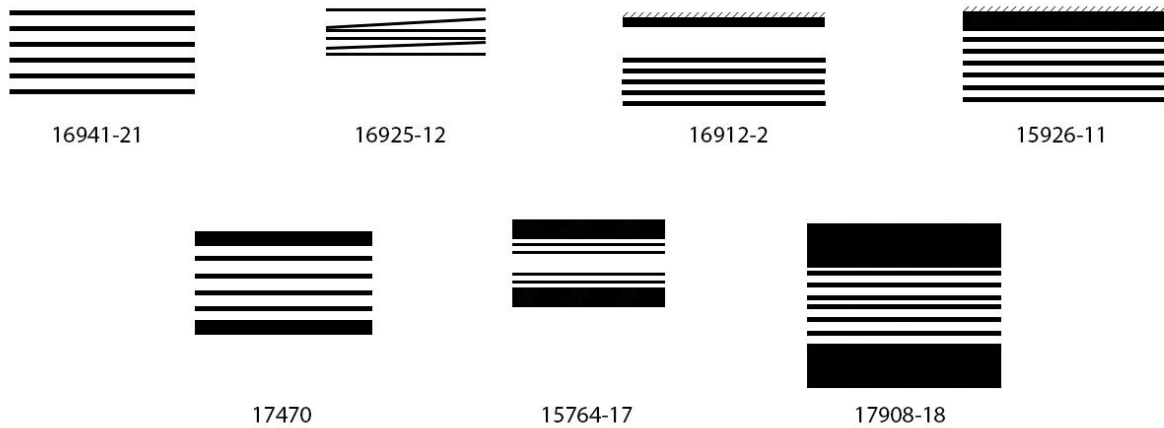


Figure 27 - Designs with horizontal lines

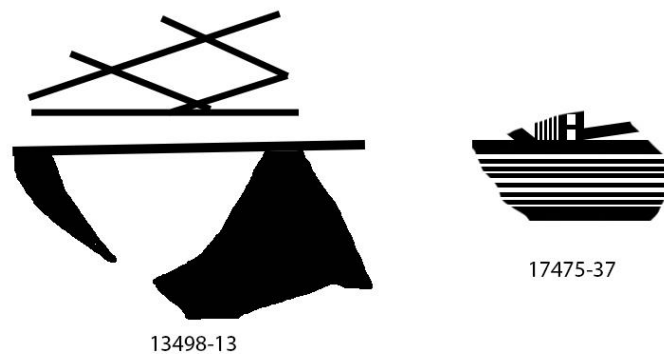


Figure 28 - Designs with dividing lines (metopes)

Out of 81 designs that could be differentiated, 45 showed a single line width whereas the remaining 36 had two or more lines of different widths. Of these 36, 34 appear to have the thickened line acting as a frame/metope.

Horizontal lines appear with diagonal lines but never intersect/pass through them (see Fig. 27). The only lines that cross over one-another appear to be lines used to make cross-hatch patterns; these are discussed in greater detail below.

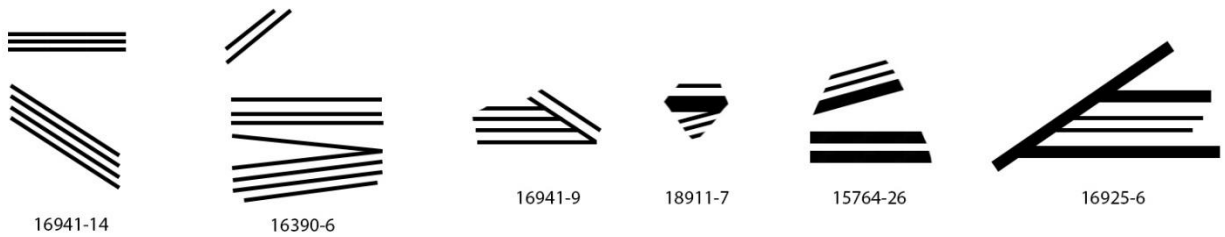


Figure 29 - Designs with horizontal and diagonal lines

Zig-zag patterns are perhaps the most common element in these designs. 42 of the 81 designs have some kind of zig-zag pattern if one includes the cross-hatch patterns in this category. The zig-zag pattern, when it is not designed to fill a space as is the case with the cross-hatch, never exceeds six parallel lines and is most frequently two or three parallel lines. These lines are always the same width unless framed by thicker lines. Zig-zag lines almost always occur with horizontal lines either as a metope frame or lines that run parallel to the frame.

Vertical lines are less frequent, appearing alone only once and with horizontal lines three times (see Fig. 28).

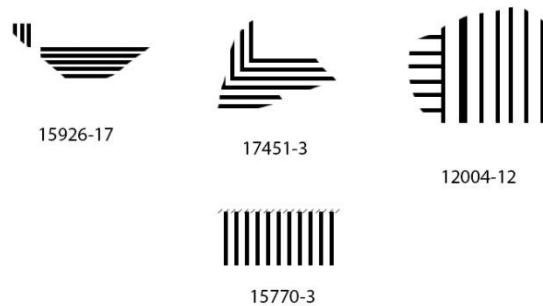


Figure 30 - Designs with horizontal and vertical lines

There is also a phenomenon of diagonal lines that are not connected to one-another. These are not as frequent as zig-zag lines and are consistently used as rim decoration (see Fig. 29).

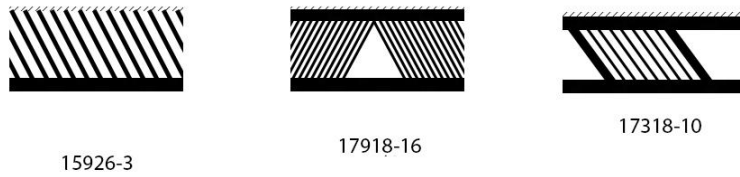


Figure 31 - Designs with diagonal lines

The combination of horizontal, vertical, and diagonal lines is also present (see Fig. 30). These designs appear to present diagonal lines framed by horizontal and vertical lines, though none are complete.

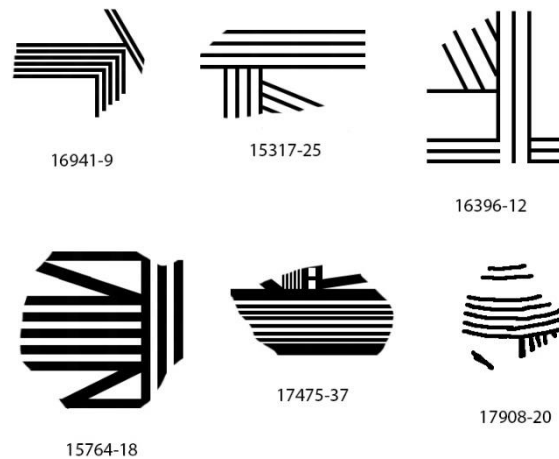


Figure 32 - Designs with horizontal, vertical, and diagonal lines

4.2.4 – Painted Ware Fabric/Pastes

This section will discuss a small study on the variety of fabrics that were used in the Painted Ware tradition. Numerous fabrics were visible in the 684 sherds recognized as Painted Ware. I took a sample of sherds from this total in the hope that a smaller number would make an identification of fabric characteristics more straightforward. The sherds with large, fresh breaks were selected, producing a sample of 258 sherds. This was necessary to reveal as much variety within the paste as possible. The purpose of this study was to better understand the numerous fabrics that appeared in the archaeological record and to make observations that might lead to hypotheses that could be tested with future study and excavation.

The categorization of these fabrics is based primarily on the temper used and secondarily on the firing conditions that served to turn the raw clay into ceramic. Within each group as determined by temper, these firing conditions produced a variety of colors in the fabrics under study and the following discussion attempts to organize the sherd collection based on these colors. This is not always a straightforward task as some colors appear in multiple sherds and others appear in only a single sherd or in two or three sherds. Furthermore, some colors are only slightly different from others and in these instances, the decision to categorize them as the same or as different is subjective.

Three paste types will be discussed in this section. The first, which is the most common, is the Red-Grit Paste. With 114 sherds identified as having this paste, it represents just over half (51%) of the painted sherds collected in this study. The second most common is the Sand Paste, with 65 (29%). Finally, the Chaff Paste sherds, with 46 examples, make up 20%.

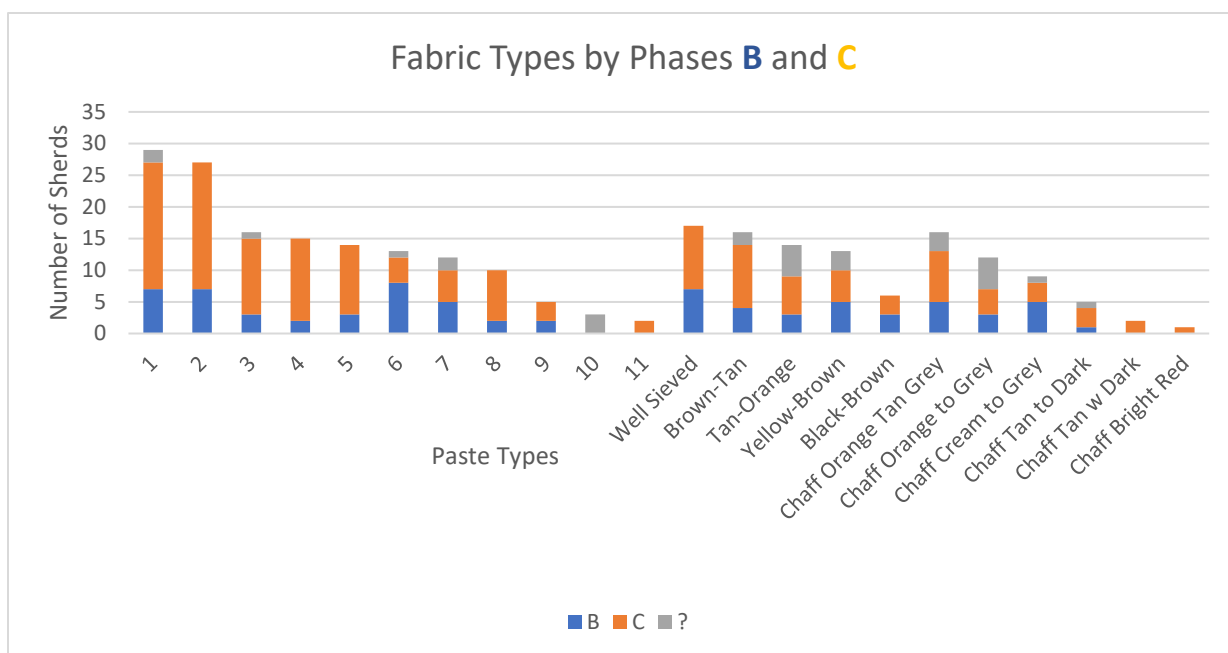


Figure 33 - Fabric types by phase

Red-Grit Paste (RGP)

This paste has sand inclusions, like the other two pastes, but this particular sand has occasional dark red kernels (a particularly large example can be found in Fig. 41)²⁵, which the other two do not. The size of inclusions is generally fine (0.1-0.25mm) to medium (0.25-0.5mm), though the inclusions tend to be not well sorted as very coarse kernels (over 1mm) are present, though rare. The inclusion percentage (amount of paste taken up by inclusions) is approximately 10%, though this too varies, most often with some sherds having a higher percentage.

For this discussion, the following terms will be used to designate size ranges of inclusions, taken from the United States Department of Agriculture standards:²⁶

Very fine	up to 0.1mm
Fine	0.1-0.25mm

²⁵ It is worth noting that the red grit particles discussed here also appear in the sherds from Uşaklı Höyük (D'Agostino and Orsi 2015: Pl. 30 K09.297, P. 31 K09.66, K09.662, K09.213). This indicates that the geographic range from which this kind of temper could be acquired was large.

²⁶ As printed in Orton and Hughes 2013: 281.

Medium	0.25-0.5mm
Coarse	0.5-1mm
Very coarse	greater than 1mm

This fabric can be broken down further into 11 sub-categories based on the color of the paste (listed in order of most to least common – see counts for each fabric type in Fig. 61 in Section 4.3.4).

RGP 1: $n=29$. The most common fabric color for red-grit paste is a very pale yellow, roughly 10YR 8/3 in the Munsell color system, with some sherds slightly lighter. This sub-category is generally fully oxidized, but some examples show a reduced core and inner margin. This is likely not caused through cooking as the interior surface of these sherds show no evidence of burning nor are these vessels the standard shape for cooking vessels.



Figure 34 - Red-Grit paste category 1 (Sherd# 15310-7)

RGP 2: $n= 27$. This fabric is characterized by a slightly more reddish color, roughly 7.5YR 8/4 at the core of the sherd. At the inner and outer margins of the core there is a thin band of fabric, usually between 0.75 and 1mm in thickness and much more orange,

10R 7/8, in color. Like RGP 1, this fabric is generally fully oxidized. Unlike RGP 1, however, when there is evidence for the use of a reduced firing atmosphere, it is limited to the core and does not appear on the inner and outer margins. Occasionally, a graded transition from the lighter colored core to the more orange inner and outer margins is visible indicating that the transition in firing atmosphere occurred more slowly²⁷.



Figure 35 - Red-Grit paste category 2 (Sherd #16925-7)

RGP 3: $n = 16$. This fabric is between RGP 1 and RGP 3 in color, though often closer to RGP 3. The spectrum runs from 7.5YR 8/4 to 5YR 7/5 and 8/5. It is distinct in that it does not have the different colored inner and outer margins. This fabric is also generally fully oxidized, with only a few examples indicating the use of a reduced atmosphere. Like RGP 1, these appear in the core and in the inner margin. As this fabric is more uniform in color than RGP 2, it is possible that control over the firing atmosphere was less important, allowing inner margins to be reduced.

²⁷ Sherd #16925-7 (shown in Fig. 14 as an example of RGP2) has better sorted inclusions that is typical for RGP fabrics. It was selected to illustrate RGP2 because it best represents the colors of this fabric.



Figure 36 - Red-Grit paste category 3 (Sherd #17315-4)

RGP 4: $n=15$. This fabric has few variations in firing atmosphere, with only a couple of sherds showing reduced atmospheric conditions. It matches best with 5YR 6/6.



Figure 37 - Red-Grit paste category 4 (Sherd #17346-16)

RGP 5: $n=14$. This fabric has more variations in firing atmosphere than RGP 1-3, with many sherds showing evidence of reduced atmosphere. The consistent fabric color is roughly 10YR 7/4, with brighter and darker colors present. This range in color is likely due to the inconsistent firing atmospheres.



Figure 38 - Red-Grit paste category 5 (Sherd #17458-3)

RGP 6 and 6a: $n=14$. This fabric has a consistent variant that has prompted the need to create an additional distinction, labelled here as 'RGP 6a'. RGP 6 is most similar on color to RGP 1, though it is slightly darker, matching 10YR 7/3.5. RGP 6a has the same color

core, but has an additional 2.5YR 6/6 outer margin and sometimes inner margin as well, making it similar to RGP 2. At approximately 0.5mm, these margins are thinner than those of RGP 2.



Figure 39 - Red-Grit paste category 6 (Sherd #16925-2)



Figure 40 - Red-Grit paste category 6a (Sherd #15334-20)

RGP 7: $n=12$. This fabric is very consistent in color, 5YR 6.5/8, and firing conditions, with no examples showing evidence for a reduced atmosphere. This is to be expected as the brightness and consistency of the color would require a well-controlled and consistently oxidized atmosphere.



Figure 41 - Red-Grit paste category 7 (Sherd #15926-17)

RGP 8: $n=10$. This fabric is related to RGP 6a in that it is the same color as the outer margin present in this category at 2.5YR 6/6. This category, however, is consistently this color. Like RGP 6, it shows no evidence for reduced atmospheres and was likely fired in well controlled oxidized conditions.



Figure 43 - Red-Grit paste category 8 (Sherd #16941-10)



Figure 42 - Red-Grit paste category 9 (Sherd #15764-20)

RGP 9: $n=5$. This fabric is very close to RGP 4 and RGP 8 in terms of color with a Munsell value of 5YR 6/5, yet several sherds consistently showing this color were excavated allowing it to be placed in its own category separate from RGP 4 and RGP 8.

RGP 10: $n=3$. This fabric has a mostly reduced core with oxidized inner and outer margins with a Munsell value of roughly 7.5YR 8/6. These margins measure between 1.5 and 2mm. It is similar to RGP 4 and RGP 5 in terms of color. It is treated here as its own category, however, as the width of the margins is relatively consistent across the sherds indicating either a firing in the same kiln at the same time, likely at Çadır Höyük, or at the same kiln over multiple firings done consistently, likely at a location outside of Çadır Höyük. This fabric is also distinct in that it consistently has a larger amount of white grit than other RGP fabrics. Only three sherds of this fabric were found, though they were each in different contexts.



Figure 44 - Red-Grit paste category 10 (Sherd #18551-17)

RGP 11: $n=2$. This category only consists of two examples, both from the same context. It is fully oxidized with light orange (5YR 7/6) inner and outer margins and a pale yellow (10YR 8/3) interior core. This makes it similar to RGP 2 and RGP 6a in that the firing conditions were changed to control the level of oxidation. However, with margins of 2.5-3mm, these conditions were maintained longer than in the other fabrics.



Figure 45 - Red-Grit paste category 11 (Sherd #17463-32)

Some sherds show two colors in the fabric. Examples of these are presented below. A significant trend is that each of the examples shows RGP 1 fabric, which is the most common fabric discovered.



Figure 46 - A sherd showing RGP 1 and RGP 2 fabrics (Sherd #16919-1)



Figure 47 - A sherd showing RGP 1 and RGP 2 fabrics, also similar to RGP 11 (Sherd #16941-24)



Figure 48 - A sherd showing RGP 1 and RGP 5 fabrics (Sherd #17336-4)



Figure 49 - A sherd showing RGP 1 and RGP 11 fabrics (Sherd #16941-12)

The presence of sherds such as these, that show two different colors in their fabrics, supports the argument that the RGP sherd groups were made with the same paste, but fired under slightly different and/or changing environments. The variety in these individual sherds also supports the possibility that a single kiln could have been responsible for some of the variety found in the RGP group, certainly RGP 1, 2, 5, and 11 (shown above).

Sand Paste

This category is more difficult to break down as it is something of an ‘other’ category. That is, its most distinguishing features are that it does not have the red-grit of the RGP sub-categories, nor does it have the chaff of the chaff paste categories. Thus, it is not possible to

assume confidently that these examples are the same paste, just fired differently. The sub-categories are detailed below and ordered from most common to least common.

Well Sieved: $n=17$. This fabric is characterized by its small inclusions, which are fine (0.1-0.25mm) to very fine (up to 0.1mm) and better sorted, and by the uniformity of its texture, as made evident by the smoothness of its fracture. The sherds in this category vary according to the color of their fabric and also the kinds of inclusions. They are kept in this category, however, due to the higher quality of their production as is evidenced by their inclusions and texture. Were these to be broken down further, according to color and inclusions, many categories would exist and most would only have 2-4 sherds in them.



Figure 50 - An example of a well-sieved fabric (Sherd #15909-2)

Brown-Tan: $n=16$. This fabric is sorted poorly, similar to the RGP fabrics with a color. Inclusions vary considerably in size, from fine (0.1-0.25mm) to very coarse (larger than 1mm), though most tend to fall within the medium (0.25-0.5mm) range. The color is approximately 10YR 5/6. It is always consistently fired with no evidence for the introduction of a reduced atmosphere.



Figure 51 - Brown-tan paste (Sherd #16946-1)

Tan-Orange: $n=14$. This fabric tends to have slightly smaller inclusions, with white grit inclusions that tend to be fine (0.1-0.25mm) to very fine (up to 0.1mm) in size and multi-colored sand inclusions that tend to be medium (0.25-0.5mm) to coarse (0.5-1mm). Color tends to be around 5YR 6/6 with mild variations in both lighter and darker directions.



Figure 52 - Tan-Orange paste (Sherd #17318-15)

Yellow-Brown: $n=13$. This fabric is similar to the Well Sieved fabric in that the inclusions are very fine (up to 0.1mm) and in fact are generally not visible to the naked eye. Another characteristic is the occasional void in the fabric. This is common for fabrics that use chaff as temper, where the voids are created when the vegetal material is

burned out through firing. When this occurs, a black mark is typically present where the vegetal matter burned away. In the Yellow-Brown fabric, these black marks are never present and the voids tend to be spherical whereas voids caused by chaff burning tend to be more elongated (at least at Çadır Höyük). Another feature that distinguished this fabric from the Well Sieved is the more irregular texture. The color is a consistent 65YR 6.5/6 and the vessels made from this fabric tend to be thinner than the other fabrics, measuring between 3 and 4mm.



Figure 53 - Yellow-Brown paste (Sherd #16935-8)

Black-Brown: $n=6$. This fabric is rare. The inclusions tend to be fine (0.1-0.25mm) to medium (0.25-0.5mm) and are very well sorted. The entire core indicates the usage of a reduced atmosphere, but with the introduction of a somewhat more oxidized atmosphere at the outer margins.



Figure 54 - Black-Brown paste (Sherd #15764-18)

Chaff Paste

Chaff is the least commonly used material for tempering among the sherds in this study. It was a common tempering material during the EBA in Central Anatolia (see Section 3.1.3) and appears again in the Iron Age at Çadır Höyük (see Ross 2010). There may be a relationship between the use of chaff and hand-made ceramic vessels. Hittite vessels from Çadır Höyük never used chaff and were always wheel-made.

Orange-Tan-Grey: $n=16$. This fabric tends to be better sorted than the RGP fabric, with inclusion size staying between fine (0.25-0.5mm) and medium (0.5-1mm). The color of the core consistently transitions from an orange 2.5YR 7/8 exterior surface to tan 7.5YR 8/6 inner and outer margins and in the center a light grey 10YR 7/1. One exception shows a consistent orange color throughout the core.



Figure 55 - Orange-Tan-Grey chaff paste (Sherd #17305-4)

Orange to Grey: $n=12$. This fabric has some similarities to the Tan-Orange fabric discussed above in that it too has very fine (up to 0.1mm) white grit inclusions mixed in with typical sand inclusions. The sand inclusions are poorly sorted ranging in size between medium (0.25-0.5mm) to very coarse (larger than 1mm). This fabric is also similar to the Orange-Tan-Grey fabric in that the exterior and sometimes interior surface is an orange color whereas the core is mostly reduced. A significant difference is that

Orange to Grey fabric does not have the gradation visible in Orange-Tan-Grey, going directly from reduced to oxidized atmospheres.



Figure 56 - Orange to grey chaff paste (Sherd #15940-11)

Cream to Grey: $n=9$. This fabric is well sorted with inclusions generally ranging between fine (0.1-0.25) to medium (0.25-0.5). The core has well oxidized outer margins and the center tends to be somewhat reduced. The width of these margins varies considerably indicating a variety of firing methods, but the color of the fabric is relatively consistent with a cream-orange ranging from 5YR 7/6 to 10YR 7/4 for the oxidized outer margins and 7.5YR 6/2 for the reduced center.



Figure 57 - Cream to grey chaff paste (Sherd #16353-12)

Tan to Dark: $n=5$. This fabric has poorly sorted inclusions ranging from fine (0.1-0.25mm) to very coarse (larger than 1mm). It is distinct in that the core has dark tan 5YR 6/4 colored inner and outer margins with a darker center 7.5YR 7/2.



Figure 58 - Tan to dark chaff paste (Sherd #15764-13)

Tan with Dark: $n=2$. This fabric is rare, with only two sherds discovered. It has the very fine to fine white grit that is in the Orange to Grey and Tan-Orange fabrics. It also has sand inclusions that are moderately sorted between medium to coarse. The firing conditions appear to have been consistently oxidized producing a 5YR 7/8 color value,

with the only the areas dense with burned off chaff having a slightly more yellowish color.



Figure 59 - Tan with dark paste (Sherd #16390-1)

Bright Red: $n=1$. This is the rarest fabric, with only a single example discovered. It is poorly sorted, with inclusions ranging in size from fine to very coarse. Its reddish-cream color, 2.5YR 7/5, is unique among the chaff fabrics though its outer margin is slightly more orange at 5YR 7/4.



Figure 60 - Bright red paste (Sherd #17346-19)

Hittite Fabric

A majority of the sherds in this study are typologically identifiable as North Central Anatolian. They are predominantly of the dining ware assemblage and have a fairly consistent fabric, though firing conditions vary. The consistency in the fabric is found in the use of white grit for temper and the color of the paste which tends towards what has been called ‘buff’ or ‘drab’. In terms of color, Hittite fabric shows far less variety than that of painted wares, generally falling within the range of 5YR 6/6, with varieties going lighter and darker than this color as is seen at other Hittite sites (Ertem and Demirci 1999: 1018, 1020).

In terms of firing conditions, B Phase NCA vessels were mostly fully oxidized (53%), with a large portion of mixed oxidized/reduced atmospheres (42%) and a small portion fully reduced (5%). C Phase is fairly similar, with predominantly fully oxidized (56%) vessels. A mix of oxidized and reduced atmospheres represent 37% and fully reduced representing 5% (2% has no data on this matter).

4.2.5 – Surface Decorations

There is no apparent correlation between surface decorations and fabric types. Most fabric types show a considerable variety of surface decoration characteristics, many of which are illustrated on Fig. 61²⁸. Two consistent features are the usage of black paint and the use of burnishing as a decorative technique. Burnishing is a decorative technique used in Hittite ceramics as well, though it becomes increasingly less popular over time. For the painted sherds presented here, burnishing becomes slightly more popular from Phase B to Phase C for the RGP fabrics and less popular from Phase B to Phase C for the Sand and Chaff fabrics.²⁹

²⁸ Note that contexts that cannot be confidently identified as Phase B or C have been left out. These include 39 sherds (15.2%).

²⁹ Note that the sample sizes are very small, in some cases only 3 sherds, and that these observations may be indicative of a trend, but must be supported by more data.

Fabric/Phase	# of sherds	Paint color breakdown	Just Burnished	Burnished & Slipped	Total Burnished	Just Slipped	None
1 B	7	100% Black	29	57	86	14	0
1 C	20	100% Black	40	40	80	10	10
2 B	7	100% Black	57	43	100	0	0
2 C	20	100% Black	55	40	95	0	5
3 B	3	100% Black	33	33	66	33	0
3 C	12	100% Black	17	75	92	0	8
4 B	2	100% Black	0	100	100	0	0
4 C	13	15% Red, 85% Black	54	46	100	0	0
5 B	3	100% Black	0	67	67	33	0
5 C	11	18% Red 82% Black	45	45	90	9	0
6 B	8	100% Black	25	50	75	25	0
6 C	4	100% Black	50	50	100	0	0
7 B	5	20% Red, 80% Black	40	60	100	0	0
7 C	5	100% Black	40	40	80	20	0
8 B	2	100% Black	50	50	100	0	0
8 C	8	38% Red/Brown, 62% Black	62.5	25	87.5	12.5	0
9 B	2	100% Black	50	50	100	0	0
9 C	3	33% Polychrome, 67% Black	67	33	100	0	0
11 C	2	100% Black	50	50	100	0	0
Well Sieved B	7	10% Red, 90% Black	57	43	100	0	0
Well Sieved C	10	10% Brown, 20% Red, 70% Black	40	60	100	0	0
Brown-Tan B	4	100% Black	0	75	75	0	25
Brown-Tan C	10	10% White, 90% Black	60	40	100	0	0
Tan-Orange B	3	100% Black	0	100	100	0	0
Tan-Orange C	6	100% Black	33	16.5	49.5	50	0
Yellow-Brown B	5	100% Black	40	40	80	0	20
Yellow-Brown C	5	100% Black	20	20	40	40	20
Black-Brown B	3	100% Black	33	67	100	0	0
Black-Brown C	3	100% Black	67	33	100	0	0
Orange Tan Grey B	5	100% Black	20	80	100	0	0
Orange Tan Grey C	8	100% Black	62.5	25	87.5	0	12.5
Orange to Grey B	3	100% Black	100	0	100	0	0
Orange to Grey C	4	25% Brown, 75% Black	25	50	75	25	0
Cream to Grey B	5	20% Red, 80% Black	40	60	100	0	0
Cream to Grey C	3	100% Black	0	67	67	33	0
Tan to Dark B	1	100% Black	0	100	100	0	0
Tan to Dark C	3	100% Black	100	0	100	0	0

Tan with Dark C	2	100% Black	50	50	100	0	0
Bright Red C	1	100% Red	100	0	100	0	0

Figure 61 - Paste composition and surface decoration

Hittite Surface Decoration

Hittite pottery shows considerable difference in terms of surface treatment frequencies. For Phase B, 58% of sherds show no surface treatment. 13% of the sherds are burnished, 13% are slipped, and 16% are slipped and burnished, giving a total of 29% burnished, which is far lower than painted wares.

Phase C is similar, with 51% of sherds showing no surface treatment, 15% showing burnishing, 22% showing slip and burnish, and 11% showing just slip. The total amount of burnished vessels is 37%, again far lower than is typical for painted sherds.

4.3 – Contextual Patterns

While the percentage of painted sherds was relatively small at 6.22% (by weight – see Fig. 62), the extent of their appearance is large. 21 contexts (features and loci) were excavated from Trench ST2. Four (19%) produced no Painted Ware during the 2015 and 2016 field seasons. 46 contexts were excavated for Trench ST7. Five (11%) produced no Painted Ware during the 2015 and 2015 field seasons. Overall, 58/67 (87%) contexts had Painted Ware (see Fig. 63).

	Phase B	Phase C
Plain Wares (cups, bowls, plates, pitchers, small pots)	53%	56%
Coarse Wares (storage vessels)	28%	28%
Cooking Wares	13%	9%
Painted Wares	6%	6%
Fine Wares	<1%	<1%

Figure 62 - Breakdown of vessels (by weight) across Phases B and C

	Phase B Feature or Locus	Painted Sherd Weight in Grams	Total Sherd Weight in Grams	Painted Sherd %		Phase C Feature or Locus	Painted Sherd Weight in Grams	Total Sherd Weight in Grams	Painted Sherd %
					<u>ST2</u>				
	L42	204	4639	4.40%		L46	20	181	11.05%
	F52	11	426	2.58%		L52	3	32	9.38%
	L49	69	3332	2.07%		L51	104	1368	7.60%
	L44	43	2080	2.07%		F59	11	238	4.62%
	L45	12	1766	0.68%		L18	86	2199	3.91%
						L20	60	1716	3.50%
<u>ST7</u>	F33	24	94	25.53%		L14	11	366	3.01%
	F71	480	2074	23.14%		L50	40	1726	2.32%
	F68	34	215	15.81%		L29	200	9995	2.00%
	L88	67	494	13.56%		L16	30	2362	1.27%
	L105	3371	26230	12.85%		F3	32	2626	1.22%
	L89	194	1659	11.69%		L40	81	11178	0.72%
	L101	59	526	11.22%					
	F11	186	1814	10.25%	<u>ST7</u>	L108	1920	9731	19.73%
	L100	55	597	9.21%		F100	61	381	16.01%
	L98	412	6457	6.38%		L78	22	166	13.25%
	L99	76	1447	5.25%		F76	389	3466	11.22%
	L86	1290	25735	5.01%		L76	75	682	11.00%
	L87	106	2405	4.41%		L115	872	7986	10.92%
	L95	339	8001	4.24%		L123	204	2100	9.71%
	F48	36	990	3.64%		L74	391	5245	7.45%
	L93	43	5644	0.76%		L107	1605	21555	7.45%
	L96	33	18289	0.18%		L84	55	1000	5.50%
						F81	62	1130	5.49%
						L103	8	162	4.94%
						L71	51	1075	4.74%
						L109	74	1659	4.46%
						L77	25	758	3.30%
						L110	250	8779	2.85%
						L114	53	2047	2.59%
						L117	89	3527	2.52%
						L116	41	2056	1.99%
						L112	9	452	1.99%
						L73	3	933	0.32%

Figure 63 - ST2 and ST7 contexts with painted wares and their percentage by weight from highest to lowest

When we examine the spatial distribution of painted sherds, it becomes clear that there is no clustering of either fabric type or type of vessel. The distribution appears random for both Phases B and C. Figs. 64-67 (below) illustrate this. These maps were made by identifying the

spatial extent of all features and loci and then randomly distributing the number of sherds found within them. As each individual sherd was not piece plotted upon excavation, this method is the only way to discern spatial patterning made by the sherds.

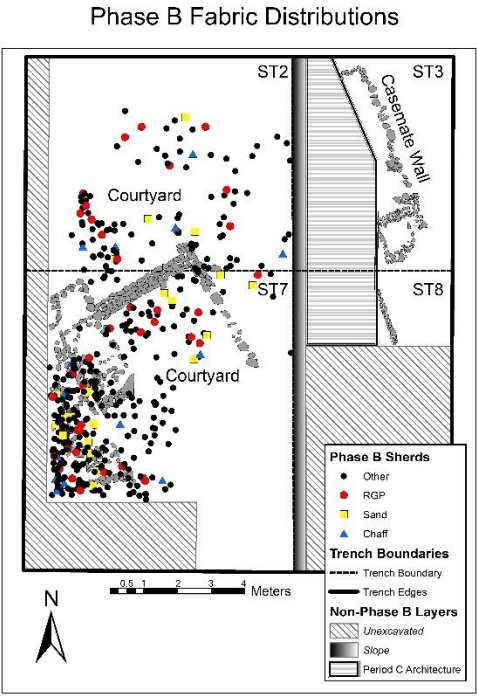


Figure 64 - Phase B sherds by paste composition

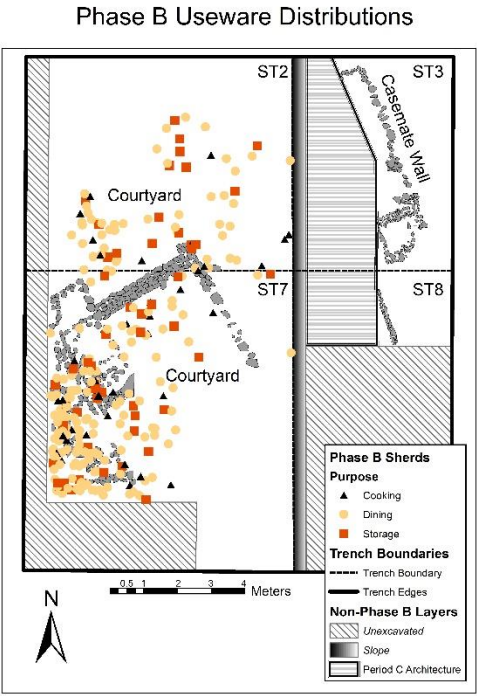


Figure 65 - Phase B sherds by ware type

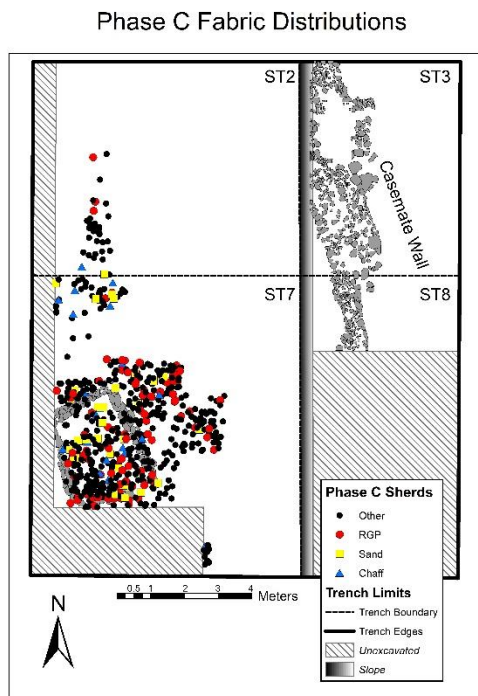


Figure 66 - Phase C sherds by paste composition

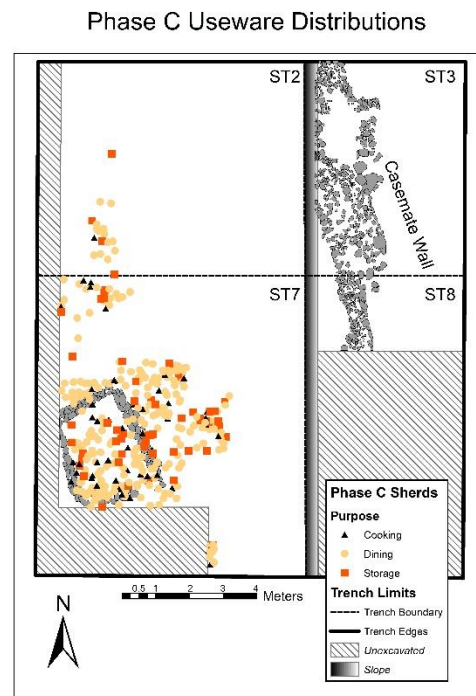


Figure 67 - Phase C sherds by ware type

4.4 – Conclusion

The fabric types discussed here appear across multiple contexts and in both Phases B and C (see Fig. 62). The implications of this spatial and chronological distribution will be discussed in more detail in Chapter 6, but here it must be noted that the quantity of these painted sherds and their presence in all excavated contexts argues for a contemporary deposit, not a secondary stratigraphic intrusion. In addition to these factors, we must also consider the diversity of contexts. Had these sherds been from the 3rd Millennium and then redeposited in the 2nd Millennium, perhaps by Hittite earth moving/land terracing, they would have appeared in greater quantity in contexts involved with such actions. This is not the case (see Fig. 63) as nearly all contexts have painted sherds present.

Another important element is the fact that the painted sherds from Çadır Höyük's 2nd Millennium contexts do not match the painted sherds from Alişar's 3rd Millennium contexts. Alişar is 13km as a crow flies and approx. 14.5km by path away from Çadır. That such a diversity of ceramic decorating traditions would exist among a site so close is unlikely, especially given the similarity between Alişar's painted traditions and those of Hattusa and Kültepe.

The considerable variety of production techniques and materials found within these painted sherds is striking, especially when compared to their Hittite counterparts which show considerable homogeneity. An explanation that must be entertained, and will be discussed in more detail in Chapter 6, is that these sherds are from vessels that were made in multiple locations away from Çadır and were then brought to Çadır. The different fabrics would then represent the traditions of different clusters of farming communities, perhaps with different access to raw materials and different production environments (e.g. different sized kilns).

What would have brought so many different production techniques together at a site like Çadır Höyük? An answer that brings the data presented together nicely and also addresses the hypothesis of this dissertation is that rural farming communities had distinctive local traditions that they produced and brought to Çadır in order to celebrate festivals. The differences detailed here are predominantly of paste recipe, paint color, and firing technique. Differences in paint color and decorative motifs are perhaps the easiest to explain as they would have served as identifiers for the farming community that produced them. The festival pottery was a 'show' pottery. It was bringing out the good china, so to speak, for a big event and also served as an opportunity to showcase the local community's distinctive take on the painted ceramic tradition.

The differences in paste recipes and firing conditions are harder to address in this interpretation. Firing conditions could be the result variations among local kilns and expertise in using them. Differences in paste recipes are the most curious. This variation would not have been visible during festivals and so is not so easily tied to identity marking. Perhaps it was the result in convenience of local raw materials, though this is uncomfortably speculative.

5.0 – The Archaeological and Textual Landscape

“Formerly, your grandparents, fathers, and mothers were careful in the matter of borders and roadways. No one violates a (agricultural field) boundary or a roadway. Boundaries are the knee of the Storm God, and a roadway is his chest. If anyone violates a boundary, he makes the Storm God weary (in) the knees, if anyone violates a roadway, he makes the Storm God weary in the chest.”¹ (KUB 17.29 ii 8’-13’)

This chapter is dedicated to understanding how Çadır Höyük participated in the Hittite agricultural administrative system discussed in Chapter 3. To do so, this chapter will first examine the textual evidence to determine likely candidates for Çadır’s Hittite name. This textual study is complemented with archaeological data and a landscape analysis that explore how Çadır was networked to surrounding Hittite sites.

The purpose of these analyses is to situate Çadır as accurately as possible within the Hittite administrative system. Hittite texts are the best source we have for understanding this system, but in order to match Çadır with what we can derive from these texts, we must develop a better understanding of what kind of settlement Çadır would have been. Historical Geography presents a way for us to begin to do this, as it not only can be used to make an argument for the textual identity of Çadır, but also for its neighbors as well. As I detail below, bringing a historical geographical analysis together with a landscape and textual analysis bring us as close as possible to comprehending Çadır’s role in the Hittite administrative system and the rural and urban communities surrounding it. This is important to this dissertation because it enables us to understand the way in which Çadır Höyük would have engaged with the rural population that was responsible for bringing painted ceramics to the site.

¹ This translation is adapted from Hoffner (1998: 320) and Gerçek (2017: 125).

The final part of this chapter will bring these observations together to discuss how Çadır may have engaged administratively with its local neighbors and with the Hittite state more broadly. The findings presented here illustrate that Çadır was most likely a low-level local center answering to a larger regional center, which in turn answered to Hattusa administratively. This is an important piece of the current study as it demonstrates the importance of Çadır's connection to the rural landscape. As a small, but centralized location for a broad area of cultivatable land (see Fig. 73), Çadır's role in Hittite agricultural administration would have been more predominantly focused on farming than its larger neighbors, such as Uşaklı Höyük and Alişar Höyük, as these sites would have had additional responsibilities, almost certainly including highly important religious and political roles. This emphasis on local management makes Çadır a valuable candidate for understanding the process of agricultural administration on the lowest level possible, i.e. as close to the farmer as we can get until a rural community is excavated.

Several books and conferences have come out in the last few years dedicated to the historical geography of Anatolia and with this wealth of new data and insights, the discipline has improved. That said, with the exception of the work of Barjamovic and Sir Gavaz, most studies have focused primarily on textual data or archaeological data, but rarely have they addressed both together. This chapter will bring both sources of data together to produce a thorough discussion of the historical geography of Central Anatolia².

Historical geography is a discipline challenged with too many data and not enough context. As an example, Fig. 68 illustrates archaeological sites that were inhabited during the 2nd Millennium³ BC. The distance from one edge of this map to the other is 4-5 days of walking.

² See also Gorny 2018 for a recent and very thorough discussion on the identification Hittite Mt. Puşkurunuwa and several other related sites in Yozgat Province.

³ Some survey reports are not more specific than this and so it cannot be said with confidence that all of these sites had Hittite remains, but it is likely that a majority do.

Within this range, there are almost 50 identified archaeological sites⁴ with evidence for Hittite occupation. The numerous sites identified in the small region of Czichon's surveys (see Section 2.4.3.2) indicate that many more sites exist, but have not yet been discovered in the many areas that have not yet received such intensive survey. Approximately 20% (9) of the 47 sites have been excavated; for the unexcavated ones, very little is known, often not even the full extent of the settlement. Any attempt to match these sites with textually attested locations is challenged by this lack of detail. Textual details on geography are likewise very limited, though itineraries provide useful information and though sometimes the presence of a nearby river or mountain is mentioned. That said, the numerous options of both archaeological sites and textually attested locations makes 1:1 matching nearly impossible.

The response to this has been a focus on matching major archaeological settlements to major historically attested locations. Beginning the search with important locations that were mentioned often in texts and were likely large settlements due to their political or ideological significance, allows the scholar to not only narrow the field, but also to start with more nodal points in the network of cities that expanded across the Hittite heartland. Even here, however, many obstacles exist, as will be detailed below.

⁴ This number excludes many smaller sites, such as those discovered in Czichon's surveys (see 2.4.2.2) and von der Osten's surveys (see Fig. 73). The sites from Czichon's survey are excluded because they are clustered in a small area and would not display well. Von der Osten's are excluded because their veracity is in doubt.

5.1 – Hittite Historical Geography

2nd Millennium Sites between Alaca Höyük and Alishar Höyük

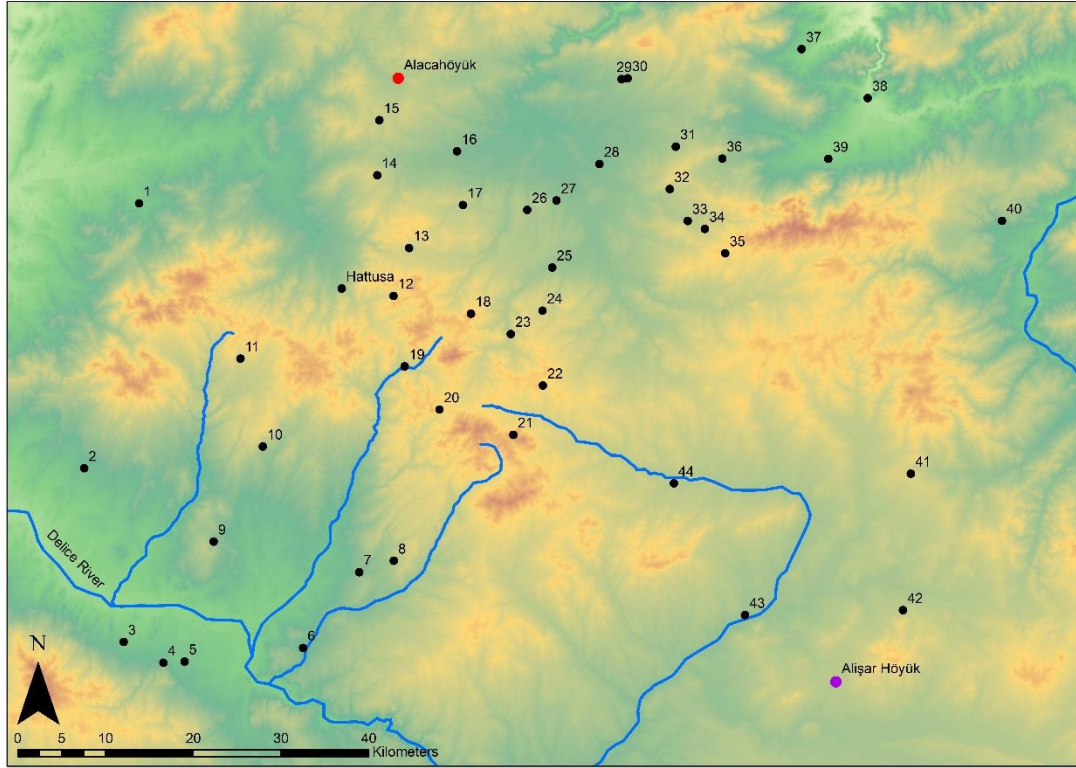


Figure 68 - 2nd Millennium archaeological sites identified by the following surveys and publications

von der Osten and Krogman 1937a; Özgüç 1978; Süel 1989; Czichon 2000; Sipahi and Yıldırım 2001, 2010, 2011; Omura 2002; Yıldırım and Gates 2007; Gerber 2008; Fales et al. 2009; and Strobel and Gerber 2011.

1 - Kemalli Höyük, 2 - Söğütçük Pınarı, 3 - Çatal, 4 - Höyük Kucuk Teflek, 5 - Höyük-Cepni, 6 - Kayalıboğaz, 7 - İğdecik, 8 - Oren Sehri, 9 - Hacıçeşmesi, 10 - Büyüknefes, 11 - Haydarbeyli, 12 - Çıradere, 13 - Küçükburka, 14 - Külah, 15 - Tahirabat, 16 - Eski yapar, 17 - Yatankavak Kayapınar Höyük, 18 - Kaletpe, 19 - Baltasarılar Höyük/Bişek Höyük, 20 - Yılanlıtepe, 21 - Çeşka Kalesi, 22 - Güllük Kale, 23 - Türkmensarılar Höyük, 24 - Yassıhöyük/Külpeşe, 25 - Sincan Köyü, 26 - Demirci Höyük, 27 - Örukaya Höyük, 28 - Bağınardı Höyük, 29 - Gökören Höyük, 30 - Gökören, 31 - Bozdoğan Höyük, 32 - Bolatçık Höyük, 33 - Tombultepe Höyük, 34 - Göçyolu Şeker Mevki, 35 - Mercantepe Höyük, 36 - Zindankuyu Höyük, 37 - Ortaköy, 38 - Sarıbabat and Gök Tepe, 39 - Kalehöyük, 40 - Çekerek Höyük, 41 - Karakız Hittite Quarry, 42 - Salır, 43 - Çadır Höyük, 44 - Uşaklı/Kuşaklı Höyük

Hittite historical geography has a long history full of debate. As early as 1907, Winckler (1907) was considering the possibility that the ruins of Hattusa represented the ‘Arzawa’ mentioned in the Amarna letters. Today, over 110 years later, Hittite historical geography is, perhaps, more popular than ever before. The geography of the Hittite heartland has received the greatest amount of attention, as is to be expected given both the political importance of this

region and the wealth of textual data available for it. Numerous connections have been made, but other than Boğazkale-Hattusa, Ortaköy-Sapinuwa, Maşat Höyük-Tapikka, and Kuşaklı Höyük-Sarissa, none have gained a truly uniform scholarly consensus. Most of the debated connections revolve, directly or indirectly, around the location of a single historical city, Ankuwa⁵.

Ankuwa appears 164 times across 76 *Catalogue des textes hittites* (CTH) categories (Kryszeń 2016: 289, Laroche 1971). It was the seat of an AGRIG (see Section 2.4.2), the location of the Hittite army's winter quarters during the reign of Mursili II⁶, a royal residence, and a significant cultic center (Crasso 2005). Ankuwa's role as a cultic center is the most valuable in determining its geographic location as its cultic importance made it a necessary stopping point for the AN.TAḪ.ŠUM traveling festival officiated by the Hittite king (CTH 604-625) (see Section 2.4.2.1). The AN.TAḪ.ŠUM festival had an extensive itinerary documented by Hittite scribes; the itineraries listed the order of locations visited and the amount of time spent travelling from one stop to the next in terms of days. Both the sequence and the length of time travelled have been used frequently by scholars trying to place these historical stopping points onto the modern landscape.

5.1.1 – The Identification of Ankuwa and Zippalanda

The debate over Ankuwa's placement in the modern landscape can be divided into those who believe the city was north of Hattusa and those who believe it was south. The 'north' camp is smaller, consisting of Popko (2000), Taracha (2015), and Kryszeń (2016) among others. The 'south' camp, consisting of Gelb (1935), Gorny (1990), Krysztat (1999), Crasso (2005), Forlanini

⁵ See Crasso 2005 for the most thorough discussion of this textually attested location.

⁶ Ünal (1984: 97) suggests that possibly his namesake, Mursili I, did so as well according to a KBo III 46 Rs. 7ff.

(2008), Bryce (2009), Barjamovic (2011), Archi (2015), and Cannon (Forthcoming), among others, has focused its attention on equating Ankuwa with the archaeological site Alişar Höyük⁷.

Gelb (1935: 9) was one of the first⁸ to identify the archaeological site of Alişar Höyük as the location of Ankuwa. He did so based on the Old Assyrian Trading Colony (OATC) texts found there⁹, five of which (out of a total of 53¹⁰) mentioned ‘Amkuwa’¹¹, taken to be an earlier spelling of ‘Ankuwa’, more on this below. A total of 14 attestations of ‘Amkuwa’ from the OATC period are known, with the nine others coming from Kanesh¹² (Barjamovic 2011: Fn. 1292).

It is not just the frequent attestation of Amkuwa, but also the very presence of OATC texts at Alişar that supports the argument that it should be equated with Amkuwa. The presence of these texts indicates that a *kārum* or a *wabartum* was present at Alişar Höyük (though no domestic neighborhoods have been identified outside of the site, as have been at Kanesh) and we know from texts that ‘Amkuwa’ had a *wabartum*¹³ (see Section 2.1.3). Viewing Alişar Höyük as a different OATC settlement, with a *kārum* or a *wabartum*, is difficult given that, with the possible exception of Sanahwitta, no other such settlements are argued to be in this region (Barjamovic 2011: 311).

While the frequency of ‘Amkuwa’ in the Alişar texts does support the argument that Alişar is Ankuwa, it must be considered carefully. The fact that Alişar Höyük has produced 36%

⁷ Sir Gavaz (2017a: 182) has argued recently for Çadır Höyük as the location of Ankuwa.

⁸ Lewy (1934: 7) appears to have been the first person to do so.

⁹ See Barjamovic (2011: 310-315) for a more thorough discussion of the equation of Alişar with ‘Amkuwa’ during the OATC period.

¹⁰ All dating to the Kaneš IIB period (Gelb 1935: 9).

¹¹ There are various spellings, including ‘*A-am-ku-a*’, ‘*A-am-ku-w[a]*’, ‘*Am-ku-wa*’, and ‘*A-ku-wa*’ (Gelb 1935: 9).

¹² While this is a significant proportion, it should also be noted that only five archaeological settlements in Anatolia have produced OATC texts. These are Kültepe, Hattusa, Alişar, Kaman Kale-Höyük, and Kayalıpınar. Of these sites, Kültepe has produced over 23,000 texts, whereas the other four have produced less than 200 (Barjamovic 2011: 56).

¹³ During both Kanesh I and IIB periods (Veenhof and Eidem 2008: 155).

of all attestations of ‘Amkuwa’ indicates the likelihood that this archaeological site was closely connected to this historical city, whether they are one and the same or they interacted extensively with each other. Within the collection of Alişar texts, Ankuwa is mentioned in more tablets (five) than any other location. Kanesh is mentioned in four tablets, Hattusa, Hahhum, and Hurama in two tablets, Zalpa, Mama, Kussara, and Lakimissa are on only a single tablet (Gelb 1935)¹⁴. Kanesh and Hattusa can obviously be dismissed as candidates for the identity of Alişar. That the other locations are mentioned in only one or two tablets indicates that these locations were less important or less connected to the ancient location present at Alişar. The conclusion from this is that the Alişar Höyük was very likely either the location of Amkuwa itself, or very closely connected to the city of Amkuwa.

We do not have enough contextual evidence to know firmly that the texts mentioning ‘Amkuwa’ found at Alişar were sent there or were written and archived there. But, it would dramatically change scholars’ geographic perception of the Old Assyrian trading network if Alişar were to be equated with any of the other sites that are mentioned in its texts¹⁵. Thus, while the simple quantity of attestations is not enough to secure the identification, it does place the burden of proof on those who would argue that Amkuwa was not located at Alişar Höyük. Similarly, the discovery at Alişar of a seal with the inscription “Seal of Anitta, Prince of Akuwa” (Crasso 2008: 88) does not prove anything, though it does supply an additional layer of support for the equation of Alişar with Amkuwa.

The evidence is less straight-forward when one considers the data from Hittite documents¹⁶. The Middle Bronze Age ‘Amkuwa’ became the Hittite ‘Ankuwa’ (more on this

¹⁴ Assur is also mentioned, but can also be dismissed as a candidate.

¹⁵ This is not a tautological argument, as arguments for these locations are able to draw on data that are independent from the Alişar/Amkuwa connection.

¹⁶ The most thorough treatment of Ankuwa in Hittite documents is Kryszewski 2016.

phonetic transition below) and, as mentioned above, appears frequently in Hittite texts. Evidence for Alişar being associated with Ankuwa via Hittite sources comes from a text describing the festival of the Divine Fleece of Zippalanda (CTH 599.1, KBo 30.155 rev. ? 2'-9')¹⁷:

As soon as the Divine Fleece goes on the Southern Road, and as soon as it arrives [from] Zippalanda to Ankuwa, the *hamena*-men take the meat and hides. As soon as (the Divine Fleece) [arrives] in Zippalanda (on its way) back from Ankuwa [...] comes.

Güterbock (1961: 92) viewed the name 'Southern Road' in reference to Hattusa and assumed from this that Ankuwa must be south of Hattusa¹⁸ though he also considered the view that the 'Southern Road' was a road leading south out of Zippalanda. As Zippalanda is most likely between Hattusa and Ankuwa based on *Reisefest* itineraries, this text supports the likelihood that both Zippalanda and Ankuwa were south of Hattusa. We also know, from the *nuntarriyašhaš* Festival texts, that Zippalanda was two days from Hattusa. This all places Ankuwa south of Hattusa at approximately three days travel¹⁹, with Zippalanda along the path.

Alişar Höyük fits this textual description well. It is SE of Hattusa and is located on a natural pathway through the landscape that connects it to Hattusa²⁰. Following this pathway, Alişar is 87.5km away from Hattusa, which places it within a three-day distance if 30-35km are covered each day by walking²¹. Also, on this natural pathway is Uşaklı Höyük, a large settlement

¹⁷ Translation from Kryszeń 2016: 299.

¹⁸ Note Kryszeń (2016: 272) argues that it is possible that the 'Southern Road' did not lead south, but was simply located south of Zippalanda and ran east to west. This is necessary for his argument that Ankuwa and Zippalanda are located north of Hattusa. Popko (1995: 256-257), on the contrary, believes that this passage indicates that Ankuwa lies south of Zippalanda.

¹⁹ This distance is further supported by KUB 25.28 (discussed by Kryszeń 2016: 299) which discusses a three day trip from Hattusa to Ankuwa, stopping in Imralla for the first night and Hupiggassa for the second.

²⁰ Summers (2014: 42-43) describes this pathway from Uşaklı to Hattusa.

²¹ 30-35km is a frequently used distance to estimate what can be covered on foot in a day. Morrison (1939: 103) notes that it took a person from the village of Alişar two and a half days to make the trek from Alişar to Yozgat by foot, a 72km distance. This indicates that the 30km distance is a reasonable estimate for the landscape of the area under study. Another example supporting this estimate is the distance between Hattusa and Tapikka/Maşat Höyük which at 99km in a straight line, would have been well over 100km along ancient roads. According to HKM 15 rev.

with monumental architecture and Hittite tablets. Alişar is 33km south of Uşaklı via the pathway, placing Uşaklı between Alişar and Hattusa. This distance is at the upper end of the 30-35km estimate used here, but it should be noted that the AN.TAḪ.ŠUM Festival mentions a direct trip from Zippalanda to Ankuwa, without the detours that were present in the Hattusa to Zippalanda leg. These data support Uşaklı as Zippalanda, an argument already made by Gorny²² (1990: 433-434) and Gurney (1995: 71) and adopted by the archaeological team currently excavating Uşaklı Höyük (Mazzoni 2015: 10). The scarcity of archaeological sites directly on the pathway from Uşaklı to Alişar²³ supports the idea that this trip was done without interruption and thus could have been accomplished with a day of serious traveling²⁴. Finally, a Hittite text (VSNF 12.1²⁵) indicates that Mt. Daha was passed while going from Zippalanda to Ankuwa. Kerkenes, argued to be Mt. Daha (Gurney 1995; Gorny 1997), is located just west of the pathway leading from Uşaklı to Alişar (for the pathway see Fig. 75), making it an excellent candidate for Mt. Daha, which was visible from Zippalanda (see Fig. 69).

12, this trip took three days, though this is likely in reference to troop travel and so would be faster than royal travel (Karasu 2007: 378).

²² Note that Gorny (2006: 30) has since argued that Çadır Höyük is Zippalanda.

²³ Note that Çadır Höyük is close to the pathway but would have involved an 8-12km round trip (depending on the route) detour to avoid the modern-day mountain Çaltepe, situated just south of Çadır.

²⁴ Though it should be noted that KUB 20.96 iii 19'- iv 6 and KUB 20.96 v 6-10, which discusses a Zippalanda festival (CTH 635), may indicate this distance was covered twice in a day. This is discussed further by Kryszewski 2016: 298.

²⁵ Discussed by Kryszewski 2016: 296.



Figure 69 - Looking south while standing on Building II of Uşaklı Höyük (mound to the right)

Kerkenes is visible in the distance (far left). Building II is argued by Mazzoni (2015: 8) to be a Hittite temple. Photo by author.

The text-based arguments against Alişar being equated with Ankuwa, predominantly led by Popko²⁶ (1995; 2000), make use of similar logic by trying to demonstrate that both Ankuwa and Zippalanda are associated with other locations that are understood to be north of Hattusa. One such example is a list of seven AGRIGs from different locations (KBo 16.78 obv. 11'-13')²⁷ who were charged with providing for a festival at Zippalanda. Among the locations represented by these AGRIGs were Tapikka and Karahna. Tapikka has been convincingly identified with the archaeological site of Maşat Höyük based on texts that were discovered there and Karahna is identified with the modern town of Sulusaray. Maşat Höyük is 99km east and a little north of

²⁶ But now see Taracha 2015, Kryszeń 2016, and Camatta 2006.

²⁷ Discussed by Popko (2000: 11; 1995: 254-255).

Hattusa and Sulusaray is 127km almost due east. Another location mentioned on the festival list is Katapa, which has not been identified with an archaeological site, but is expected to be near Gasgaean lands (north of Hattusa) since it was a base of operations against them (Popko 2000: 446). That Ankuwa and Zippalanda are mentioned in the same context as these locations indicates they may be likewise north and perhaps possibly east of Hattusa.

Yet another example is the delivery of 1000 sheep and 50 oxen by the great shepherd of the House of Ankuwa to Hanhana, mentioned in the Great Festival for Telipinu (CTH 638)²⁸. Hanhana is generally believed to be in the north due to its connection with Gasgaean raids and because it was mentioned in a text found at Inandık (Camatta 2006: 263-264, 266). The movement of such a large amount of livestock argues that these two locations would be close to one-another, especially since Ankuwa is the only major urban center to make such an offering (Kryszeń 2016: 164). Similarly, the AGRIG of Ankuwa was tasked with bringing animals to Arinna (the northern location of which is discussed in more detail below) according to KBo 30.54²⁹.

Based on these details, Popko (1994; 1995; 2000) has argued that Ankuwa should be identified with the archaeological site of Eskiypar³⁰, 21km north of Hattusa, and Zippalanda should be identified with Alaca Höyük, 25km north of Hattusa. Popko (1994: 32-37) has further defended his argument by stating that the 2nd Millennium BC orthostats located at the entrance to Alaca Höyük depict a young storm god (shown as a bull) and an old storm god. He then cites

²⁸ Discussed by Kryszeń (2016: 164-165). See Sir Gavaz (2017a: Fn. 22) for further critique of this argument.

²⁹ Discussed by Kryszeń (2016: 301).

³⁰ Taracha (2015) also argues for a northern location for Ankuwa, citing Soysal's (2011: 26) recognition that a tablet fragment found at Kuşsaray (ABoT 2.143) was a duplicate of a text describing a spring festival of Zippalanda (KUB 11.30 + KUB 44.12 IV 22'-27') found at Hattusa. Taracha, however, argues that Kuşsaray is Ankuwa, based on this evidence.

several Hittite texts that describe the Storm God of Zippalanda as the son of the Storm God of Hattusa and argues that this familial relationship is represented on the Alaca orthostats³¹.

Finally, a layer of evidence that Popko (1995: 257; 2000: 445) and now Kryszeń (2016: 293) present as a challenge to the Alişar = Ankuwa argument is the rejection that ‘Amkuwa’ of the OATC texts is the same location as ‘Ankuwa’ of Hittite texts. Popko cites the argument made by Laroche (1962: 29), that ‘Ankuwa’ likely derived from an earlier form **Hannik(wa)*. Laroche based this on KBo 10.24 rs. iv: 22, 30³², which has the word ‘Hannikuil’, which is Hanniku plus the Hattian gentile suffix ‘il’, meaning ‘from Hanniku’. To Popko, this indicates that ‘Amkuwa’ is not an earlier form of ‘Ankuwa’, but a different location altogether. Ankuwa, then, is the Hittite name for the earlier location called Hanniku³³. This argument allows him to agree that Ankuwa was located at Alişar Höyük, which then makes it impossible for Ankuwa to be located there as well. Kryszeń (2016: 293) points out that the earliest Hittite attestations of Ankuwa, which date to the Old Hittite period, use the spellings ‘Ānkuwa’ and ‘Hanikku’, which he considers to be different enough from the OATC ‘Amkuwa’³⁴ to be supportive of Popko’s argument.

Barjamovic (2011: Fn. 1292) rejects Popko’s argument and suggests that ‘Hannikuil’ may be related to a Hittite folk etymology for ‘Ankuwa’. Barjamovic does not defend his rejection, perhaps because he believes the phonetic /m/ to /n/ transition to be simple enough to

³¹ For a different interpretation, see Ünal (1994), who connects the scenes depicted on the orthostats outside of Alaca Höyük with the Festival of Teteshapi (CTH 738), which occurred at Tawiniya (de Martino 2006: 538). This festival discusses a sword swallower and a ladder-man, both of which are shown on the Alaca orthostats. While Arinna itself is not mentioned in the texts, the city of HARharna provides the sword swallower and this location is associated with Arinna by Kryszeń (2016: 66, see Section 2.4.2.2, Fig. X). It should also be noted that Teteshapi had a temple at Tawiniya (Kryszeń 2016: 119).

³² Discussed by Barjamovic (2011: Fn. 1292) and Ünal (1984: 89). See also Soysal (2004: 441).

³³ Note that Soysal (2004: 142, 144) agrees that Hanikku is to be associated with Ankuwa and identifies a Hattian god ^DHanniku(n) who is attested in the same context as Ankuwa and the goddess of that location, ^DKattahhan.

³⁴ Kryszeń (2016: 293) notes that the spelling ‘Akuwa’, which matches with the spelling variant found at MBA Alişar Höyük, is also present in Hittite documents, but only in the New Kingdom period.

not require much explanation, a stance taken by Crasso (2005: 154). Indeed, this transition from a bilabial nasal (/m/) to an alveolar nasal (/n/) is straightforwardly explained as an assimilation to the place of articulation of the following velar stop (/k/). In other words, the tongue is pulled back from the lips, where the /m/ is pronounced to the alveolar ridge (the ridge on the roof of the mouth behind the teeth), where the /n/ is pronounced. This movement is encouraged by the /k/, which sits further back in the mouth at the velum (just in front of the uvula). The /k/ exerts this influence because it is easier for the tongue to transition between places of articulation that are close to one-another³⁵.

Popko's designation of an Amkuwa and a separate Ankuwa also presents the problem of Amkuwa disappearing after the end of the OATC period. Gorny's (1994, Gorny et al. 1995) brief excavations at Alişar Höyük demonstrated that this site was inhabited at least during early Hittite times and that it continued to be a significant population center with a stone gate similar, though smaller, to those of Hattusa³⁶. Unless the name of this site changed, one must explain the absence of 'Amkuwa' in Hittite texts when Alişar Höyük continued to exist as an urban center.

Additionally, Ankuwa's association with locations expected to be north of Hattusa does not necessarily argue against it being located to the south. As was discussed above, texts indicate that Ankuwa's AGRIG was responsible for delivering livestock to Tapikka and Karahna (locations known to be north as they have been identified in the archaeological record) and Hanhana and Katapa (locations expected to be north due to their involvement with Gasgaean campaigns). Whether Ankuwa was north or south of Hattusa, the trek east to Tapikka and

³⁵ Ünal (1984: 89) argues that the occasional Hittite spelling of Ankuwa as 'A-ku-wa' indicates that the first consonant was an engma and not a distinctive 'n' followed by a 'k'.

³⁶ Also worth noting that the Old Hittite texts *Landschenkungsurkunden* and the MELQETU Lists mention 'É_{URU} Ankuwa' 'The House of Ankuwa', indicating that there was a palace at this location. Excavations at Alişar Höyük revealed a 'mansion' on the terrace, which von der Osten (1937b: 2) dated to level 10T, or the 'Period of the Hittite Empire', and Gorny (1995: 78) in his reworking of von der Osten's layers, dated to 10bT, which he equates to the beginning of the Old Hittite period.

Karahna would have been far. In fact, Alişar Höyük is closer to Maşat Höyük/Tapikka (75km) and Sulusaray/Karahna (83km) than Eskiypar is (84km and 113km respectively). Thus KBo 16.78 cannot be viewed as a useful indicator of Ankuwa's position relative to Hattusa, as the northern and southern options are roughly equally valid, with the southern argument being slightly more valid. Furthermore, as Kryszeń (2016: 309) points out himself, there are other textual contexts in which we would expect to see Ankuwa mentioned if it were to the north, but do not. These include texts concerning Gasgæan operations, oracle itineraries, and Hattuşili III's discussion of northern lands given to him by his brother Mursili³⁷.

A final issue with Kryszeń and Popko's arguments is that it places all major Hittite population centers north of Hattusa (a region that does not have enough sizable archaeological settlements to support this) and does not address the considerable amount of archaeological settlements south of Hattusa. If Ankuwa, Zippalanda, Arinna, Hanhana, Katapa, and Tahirpa are all expected to be north of Hattusa, as they argue, what is left to be identified with the five large archaeological sites south of Hattusa (Yassihöyük, Uşaklı Höyük, Çadır Höyük, Alişar Höyük, and Büyüknefes)?

Placing Ankuwa at Alişar Höyük is additionally, though indirectly, supported by arguments that place Arinna at Alaca Höyük, introduced by Erkut (1992; 2005), but taken up and supported by several others (Sir Gavaz 2017b; Alp 2003; Haas 1994; Gorny 1997). The evidence rests primarily on two sources, neither of which is definitive. First, Erkut (1992: 159-165) connects the natural springs near Alaca Höyük to the textually attested springs used by the Hittite king to wash himself outside Arinna. Second is that Alaca Höyük, at 25km away, is within a day's travel of Hattusa, a distance that Arinna was likewise known to be.

³⁷ Though note that Zippalanda is mentioned among those cities under Hattusili III's control, according to KUB 1.1 and KBo 6.29, discussed by Camatta (2006: 265-266).

Working from Arinna being located at Alaca Höyük, Sir Gavaz has made compelling arguments for additional equations, including Eskiypar as Tahrpa³⁸ (Sir Gavaz 2012) and Tahirabat as Matilla (Sir Gavaz 2017b). The result of these tentative connections is a kind of ‘fit’ that extends from Ankuwa. Granted, many assumptions are themselves built on assumptions, but when the entire picture is brought together (see Fig. 70), the most comprehensive argument is created. More sites are comfortably associated with textually attested locations than is the case with arguments that place Ankuwa north of Hattusa.

Hittite Settlements and their Textual Correlates as Argued in this Chapter

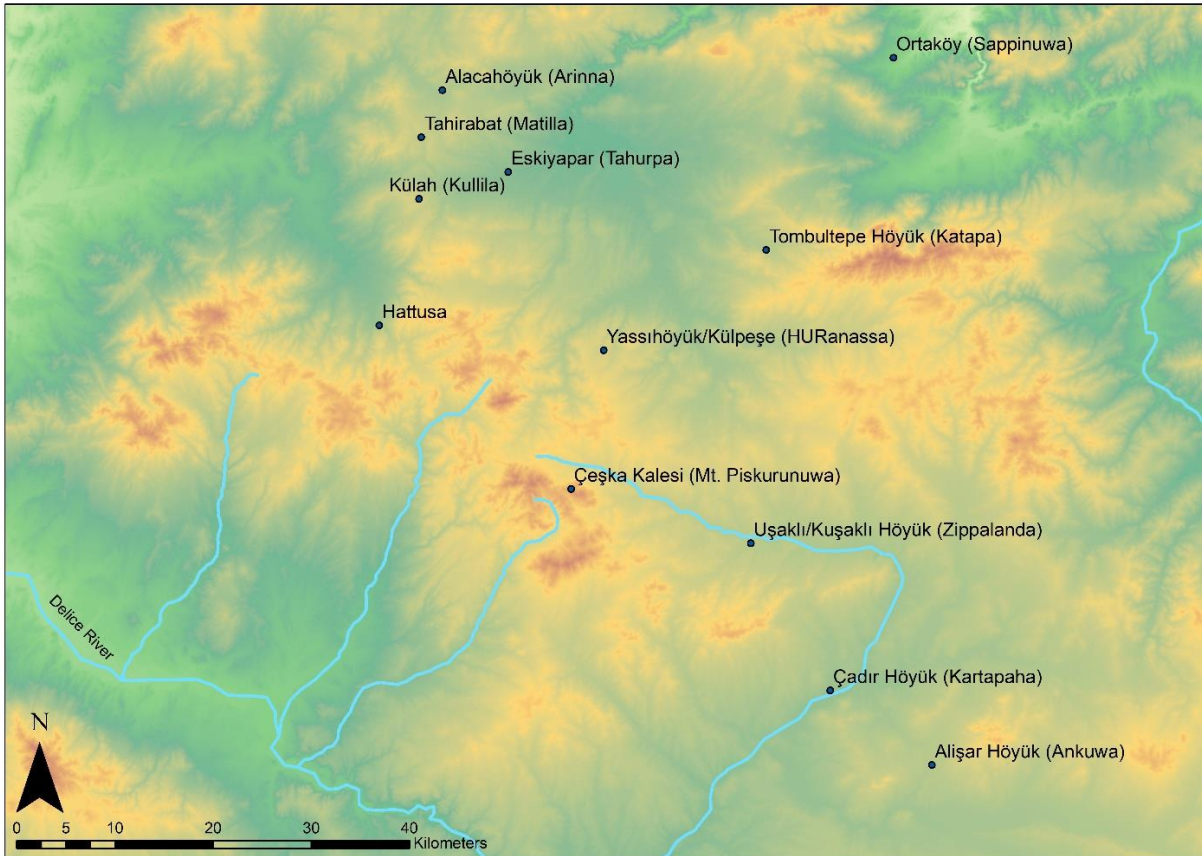


Figure 70 - Hittite settlements and their textual correlates

³⁸ One issue with Sir Gavaz’s connection is that she argues Hittite Tahrpa is the same as Old Assyrian Tahrwa (Sir Gavaz 2012: 34-35), a position disputed by Barjamovic (2011: Fn. 1045) and Kryszew (2016: Fn. 226 and 227) on geographic and linguistic grounds, respectively. Eskiypar has EBA and Old Hittite levels (Süel et al. 2017: 55) indicating that it may well have MBA levels also, which would be necessary if Tahrpa = Tahrwa = Eskiypar.

5.1.2 – Identification of Çadır Höyük

Interestingly, there is no obvious candidate for a textually attested match for Çadır Höyük. Gorny has argued for Zippalanda³⁹, Sir Gavaz has argued for Ankuwa, and Forlanini (2008: Fn. 76) has argued for Kartapaha, by suggesting that this location should be found directly between Zippalanda and Ankuwa⁴⁰, in the modern Kanak Su basin. As described above, the locations for Zippalanda and Ankuwa are better matched with Uşaklı and Alişar respectively. Forlanini's (2008: 157-158) suggestion is based primarily on Kartapaha's associations with Zippalanda and what he calls the province of Parsananhila, which he believes to be south-west of Zippalanda.

The connection between Zippalanda and Kartapaha is perhaps the strongest and so is a useful starting point for trying to narrow down where Kartapaha could have been. One piece of evidence indicating this connection is KUB 11.33 (CTH 662), which details the *aškuwammaš* festival held at Kartapaha. For this festival, the divine fleece of the stormgod of Zippalanda was brought to Kartapaha and several population centers sent food and drink for the celebration. These include Katapa, Hipuriya, Haliputta, Tanistaha, Mita, Dahaya⁴¹, and one, possibly two, locations unknown due to breaks in the tablet.

Katapa, one of the more significant population centers mentioned in Hittite texts, has close connections with Tahirpa, Gasgae territory, Sapinuwa, and Zippalanda (Kryszeń 2016: 198ff; Forlanini 2008; Karasu 2007). Sir Gavaz (2013: 13) proposes Tombultepe Höyük which, with proof of Hittite occupation⁴², fits the required archaeological evidence and proximity to

³⁹ See Gorny (forthcoming – in *Assyromania and More in Memoriam for Samuel M. Paley*) for a very thorough treatment of his thoughts on the identification of Çadır Höyük and its neighboring archaeological sites.

⁴⁰ A relative location agreed upon by Kryszeń (2016: 274).

⁴¹ Kryszeń (2016: 273) notes another text KUB 57.71 that mentions Zippalanda, Katapa, Kartapaha, and Haliputta together, all in the dative-locative case. In this unfortunately broken context, Salampa is also included.

⁴² Including bull-headed vessels (Süel 1989).

Tahurpa-Eskiyapar, Sappinuwa-Ortaköy, and Zippalanda-Uşaklı Höyük well⁴³, as it is less than 30km from each. Kryszewski (2016: 236) suggests that Dahaya may be a population center connected to Mt. Daha. If Mt. Daha is Kerkenes, Dahaya would then be very close to Uşaklı Höyük. There is, however, no archaeological settlement near to Kerkenes that offers itself as a good candidate for Dahaya. This may be expected, however, as Dahaya and the other locations listed here are infrequently mentioned in texts. This infrequency likely correlates to a lack of size and importance which would make them more difficult to find archaeologically. Less can be said about Hipuriya, Haliputta, Tanistaha, and Mita, but I believe these are more northern locations, perhaps between Zippalanda and Katapa, as they do not appear in other texts (discussed below), which seem more focused on the south of Zippalanda.

This all indicates that the *aškuwammaš* festival drew people and resources from locations around (and including) Zippalanda and north of this area. Çadır Höyük, at 17km south of Uşaklı Höyük, is certainly a viable candidate for Kartapaha, though its southern location makes it stand out from the argued general location of the other participants.

Forlanini's suggestion that Kartapaha should be found at Çadır Höyük stems primarily from the text HT 2, a list of female singers summoned from numerous population centers, large and small. This text appears to be focused on population centers south of Zippalanda. The women are presumably being summoned away from their homes to serve in a religious center, though the destination is unknown, with Zippalanda or Hattusa suggested as likely candidates.

⁴³ Strobel (2008: 295) suggests that Kalehöyük, 3km north of Aydıncık, is Katapa. His reasoning is similar to that of Sir Gavaz's, but this settlement is just a bit too far away to make it as viable a candidate.

Zippalanda⁴⁴ is a candidate because many place names mentioned are associated with Zippalanda in other texts and Hattusa because it was the capital (Rutherford 2004: 381-382).

HT 2 lists at least 94 locations, with the actual number possibly being higher due to breaks in the text and references to people who own the women as opposed to the place from which they came. These 94+ locations are organized into 9 groups⁴⁵ each assigned to an over-arching location from which the women are ultimately considered to have come. These over-arching locations then are likely to be close to, and perhaps administratively in control of, the locations listed above them. For example:

HT 2 obv i 1-6⁴⁶

1 woman singer from the great man, the adviser

1 woman singer from the palace from the king

1 woman singer from the palace from Huha

1 woman singer from the palace from Siyana

1 woman singer from the place of Karupaha

Total: 5 from Katapa

Of these 9 over-arching locations, five are designated with the term *ḫalzi*, which came into the Hittite vernacular from Hurrian and is originally Akkadian *ḫalṣu* ‘fortification, territory held by a fortification’ (Tischler 1997: 180; Friedrich and Kammenhuber 1975: 111). Tischler (1997: 179) connects *ḫalzi* with Hittite *telipuri*-, meaning ‘precinct’ or ‘district’. Singer (1984: Fn. 131) argues that a *telipuri* was the administrative unit controlled by an AGRIG (see Section 2.4.1.2). However, he notes that two lists of *ḫalzi* locations (the Sahurunuwa Deed [CTH 225] and HT 2 – discussed here) all bear locations that are never associated with an AGRIG. Ankuwa,

⁴⁴ It seems that Zippalanda is the better candidate for the destination because it is not mentioned as having provided any singers, despite its neighbors doing so, and because it was a major cultic center that would reasonably have had need of singers.

⁴⁵ 11 groups if one counts the 9 women from Tissuwa and the 8 women from Dunna (col. vi 6-7). Since these are the only locations listed, it is not clear if they represent a collection of population centers or stand alone.

⁴⁶ Translation from Rutherford 1994: 386.

known to have had an AGRIG at least in Old Hittite times, is never designated with *ḫalzi*⁴⁷. We do not have enough textual evidence to truly understand this administrative designation, but it seems reasonable to assume that the *ḫalzi* territories may not exactly equate to *telipuri*, though some overlap is entirely possible. I would argue that a *ḫalzi* is a later and likely smaller designation, though if this is true, its relationship to *telipuri* remains unclear. Perhaps it replaced this designation for a time? Or co-existed in a parallel administrative organizational system?

The *ḫalzi* designated locations mentioned in HT 2 are Katapa, Salma⁴⁸, Kartapaha, Parsananhil/ta, and Ulusna. Two significant Hittite population centers, Ankuwa and Tahirpa, are also among the 10, but are not designated with *ḫalzi*⁴⁹. LBA Alişar Höyük has shown no evidence of defensive architecture (Gorny 1995: 74), whereas LBA Eskiypar (possibly Tahirpa – see above) does have LBA defensive architecture (Sipahi 2012: 9). It is difficult to know how much to make of the fortification aspect of the term *ḫalzi*. Does the presence of this term indicate that the location designated had fortifications? Not necessarily, and many Hittite scholars have simply translated the term as ‘province’, ‘district’, or ‘territory’, leaving out the fortification part. Alişar’s not having evidence for fortification and the lack of a *ḫalzi* designation for Ankuwa fits nicely, but is contrasted by Tahirpa-Eskiypar’s presence of fortifications and lack of *ḫalzi* status. Though, perhaps Tahirpa was administratively considered not a territory while still having fortifications. Çadır Höyük did have fortifications during the LBA and so if it was indeed Kartapaha, it would have earned the *ḫalzi* designation in the fullest sense.

⁴⁷ One possible explanation for this lack of overlap is the dating of the texts that discuss AGRIG and *ḫalzi/telipuri*. The fact that two terms exist may indicate that the administrative organization changed over time, perhaps affected by Hurrian influences, thus giving rise to a preference for the term *ḫalzi*.

⁴⁸ It is important to note that Del Monte and Tischler (1978: 184) connect Kartapaha with Salampa (likely Salma – see below) and Katapa due to frequency of co-occurrence in texts. That Zippalanda is not likewise included potentially weakens the connection between Kartapaha and Çadır as Çadır’s is closer to Uşaklı Höyük/Zippalanda than to the region where Katapa is generally believed to have been located (around Tombultepe Höyük).

⁴⁹ Pasdu, and Kukuwa are the other two not designated with *ḫalzi*.

Another set of texts is useful in considering Kartapaha as a candidate. This collection (CTH 635) discusses the Old Hittite Great Festival at Zippalanda, to which Kartapaha contributed (Popko 1994: 102-103). This ensemble/composition links Kartapaha and Zippalanda together and indicates that Kartapaha was present in the Old Hittite period, which must be true if it is to be connected with Çadır Höyük since excavations at the site have produced remains from this period. The festival texts list locations that were involved in providing for the festival, with Kartapaha, Katapa, Salampa, and Ulusna mentioned together. Later, Ankuwa is mentioned as well. If one agrees with Forlanini⁵⁰ (2008: 158-159) that Salma and Salampa are variant spellings of the same location⁵¹, this links the Great Festival of Zippalanda with the HT 2, the list of female singers, in listing Kartapaha, Katapa, Salma, Ulusna, and Ankuwa together.

From this, Kryszewski (2016: 270) infers that these locations must have been close to one-another. I agree with him here; it is a reasonable assumption that Katapa, Zippalanda, Kartapaha, Katapa, Salma, Ulusna, and Ankuwa were all relatively close to one-another (perhaps within a one or two day's travel radius) and because of this, the identity of Çadır Höyük, situated between Zippalanda-Uşaklı and Ankuwa-Alişar could very well be one of the names in this list. Katapa can be dismissed for reasons discussed above; this leaves us with Kartapaha, Salma, and Ulusna as candidates for Çadır.

Little can be said of Salma (Salampa), and Ulusna. Salampa was the site of a battle between Anitta of Kanesh and Piusti of Hattusa. A location directly between Kanesh and Hattusa would place Salampa SE of Ankuwa (roughly between the modern day locations of Uzunlu and Çandır, Yozgat Province), but such a location is entirely conjectural. Forlanini (2008: 159, fn

⁵⁰ Who cites Cornelius (1958: 380) and von Schuler (1970: 46).

⁵¹ Both appear in texts that also include Kartapaha and Katapa (Del Monte and Tischler 1978: 332-333, 335), adding strength to Forlanini's otherwise linguistic argument.

104) argues that since Piusti was the aggressor, the location of Salampa cannot be near Hattusa, but is likely on the frontier of Kanesh. He suggests the area near modern Başköy, Yozgat.

Omura's (1991a) survey has found several EBA and MBA sites around this area, but no report of LBA. Forlanini places Ulusna near modern Yerköy, Yozgat, near to which are indeed several small sites identified as having LBA material by Omura's (2002) survey.

Given this information, we must say that we cannot identify a textually attested Hittite population center for Çadır Höyük with a confidence similar to other, larger sites. That said, I am inclined to agree with Forlanini in believing that the *halzi* Kartapaha is the best candidate for Çadır Höyük. Çadır fits well with where one might expect Kartapaha to be and is a sizeable, walled settlement that had the potential to control a large amount of territory (see 5.2.1 below and see Fig. 73). Other archaeological sites that may fit this description include Salır (also Salur – see Fig. 72) Höyük⁵², 18km east of Çadır, and Çıkırıkcı Höyük⁵³ (see Fig. 71), 31km south-east of Çadır. Of these three sites, Çadır is the closest to Uşaklı and most directly connected in terms of the Focal Mobility Network (FMN - see Fig. 75). Further examination of the landscape around Çadır will provide more context.

5.2 – Evidence from the Landscape

Of the six settlements (this excludes the Karakız quarry) shown in Fig. 73, three have been excavated, Çadır Höyük (currently), Uşaklı Höyük (currently), and Alişar Höyük (von der Osten 1937a, 1937b; von der Osten and Krogman 1937, Gorny 1994). Of these three excavated

⁵² Salır is argued to be Hittite by von der Osten and Krogman (1937a: 438) due to sherd finds, but Sir Gavaz (2017a: Fn 26) remarks that Geoffrey Summers told her it was a natural hill. This does not preclude it having evidence for a Hittite settlement. Furthermore, satellite imagery (see Fig. 72) of Salır Höyük makes it appear to be a fairly classic, if somewhat elongated, höyük, similar in morphology to other Hittite era mounds. This challenges Summers' assessment sufficiently enough for me to believe von der Osten is more likely to be correct.

⁵³ This site was identified as Phrygian by Osten and Krogman (1937a: 452, 454), but Gorny (personal communication) has said that it has Hittite remains as well.

settlements, only Uşaklı Höyük has revealed Hittite texts. Çadır is, in fact, one of the smaller settlements, roughly equal to Uşaklı Höyük at just over 2 ha in size. The measurement in hectares of these archaeological sites can be misleading. First, we do not always know with confidence how far the inhabited zones of a population center extended. Measurements such as the ones on Fig. 73 are only of the mound and any clearly visible extensions from the mound, as is the case with Uşaklı Höyük. In addition to this, the size of the mound itself is not the same as the size of the settlement that existed there at any given time⁵⁴. The measurement of the mound is at its base and the Hittite settlements are located some ways above this base, shrinking their diameter as the base narrows towards its top. Finally, without thorough excavation of at least the edges of the mound, which exists for none of these archaeological sites, we cannot know how much of the mound was covered in settlement at a given time.

⁵⁴ Weeden and Ullmann (2017: 7) wisely warn against equating mound size with settlement size for any given period.

Fig. 71⁵⁵



Figure 71 - Çıkrıkcı Höyük

Fig. 72⁵⁶



Figure 72 - Salır Höyük

⁵⁵ Source: “Salır Höyük.” 39°40'38.35"N and 35°21'10.20"E. Google Earth. October 20th, 2017. June 29th, 2018.

⁵⁶ Source: “Çıkrıkcı Höyük.” 39°32'10.28"N and 35°26'57.84"E. Google Earth. October 20th, 2017. June 29th, 2018.

Hittite Archaeological Locations in the Kanak Su Basin

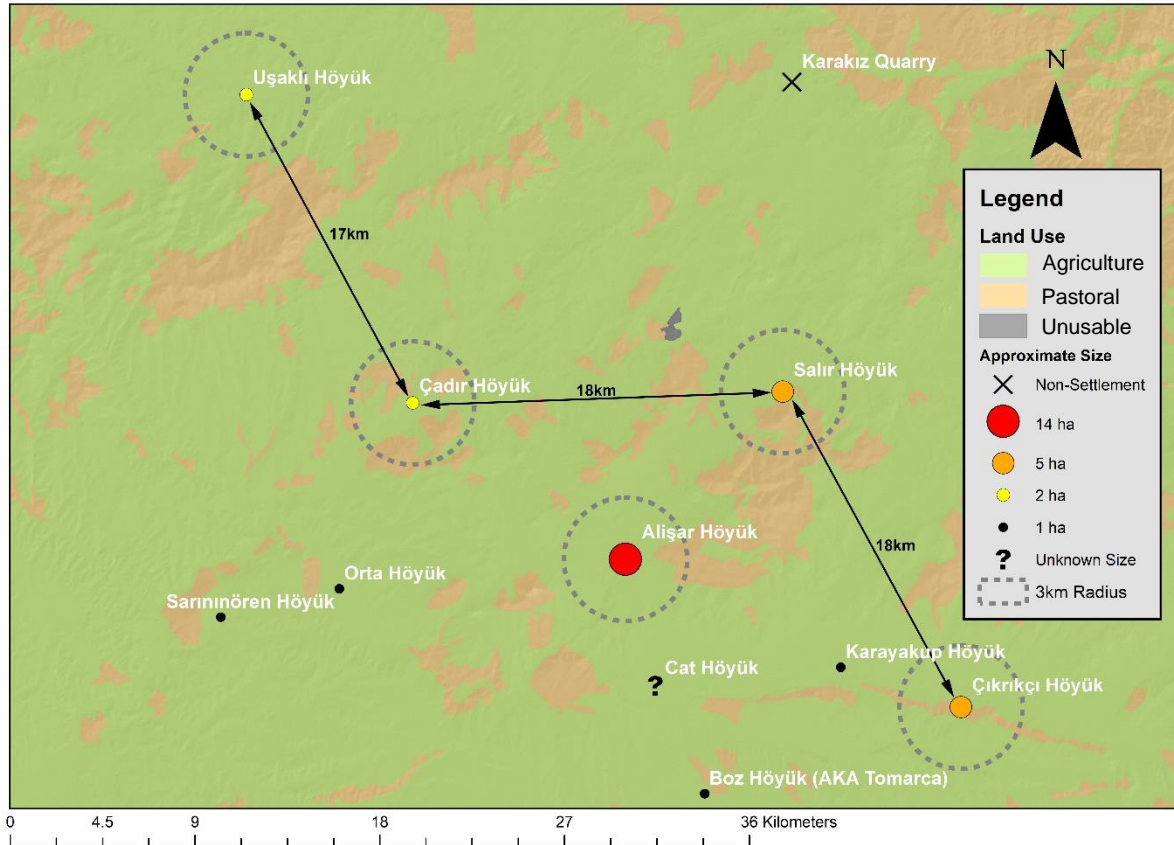


Figure 73 - Hittite archaeological locations in the Kanak Su Basin

With these challenges in mind, we must study these archaeological sites based on the material that has been recovered from them and be wary of judging their political or administrative importance based on size alone. As discussed above, Çadır Höyük had considerable defensive architecture (2m wide casemate walls) at least in the Old Hittite period. Uşaklı (see Fig. 74) also has evidence for walls, though these data have not yet been published in full⁵⁷. Also addressed above, Alişar did not have defensive architecture in the LBA, and yet was by far the largest settlement in the basin. Without excavation or more extensive survey, we

⁵⁷ Mazzoni (2015: 9) discusses what she believes to be evidence for defensive walls from her geomagnetic survey.

cannot yet know whether Salır, Çıkırıçı, or the smaller sites shown in Fig. 73⁵⁸ had defensive architecture. From satellite imagery, it appears very unlikely that Cat Höyük did, whereas I would argue that both Salır and Çıkırıçı were likely fortified. Salır because it has a well-defined citadel and Çıkırıçı because the mound would have already been fairly high during Hittite times and such a natural defense would reasonably have encouraged additional defenses, made more potent by the existing height upon which their foundations were built.

*Fig. 74 – Uşaklı Höyük*⁵⁹



Figure 74 - Uşaklı Höyük

⁵⁸ These sites, Cat Höyük, Karayakup Höyük, Orta Höyük, Sarminören Höyük, and Boz Höyük/Tomarca were identified as Hittite by Osten and Krogman (1937a: 438).

⁵⁹ Source: “Uşaklı Höyük.” 39°48'47.02"N and 35° 3'9.40"E. Google Earth. June 19, 2016. June 29th, 2018.

Fig. 73 also illustrates that the settlements were evenly spaced apart such that there would have been no overlap in agricultural spaces as defined by Wilkinson's (2003: 116-117) radii for dry farming (see Section 2.4.2.2), even if the larger 5km radius was used (less likely given the smaller size of the settlements compared to those of the Jazirah in Wilkinson's survey). This radius has not been applied to the smallest sites (1 ha), though note that none of the smaller sites fall within the radius of the larger sites (2 ha or greater). The 3km radius buffers shown in Fig. 73 also demonstrate the massive amount of agricultural space that would not have been used by residents of the urban centers mapped out. This land would have, presumably, been available for smaller farming communities such as the ones described in the *Landschenkungsurkunden* documents (see Section 2.4.2.3) or shown to have surrounded Hattusa by Czichon's intensive survey. Cat Höyük, Karayakup Höyük, Orta Höyük, Sarınınören Höyük, and Boz Höyük are likely communities of this nature, though they may be larger given that they have left an archaeological signature.

It is probable that the towns of Hipuriya, Haliputta, Tanistaha, and Mita mentioned in the *aškuwammaš* Festival text (discussed in 5.1.2) inhabited these seemingly empty, agriculturally viable spaces (or similarly empty spaces somewhat to the north of the Kanak Su basin) and could potentially be associated with 1 ha sized sites like the ones in Fig. 73. Additional small communities almost certainly existed, dedicated to farming and not to building walls and temples, which meant that their presence was far more ephemeral than that of larger population centers and thus far more difficult to identify archaeologically.

Salma and Ulusna are viable candidates for Salır Höyük and Çıkırıçı Höyük, but this connection is too speculative to make with any confidence. In fact, the lack of deeper textual ties between Ankuwa and Salma and Ulusna makes this less likely given the proximity of Salır

Höyük and Çıkırıçı Höyük to Alishar Höyük. Furthermore, this would restrict the size of a *halzi* district to less than 9km in radius. It is interesting to note, however, that the distances between Uşaklı-Çadır-Salır-Çıkırıçı are all approximately 18km (see Fig. 73). If Çadır, Salır, and Çıkırıçı were Kartapaha, Ulusna, and Salma (all *halzi* locations), the domain of a *halzi* would be fascinatingly consistent in this part of the Hittite heartland⁶⁰.

We can consider this landscape another way in an attempt to determine how these settlements may have interacted with one-another. Fig. 75 shows a focal mobility network (FMN). An FMN is a means of analyzing terrain developed by Llobera et al. 2011. This network is a way of analyzing how least cost paths are networked via hydrologic modelling. Another way to think of this is to imagine Çadır as a deep hole in the landscape. If we were to pour water over the landscape and watch it get sucked into the hole, what paths would the water take? Also, what paths would receive the greatest amount of channeled water? As one can see from Fig. 75, the closer one gets to Çadır, the focal point, the greater the amount of water the paths receive. This is because the more central paths accumulate water fed to them from the more peripheral paths.

This hydrologic modelling is an attempt to mimic the movement of people across a landscape. Naturally, people are not water. They make choices that are based on more than the landscape in front of them. They use some paths because they are traditional and they use other paths because they want to access something, a village, a shadier walkway, or a fruit grove, that is now unknown to us. However, as FMN pathways are determined through geologic processes and thus change at an incredibly slow geologic pace, they would have existed as they are now for the many thousands of years in which various cultures were present in Central Anatolia.

⁶⁰ Of course, Çadır was settled long before the 2nd Millennium and this is almost certainly true of Salır and Çıkırıçı as well. This means that the spacing of these settlements, if it has any significance, was determined thousands of years before the Hittites were the dominant political power in the area.

Throughout these millennia, these cultures lived in this landscape and adapted themselves to it. A part of this adaptation was an interest in being near water and being near pathways leading to other population centers, two priorities that were closely tied to ease of movement across the landscape.

Focal Mobility Network of Hittite Sites in the Kanak Su Basin Centered on Çadır Höyük

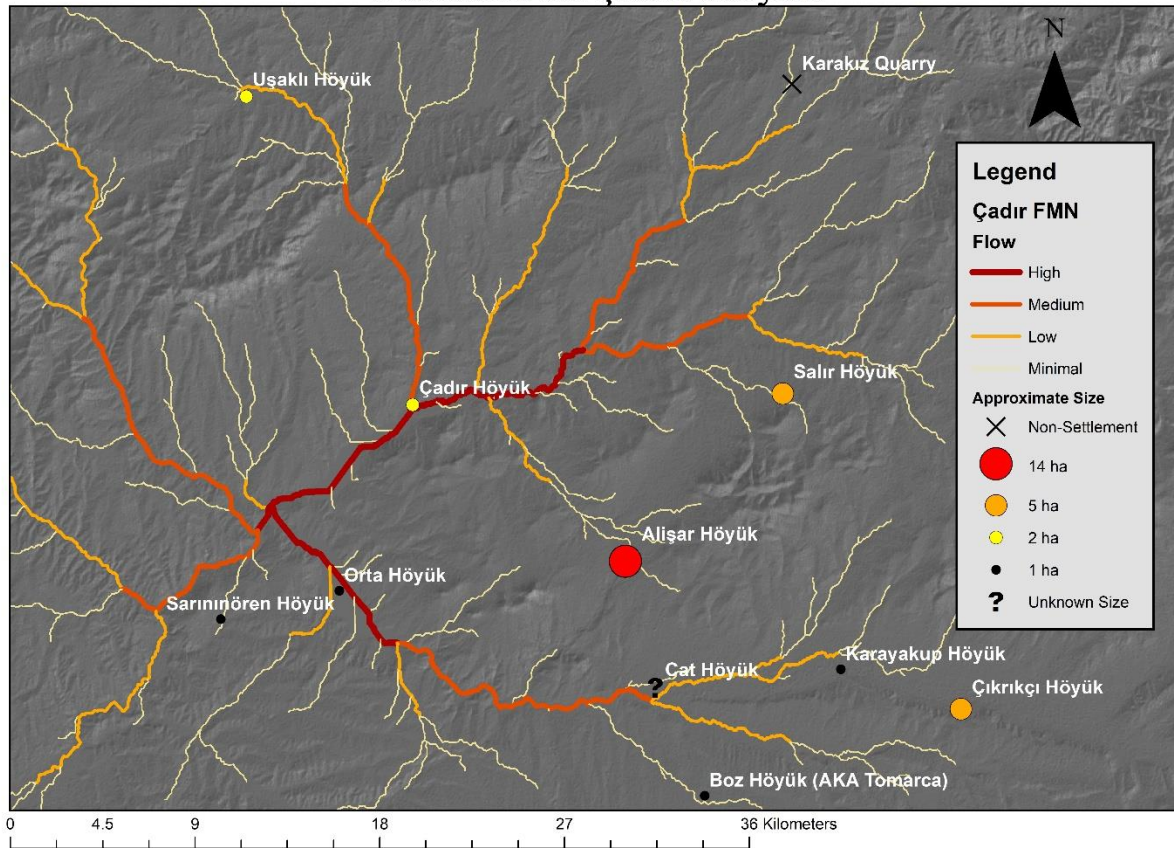


Figure 75 - A focal mobility network centered on Çadır Höyük and the approximate size of surrounding settlements in hectares

Fig. 75 presents an FMN with Çadır Höyük as the focal point. This map allows us to understand which pathways were the easiest to traverse as one walked towards Çadır from any point on the map and they show us what pathways would have been most commonly used as one gets closer to the target. Immediately we can see that Çadır was accessed by three pathways, two high flow pathways (red), one that extends out from Çadır to the east and one that extends out to

the SW, and a single medium flow pathways that extends north to Uşaklı Höyük. Each of these then split off into numerous smaller branches. A fourth pathway of note is the one that branches off the high flow pathway leading east. This one is a low flow pathway that ultimately leads to Alişar Höyük. It is also worth noting that Çadır is connected to all of the sites under study except for Çıkırıçı Höyük, which, while certainly accessible by the inhabitants of Çadır, would have been a hilly trip, not one naturally encouraged by the landscape.

Çadır is closest to Orta Höyük, at 14.3km along the pathway and with the SW paths being the dominant way for any location west and south of Çadır, with the exception of Alişar Höyük. Alişar is the second closest site at 16km along the path, but its position in the FMN indicates that it was in somewhat isolated territory. Other locations, such as Cat Höyük and Karayakup Höyük skirt around Alişar to access Çadır, even though this entails a great distance to travel. Kryszeń's (2016: 303ff) textual study of Ankuwa's local cluster of population centers correlates with this. His study only presents four locations, three of which are only mentioned in texts 1-2 times. The fourth location, Wastissa, is mentioned in texts more often, but Kryszeń (2016: 306-307) argues that there were two or three Wastissas in Hittite lands. The ultimate result of this study is to show that Ankuwa had few named locations close to it⁶¹ and those that were named were of low significance. Of course, this should be considered with the fact that Ankuwa was once an OATC stop with a *wabartum*. This was when connections with Kanesh in the SE were of high importance. Kanesh's abandonment prior to Old Hittite times (Kulakoğlu 2014: 87) may have made the SE route connecting Ankuwa to Kanesh much less traveled and thus relegated Ankuwa to a kind of end-point status as opposed to mid-point.

⁶¹ Or that Hittite scribes simply did not discuss those locations that were close to Ankuwa. This possibility seems far less likely, especially as Ankuwa is one of the best attested Hittite urban centers (Kryszeń 2016: 289).

Çadır's next closest point is Uşaklı Höyük at 18km along the pathway, though this connection between the two locations took greater advantage of natural features of the landscape. While Alişar was closer, Uşaklı was likely more accessible, which makes Uşaklı the best connected urban center to Çadır. It is also worth noting that Çadır is not directly on the path between Uşaklı and Alişar, indicating that Çadır would have been a detour on a trip from Uşaklı to Alişar as was likely done for the AN.TAḪ.ŠUM Festival. Çadır's close connection to Uşaklı/Zippalanda and the lack of any mention of Kartapaha in the AN.TAḪ.ŠUM Festival (because it would have been out of the way) both support the association of Çadır with Kartapaha.

In spite of this evidence, it is problematic that Kartapaha has such a strong textual connection to Katapa and such a weak connection to Ankuwa. The connection to Zippalanda is strong and supports the association well, but its relationships with Katapa and Ankuwa, respectively, may serve to 'pull' the location of Kartapaha north, closer to where Katapa is likely to be. A location north of Uşaklı Höyük would, in fact, fit the textual data better than Çadır Höyük's location. Yassihöyük, argued by Gavaz (2012: 37) to be ḪURanassa and by Forlanini (2008: 155) to be Tahurpa, presents itself as a possible candidate with this in mind.

5.3 – Conclusion

The results of these textual, archaeological, and landscape studies indicate that while Kartapaha is not an ideal candidate for the ancient name of Çadır Höyük, it is the best one that has been proposed. No other textually attested location presents itself as a superior option at the moment. With this in mind, we can consider Çadır Höyük as the center of a *ḫalzi*. Its nearest neighbor to the south, Ankuwa, was most likely not within its administrative domain, as Ankuwa had its own AGRIG and was listed separately in HT 2. Perhaps, Ankuwa was the center of a

telipuri that overlapped with Kartapaha's *ḫalzi*. Zippalanda was likely not within Çadır's domain either, though it may have been. It was, in fact, more likely that Zippalanda answered to Çadır/Kartapaha than the other way around. Zippalanda's cultic importance was of the highest significance, but Hittite texts never discuss Zippalanda as an administrative center (Kryszeń 2016: 260). This is in contrast to Arinna, an equally important cultic center, which is also designated as a *ḫalzi* with a three-tiered settlement hierarchy (KUB 26.43 obv. 32-34 – discussed in Rutherford [2004: Fn. 27] and see Section 2.4.2.2 as well as Fig. 6). We must view Zippalanda, then, as primarily a cultic center with few additional responsibilities. This may be in keeping with its smaller size; Alaca Höyük/Arinna, in contrast, measures to 6ha (three times larger).

As the *ḫalzi* Kartapaha, Çadır would have been the administrative center for at least the 12 towns mentioned in HT 2. While the number of women sent does not necessarily correlate to *ḫalzi* or settlement size, it is worth examining HT 2 closer to see the contributions each location made.

<u>Name</u>	<u>Women Sent by Central Location</u>	<u>Number of Contributing Towns</u>
<i>ḫalzi</i> Katapa	5	20
<i>ḫalzi</i> Salma	2	18
<i>ḫalzi</i> Kartapaha	2	12
<i>ḫalzi</i> Parsanahila	8	11?
Tahurpa	15	1?
<i>ḫalzi</i> Ulusna	2	17?
Ankuwa	?	?
Pasdu	?	?
Kukuwa	?	10

Figure 76 - List of *ḫalzi* locations

HT 2 tells us that Kartapaha, Salma, and Ulusna each contributed two women and were responsible for collecting women from 12-18 towns under their control. Two is the smallest contribution by a central location and this may, perhaps, indicate that these districts were small

themselves. This too may support the association of these locations with Çadır, Salır, and Çıkırıkcı.

If this is true, then Çadır/Kartapaha represents a small *halzi* (but not *telipuri*) operating south of Hattusa, between two major cultic centers and beside other similarly sized *halzi* districts. As Fig. 73 illustrates, there was ample space for Çadır/Kartapaha's 12 villages to have existed outside of the space that Çadır or any of its larger urban neighbors would have commanded directly.

Understanding Çadır in this way enables us to perceive, on the ground, a low-level Hittite administrative entity. With this perspective in mind, we can return to the ceramic evidence presented in Chapter 4 and consider the presence of a non-Hittite ceramic tradition similar to the preceding Alisar III ceramic tradition. This tradition, which is non-existent at Hattusa and less frequent at other, large Hittite sites, indicates that Çadır had a closer connection to outlying rural communities that, this dissertation argues, were producing these vessels. This, then, supports the administrative organization posed by Siegelová (see Section 2.4.3) and enables us to consider the relationship between Hittite urban and rural communities in light of evidence from the farmers themselves. Lacking the excavation of a rural community, this is the most direct approach we have at the moment.

Section 2.4.3 discusses how the gradual movement away from a city-state like management of the agricultural landscape to a more centralized organization is visible in the archaeology of the Kanak Su Basin. While the texts that describe this system have been known to us for a long time, an actual representation of it has eluded archaeologists and Hittitologists alike. I argue here that Çadır provides an example of what a *halzi* looked like, how it was situated in the landscape relative to other *halzi* designated population centers as well as important

ritual centers. Further, the evidence from Çadır demonstrates that the smaller, rural communities that answered to a *halzi* maintained a close connection with it, bringing locally made ceramic vessels, likely for the religious festivals hosted there.

6.0 – Conclusion

This dissertation proposes that the arrival of the Hittites as the politically dominant entity in Central Anatolia established NCA pottery as the main ceramic tradition in urban centers as well as in several other settlement centers. The previously dominant tradition, Alişar III ware, continued to be produced after the arrival of the Hittites, but production centers were relegated to the countryside. This resulted in greatly reduced Alişar III ware production making it particularly difficult to find archaeologically, especially as rural Hittite settlements are generally unexplored.

Chapter 2 presented a history of our knowledge of painted ceramic traditions in Central Anatolia and demonstrated that several existed. Even within the recognized traditions, such as those published in von der Osten's volumes, there is considerable variety with regards to paint color and decorative motifs. There is less variability in vessel form, with inward turning bowls of a similar style lasting from the EBA to the Iron Age. The emphasis, then, on the variety within color and motif of these vessels is significant. Whether these variables represented different forms of identity production, as I consider in Chapter 4, or are simply representative of a broad spectrum of decorative traditions is unclear. What is clear is that the variables continue into Hittite times as demonstrated by the considerable variety in color and motif discovered in nearly all Hittite contexts excavated in Step Trench 2 and 7.

This abundance of painted pottery indicates that these vessels were contemporaneous with the Hittite vessels they lay next to. Most scholars argue that such finds represent intrusive elements from earlier strata, perhaps introduced to via ancient digging or erosion. This dissertation has shifted the burden of proof so that now the argument for intrusivity requires much more explanation than that of contemporaneity, at least at Çadır Höyük.

That Çadır Höyük would present this evidence is not surprising. As discussed in Chapters 2 and 3, Hittite agricultural administration relied on numerous small farming communities that answered to larger settlements, such as a *ḫalzi*. Textual and archaeological evidence makes clear that the small farming communities were scattered throughout the countryside and were part of a settlement hierarchy that in some cases can be mapped on the ground. Çadır's role in this was presented in Chapter 5 where I gave an argument that Çadır should be viewed as a *ḫalzi*, but not just any *ḫalzi*; one that was situated near to major *Reisefeste* routes and cultic centers in Zippalanda and Ankuwa. Thus, Çadır was far from a back-woods settlement; it was located in the heart of Hittite ritual travel and festival celebration. The farming communities that answered to Çadır would have been close enough to those festival events held at Zippalanda and Ankuwa to have attended them as well as the ones at Çadır, such as the *aškuwammaš* festival, possibly.

When people of these farming communities came to the festival, it is reasonable to think that they brought their own bowls in order to attend the feast. I have shown evidence for numerous painted ceramic bowls at Çadır. Almost all the storage and cooking vessels found in these contexts can be identified as NCA ware, indicating that the people who introduced the painted ceramic bowls were not also bringing along other types of pottery. This makes sense if the vessels were brought from the outside to participate in feasting as opposed to being produced on site.

This scenario challenges Schoop's (2011: 266-267) assertion (referenced at the beginning of this dissertation):

As for an 'archaic' Hittite rural population, we should at least expect some import of their pottery products at the large centres where they would have shown up in the excavations long ago. Not a trace of such objects has come to light so far, however, be it at Boğazköy-Ḫattuša or at any other excavated places.

Despite Schoop's observation, the scenario I propose does in fact provide the best explanation for the presence of painted wares in Hittite contexts at Çadır Höyük. I will not argue with Schoop about the lack of painted ceramics at other Hittite sites. Hattusa in particular sees this tradition disappear fairly thoroughly after the Old Assyrian Period and it has been argued that the tradition was never local in the first place. The few examples where a painted tradition does appear in Hittite contexts, stated earlier in this dissertation (see Chapter 1 Fn. 1), are dismissed as intrusive and not contemporary. My experience as an archaeologist in the field has likewise exposed me to excavators who stand by this assumption when they find painted ceramics in Hittite contexts.

And yet, I have shown that at Çadır Höyük, the intrusive argument does not hold. The level of intrusivity needed to seed nearly all archaeological contexts with painted ceramics is too high for this to be the preferred explanation. Furthermore, the diversity of production types likewise presents a severe challenge to the belief that these ceramics were dug up, inadvertently by the Hittites or perhaps later by erosion, from earlier strata and deposited into Hittite strata. To argue that these ceramics were contemporary with the Hittite strata is a far simpler explanation. To further argue that the diversity of production methods is the result of multiple production sites, scattered throughout the countryside at among rural communities, is likewise a more elegant solution.

This does not address the possibility that the ceramics were contemporary *and* produced at Çadır. This scenario, of course, explains how the painted ceramics arrived at Çadır, but it does not address the number of different production techniques visible in the finished vessels. The numerous paste types cannot be the result of batches made by single firings done with little consistency in control of atmospheric conditions because they

appear across phases (see Fig. 61). The consistency within paste types implies a degree of control over firing conditions that was passed down generation after generation. This could have occurred at Çadır, but this would imply multiple kilns being used by groups with distinctive firing techniques. Or it could be that these groups with distinctive techniques shared a small number of kilns. Both of these scenarios are possible, but they imply multiple community identities co-existing and expressing their identities within a very small space.

It seems to me that so many distinct communities would not have existed within this same space and maintained their distinctiveness for the length of time covered in Phases B and C. More likely, these communities lived much farther apart from one-another, in separated rural communities that were connected to Çadır.

How then does this tie into D'Altroy and Earle's economic models of staple and wealth finance? I follow Frangipane and Burgin's argument that a wealth finance model is the best descriptor for the Hittite state. That said, this argument has always been made at a macro level, examining the Hittite state as a whole. When we examine Çadır Höyük, we begin to see elements of a more staple finance-oriented economy. As I discuss in Section 2.5, Çadır represents the process the Hittite state undertook to tie rural communities to urban centers. This is a wealth finance strategy and reflects D'Altroy and Earle's (1985: 188) observation that these economies tend to rely on strong regional powers that can mobilize resources independently. The Hittite festival was a strategy employed to tie these rural communities. That these festivals had major political benefits for the Hittite state has been discussed in detail (Haas 1994: 680; Hutter 1997: 78; Gilan 2004: 197-199; Görke 2008: 68; Cannon Forthcoming). There is little, thus far, that we

have been able to say about the Hittite festival from a local level. This dissertation demonstrates that at Çadır Höyük, we can see evidence of the administrative process of aligning rural communities with urban communities and thereby fulfilling the needs of a staple finance oriented economy.

APPENDIX – 1 – Hittite Ceramic Profiles

Inverted Rim Bowls 1

#	FCN	ST	Phase
1	15314-5	2	B
2	17314-1	7	C
3	12004-9	7	C
4	15948-2	2	B2
5	15938-1	7	C
6	17480-19	7	B1-2
7	15948-9	2	B2
8	17488-2	7	B1-2
9	17470-3	7	C
10	15302-3	7	C

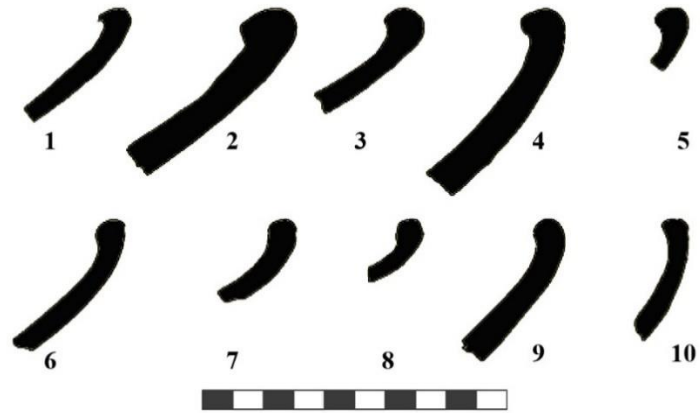


Figure 77 - Inverted Rim Bowls 1

Inverted Rim Bowls 2







#	FCN	ST	Phase	
1	18575-4	7	B1-2	
2	17480-2	7	B1-2	
3	17466-12	7	B1-2	
4	16925-9	7	C	
5	16928-1	2	C	
6	17466-18	7	B1-2	
7	17498-10	7	B1-2	
8	16387-3	2	C	
9	17480-37	7	B1-2	
10	18575-17	7	B1-2	
11	13498-10	2	B	
12	15306-5	7	C	
13	15317-19	2	B	
14	18575-7	7	B1-2	
15	17908-8	7	B1-2	
16	16915-7	7	C	
17	18566-12	7	?	
18	18916-4	7	B1-2	
19	18592-6	7	?	
20	17490-10	7	B1-2	
21	14959-7	7	B1-2	
22	18575-14	7	B1-2	
23	18556-8	7	?	
24	14959-14	7	B1-2	
25	18938-10	7	?	
26	18938-14	7	?	
27	15334-7	7	C	
28	15911-11	7	C	
29	15940-2	2	C	
30	17468-5	7	C	
31	17468-6	7	C	

Figure 78 - Inverted Rim Bowls 2

Inverted Rim Bowls 3

1	15900-2	7	B2
2	16915-10	7	C
3	18903-7	7	?
4	18920-6	7	?
5	17480-7	7	B1-2
6	15345-8	7	C
7	17470-35	7	C
8	17918-18	7	B1-2
9	17493-1	7	B1-2
10	15764-7	7	C
11	12004-7	7	C
12	18901-7	7	?

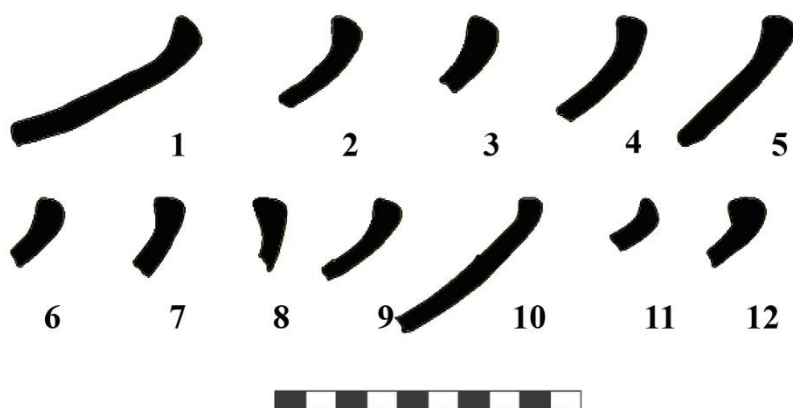


Figure 79 - Inverted Rim Bowls 3

Everted Rim Bowls 1

#	FCN	ST	Phase
1	18938-11	7	?
2	18909-7	7	B1-2
3	18914-11	7	?
4	17910-1	7	B1-2
5	14450-1	7	B2
6	16935-2	2	C
7	13498-8	2	B



Figure 80 - Everted Rim Bowls 1

Everted Rim Pots 1

#	FCN	ST	Phase
1	17490-2	7	B1-2
2	18909-1	7	B1-2
3	18575-1	7	B1-2
4	17498-3	7	B1-2
5	18909-2	7	B1-2
6	18566-1	7	?
7	18566-17	7	?

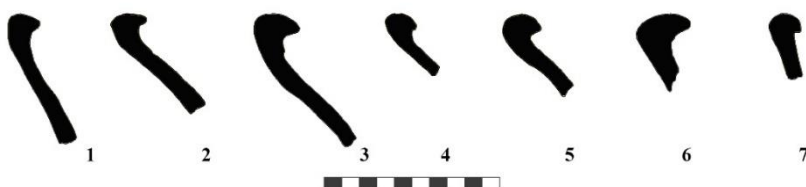


Figure 81 - Everted Rim Pots 1

Everted Rim Pots 2

#	FCN	ST	Phase
1	6251-1	7	C
2	15948-5	2	C
3	13871-4	2	B
4	18938-6	7	?
5	17470-33	7	C
6	17482-3	7	B1-2
7	13887-6	2	B
8	16946-2	7	C
9	18903-1	7	?
10	17466-17	7	B1-2
11	17480-9	7	B1-2
12	18556-10	7	?
13	17475-12	7	C

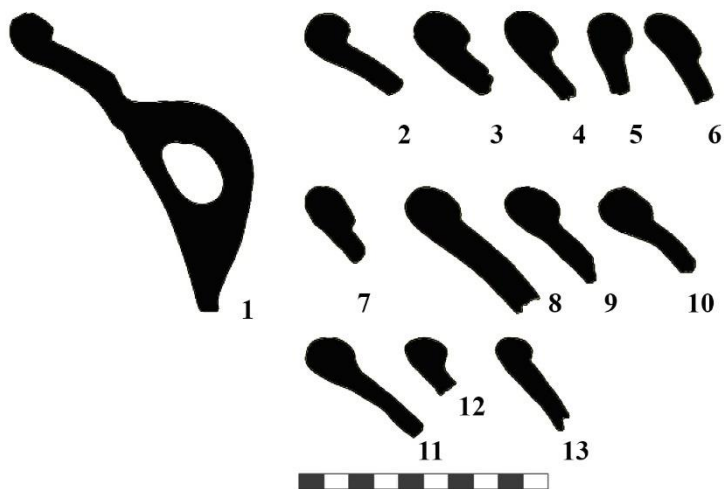


Figure 82 - Everted Rim Pots 2

Everted Rim Pots 3

#	FCN	ST	Phase
1	12004-8	7	C
2	15948-6	2	C
3	14985-2	7	B2-3
4	15948-7	2	C
5	16915-5	7	C

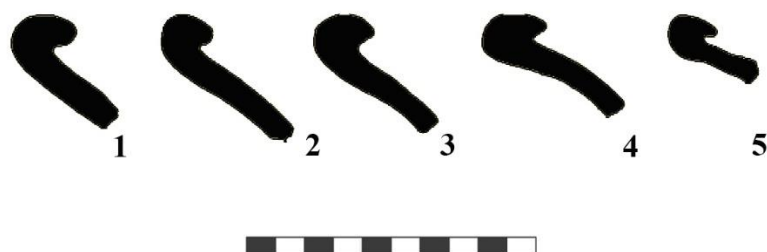


Figure 83 - Everted Rim Pots 3

Everted Rim Pots 4

#	FCN	ST	Phase
1	18903-6	7	?
2	18551-13	7	?
3	16364-4	2	C
4	18589-1	7	?
5	14996-2	7	C
6	18914-1	7	?
7	14450-5	7	B2
8	18571-2	7	B1-2

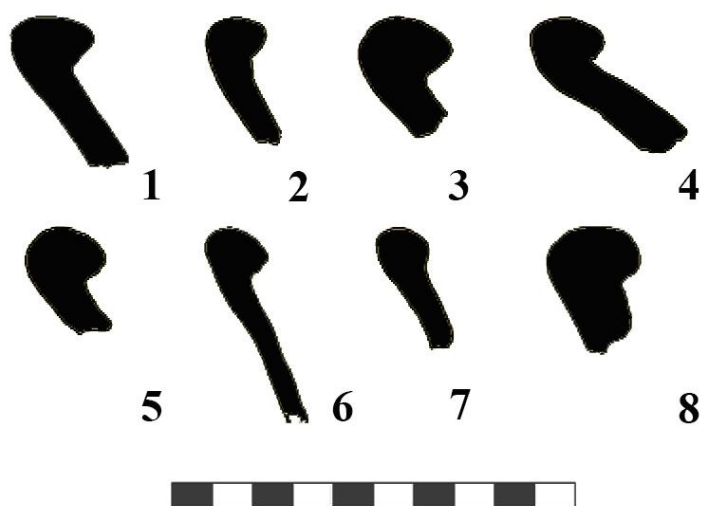


Figure 84 - Everted Rim Pots 4

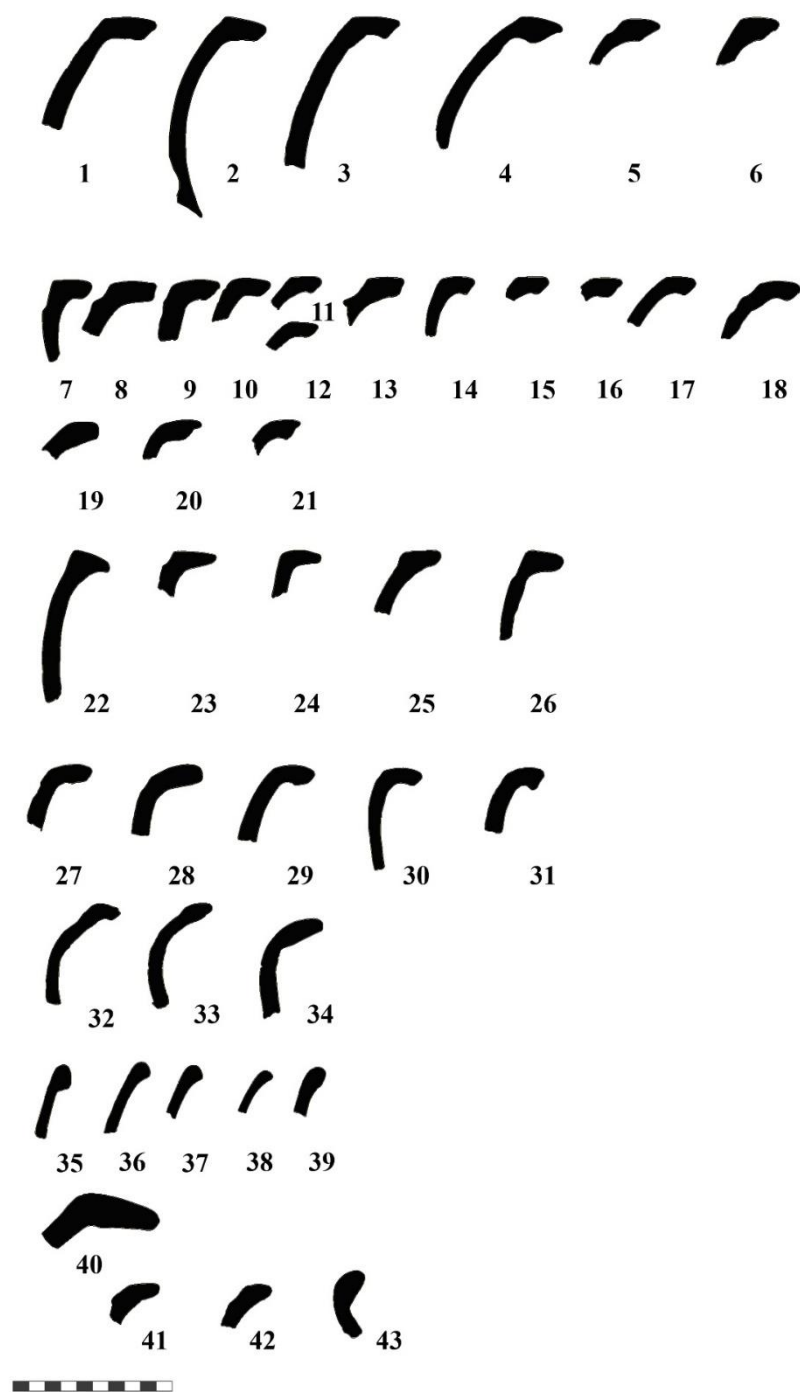


Figure 85 - Everted Rim Pots 5

Evert Rim Pots 5

1	10575-1	7	C
2	15754-2	7	C
3	15754-1	7	C
4	15754-3	7	C
5	16364-3	2	C
6	15940-1	2	C
7	13498-6	2	B
8	18556-1	7	?
9	17470-8	7	C
10	13887-3	2	B
11	13498-9	2	B
12	18556-12	7	?
13	17498-5	7	B1-2
14	18566-6	7	?
15	13871-2	2	B
16	17938-4	7	?
17	15310-2	2	B
18	15926-1	7	C
19	18901-6	7	?
20	16948-3	2	B
21	18909-5	7	B1
22	15348-1	7	C
23	18938-1	7	?
24	15348-8	7	C
25	15348-5	7	C
26	17908-1	7	B1-2
27	17466-9	7	B1-2
28	13871-1	2	B
29	15334-1	7	C
30	16932-2	2	B
31	17490-4	7	B1-2
32	16915-1	7	C
33	15906-1	7	C
34	17470-4	7	C
35	18935-3	7	?
36	17918-9	7	B1-2
37	17918-11	7	B1-2
38	14992-5	7	C
39	15317-13	2	B
40	17475-6	7	C
41	18589-3	7	?
42	18553-2	7	C
43	15317-12	2	B

Plates

15310-3	2	B
15317-4	2	B
16900-1	2	C
17908-5	7	B1

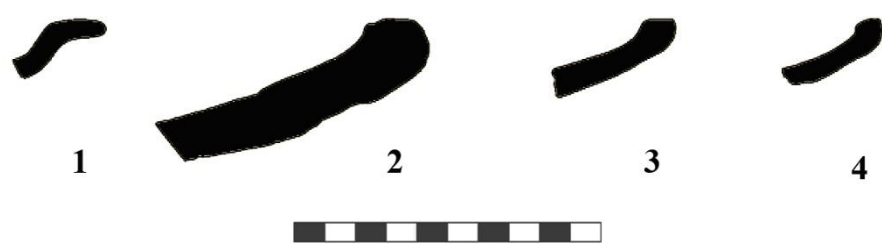
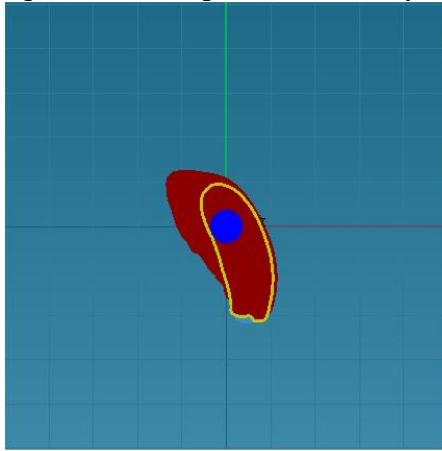


Figure 86 - Plates

APPENDIX – 2 – Painted Bowls

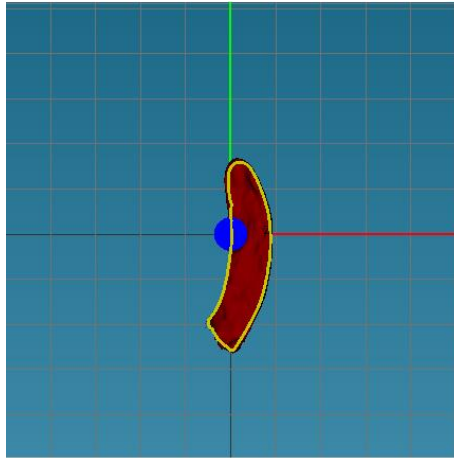
The images below represent some of the clearer, larger painted bowls and their profiles. Grid squares behind profile is 1cm by 1 cm.



13498-5 ST-2 L18

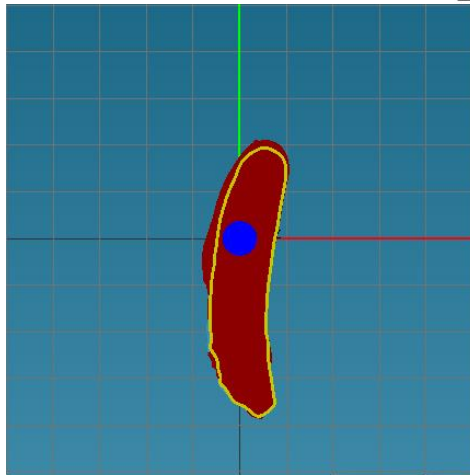
Burnished and slipped
ext
Burnished int

Figure 87 - 13498-5



13871-6 ST-2 L16

Burnished and slipped
ext & int

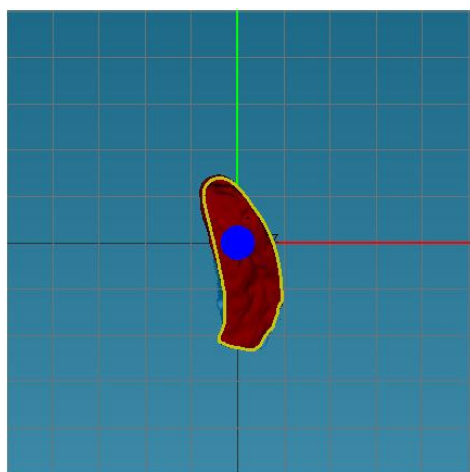


13887-1 ST-2 L20

Burnished and
slipped ext



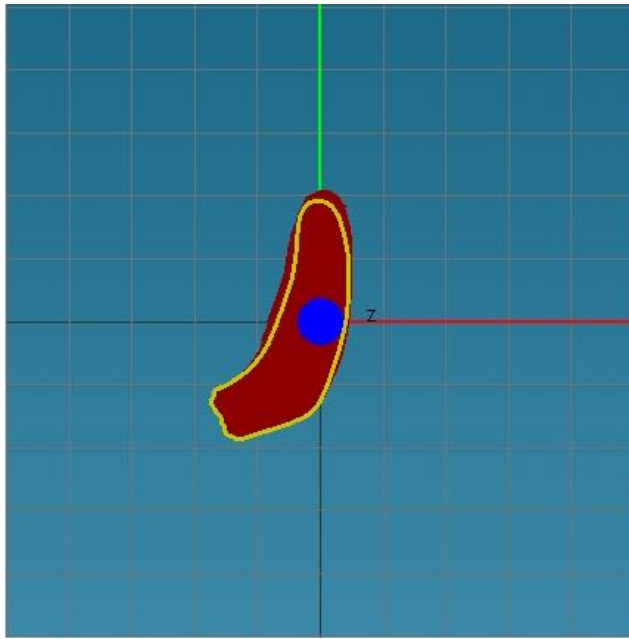
Figure 88 - 13871-6 and 13887-1



13887-2 ST-2 L20
Burnished ext & int



Figure 89 - 13887-2

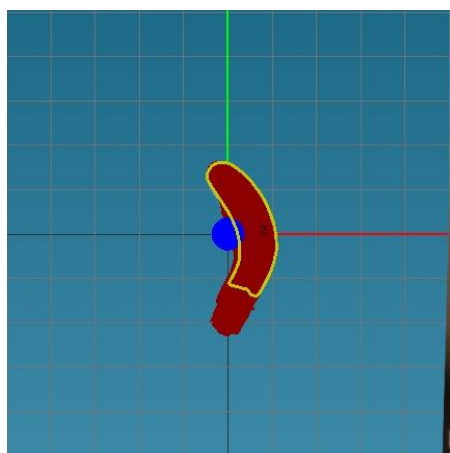


15304-1 ST-7 L88

Burnished ext & int
chaff



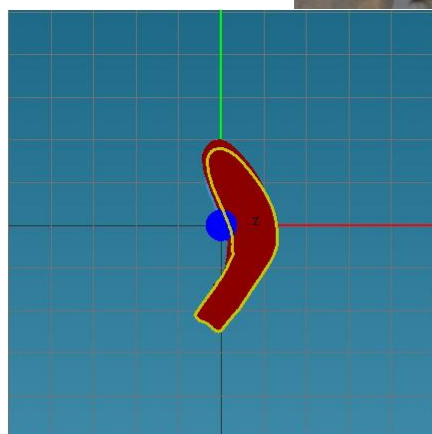
Figure 90 - 15304-1



15317-18
ST-2 L29



Slipped ext & int

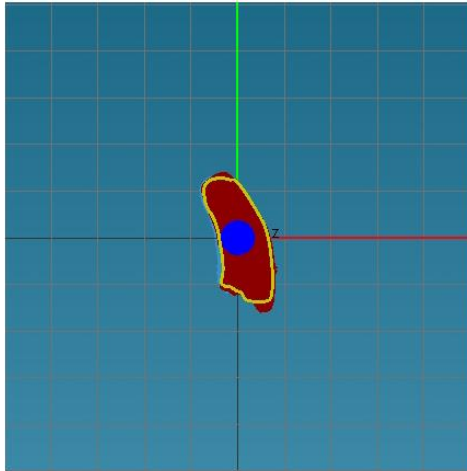


15334-10 ST-7 L86

Burnished ext & int



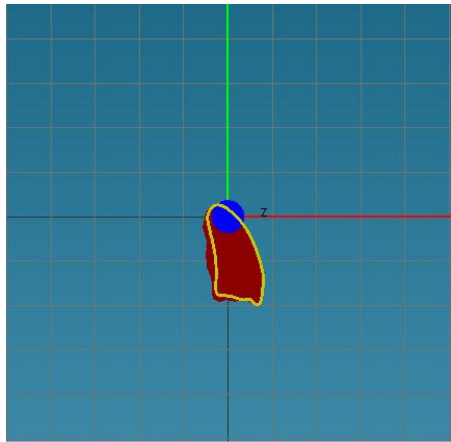
Figure 91 - 15317-18 and 15334-10



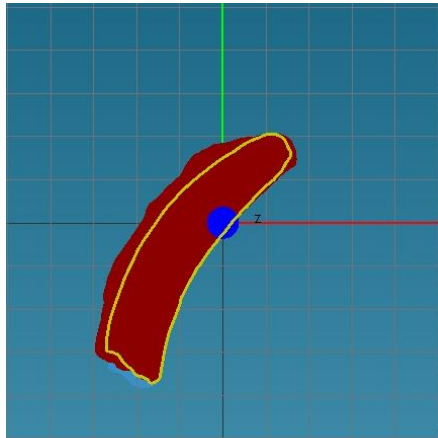
15334-11 ST-7 L86
Burnished ext & int



Figure 92 - 15334-11



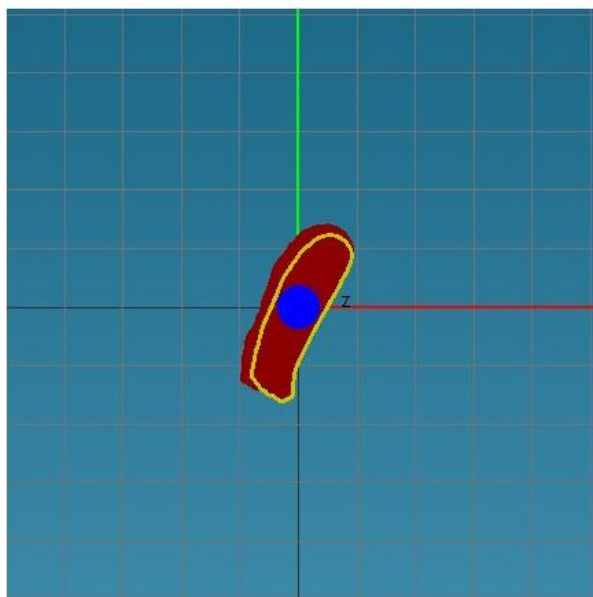
15348-11 ST-7 L93
Burnished ext & int



15764-4 ST-7 L86
Slipped ext & int



Figure 93 - 15348-11 and 15764-4



Handmade
Burnished int & ext
Sand and chaff
15764-9 ST7 L86



Figure 94 - 15764-9

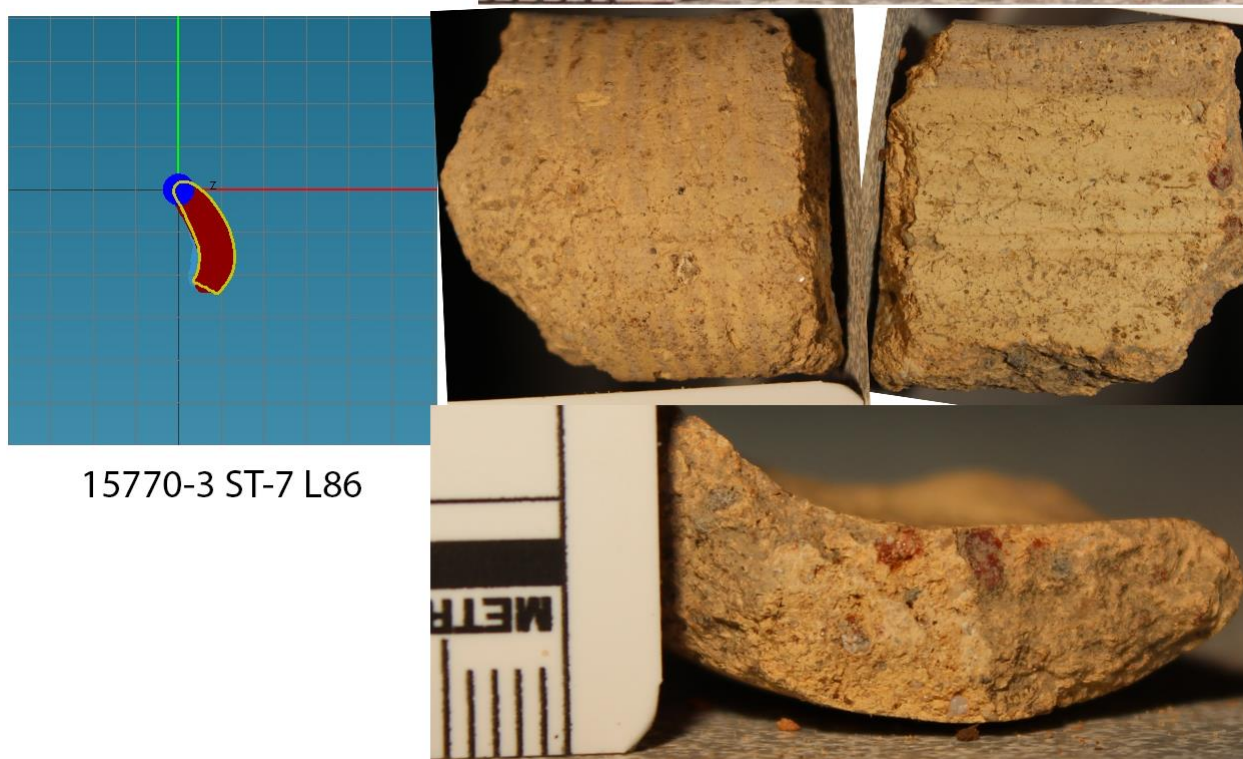
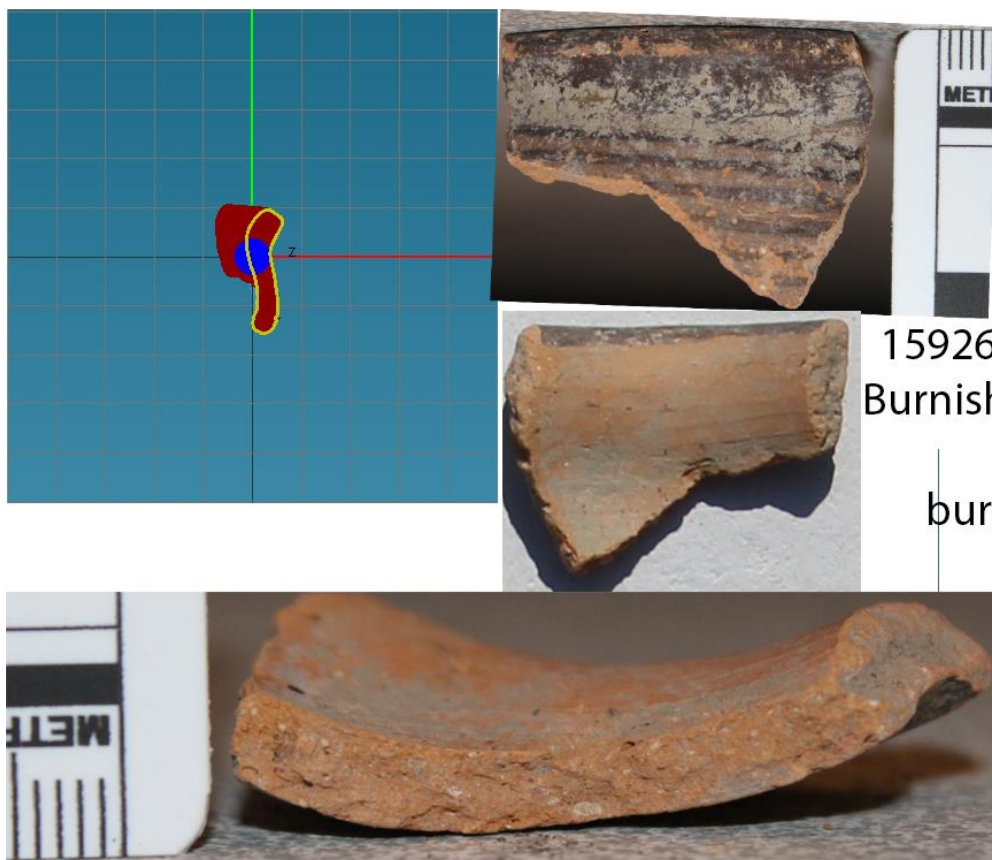


Figure 95 - 15764-11 and 15770-3



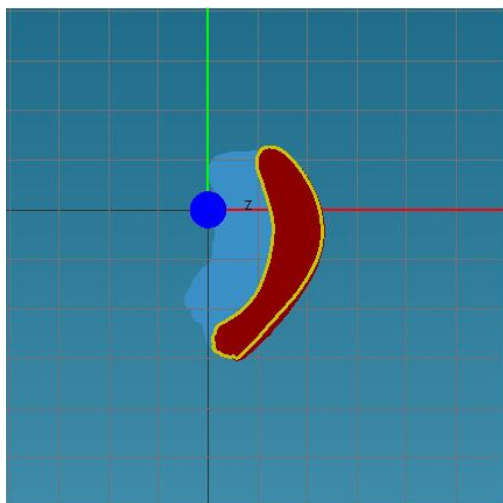
15936-3 ST-7 L95
Burnished and slipped
ext & int
chaff

Figure 96 - 15936-3



15926-11 ST-7 L95
Burnished & slipped
ext
burnished int

Figure 97 - 15926-11



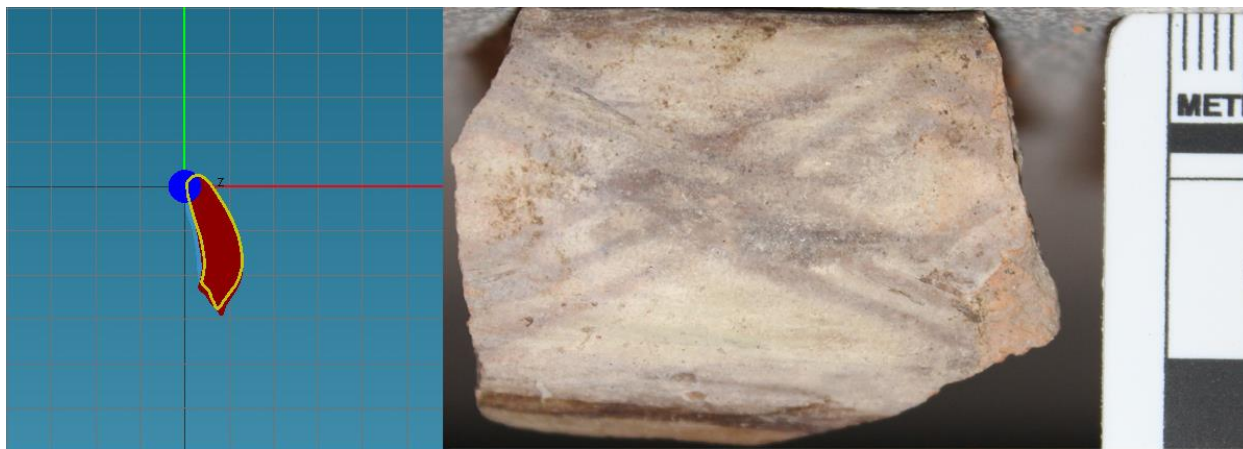
15932-2 ST-7 L95
Burnished & slipped ext
Burnished int



Figure 98 - 15932-2



Figure 99 - 15940-6



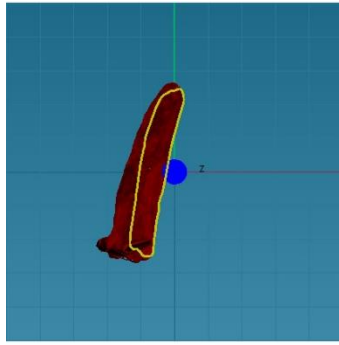
16375-4 ST-2 L42
Burnished & slipped
ext & int



Figure 100 - 16375-4



Figure 101 - 16377-2

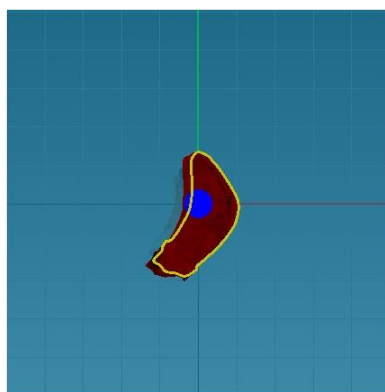


Slipped int & ext

16396-2 ST7 L89



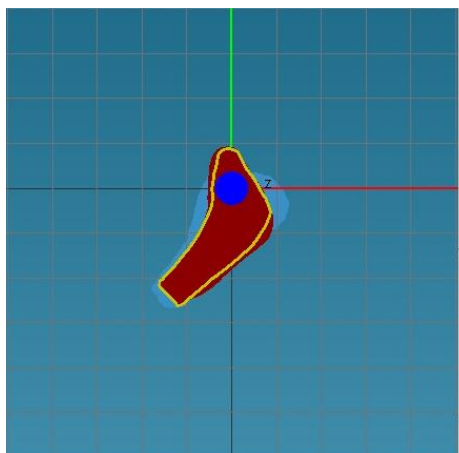
Figure 102 - 16396-2



Chaff
Burnished & slipped
int & ext
16396-10 ST7 L89



Figure 103 - 16396-10



16904-1 ST-7 L89
Burnished ext & int



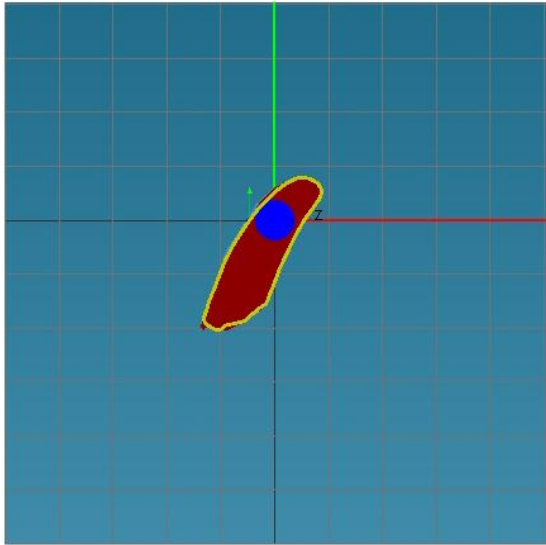
Figure 104 - 16904-1



16915-11 ST-7 L86
Slipped ext & int
chaff



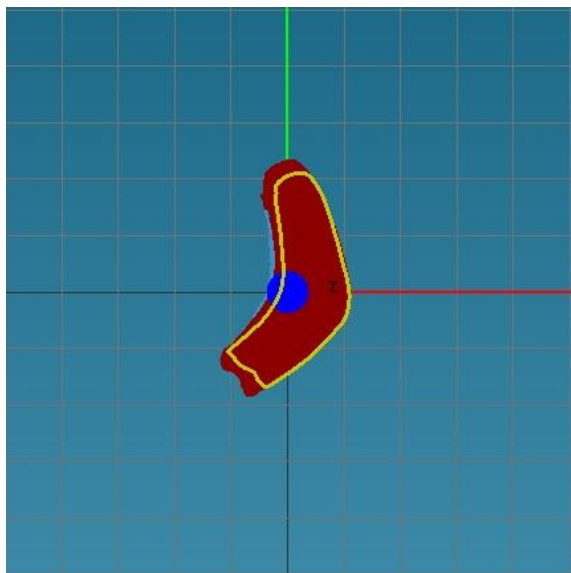
Figure 105 - 16915-11



16935-3 ST-2 L49
Slipped ext & int



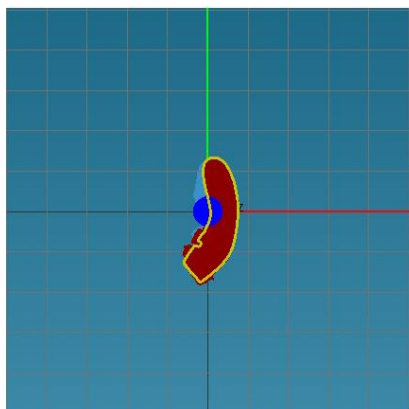
Figure 106 - 16935-3



16941-3 ST-7 L86
Burnished ext



Figure 107 - 16941-3



Burnished int & ext

16946-1 ST-7 L86



Figure 108 - 16946-1

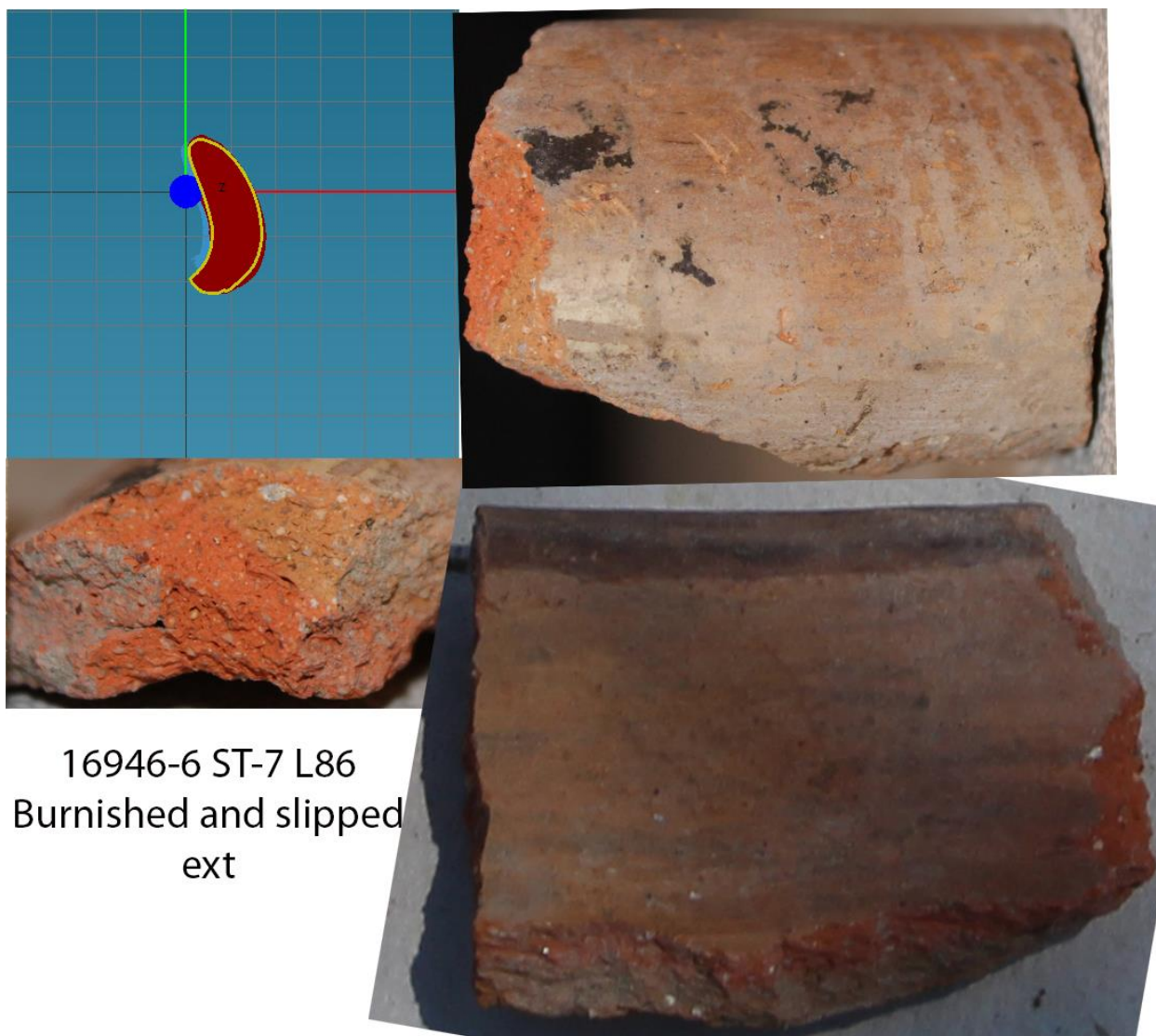
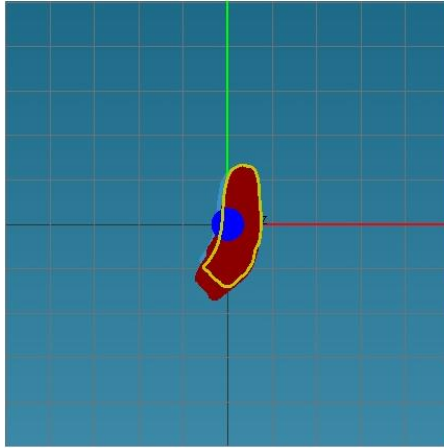


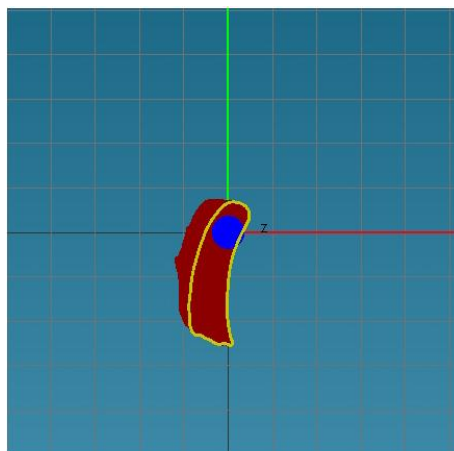
Figure 109 - 16946-6



17314-3 ST-7 L99
Burnished & slipped
ext & int
Chaff



Figure 110 - 17314-3

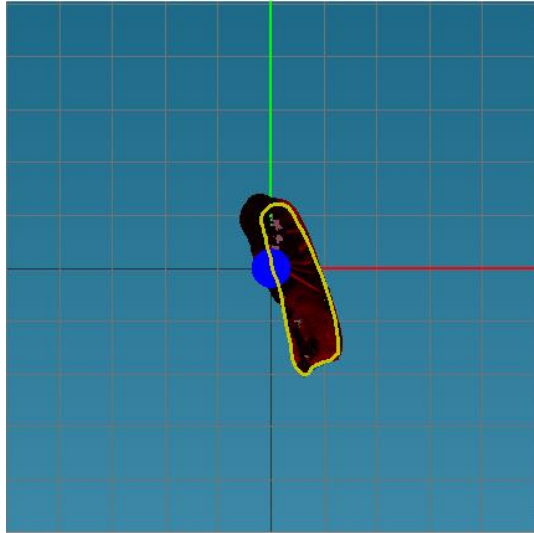


Burnished and slipped
ext

17336-4 ST-7 L98

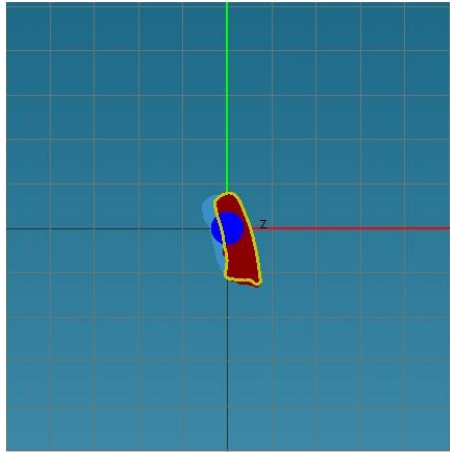
Figure 111 - 17336-4





17342-1 ST-7 L101
Slipped ext
chaff

Figure 112 - 17342-1



17346-13 ST-7 L86
Burnished and slipped
ext & int

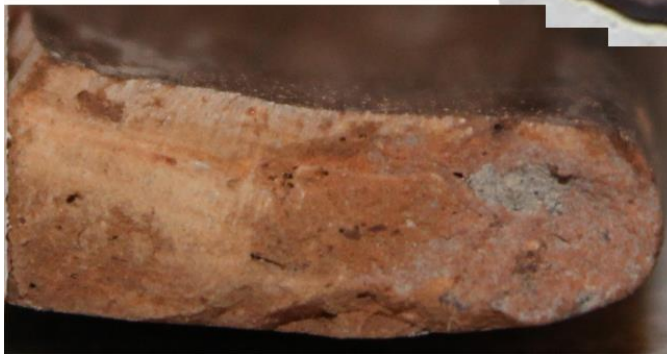
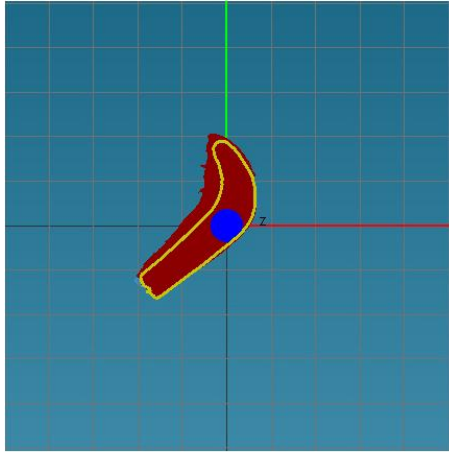


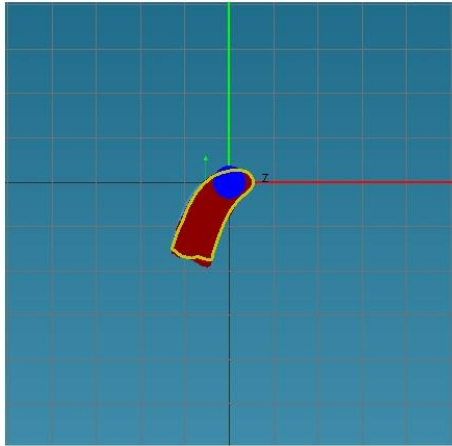
Figure 113 - 17346-13



17458-3 ST-7 L98
Burnished ext



Figure 114 - 17458-3

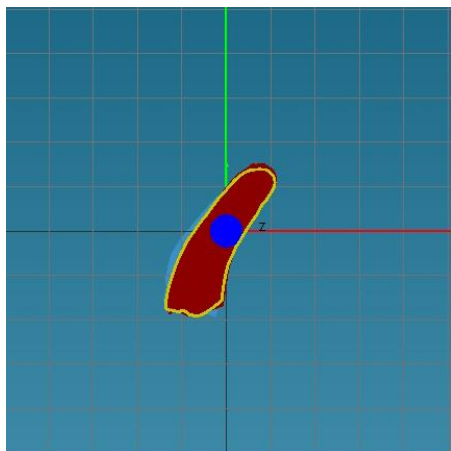


17468-10 ST-7 F71

Chaff



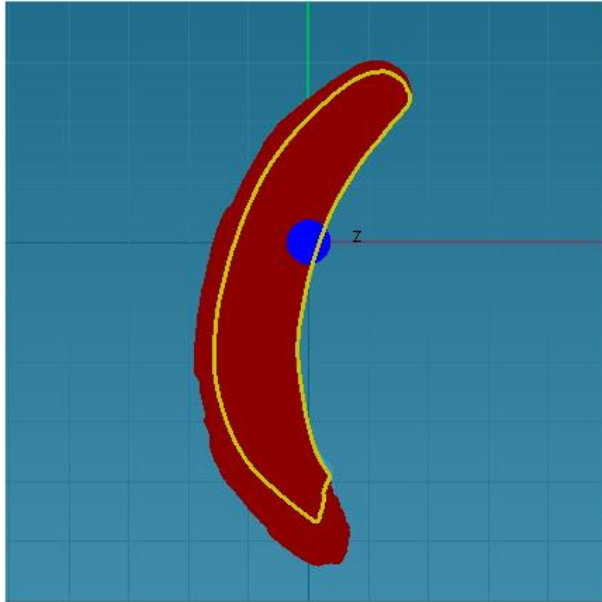
Figure 115 - 17468-10



17475-11 ST-7 L105
Burnished ext & int

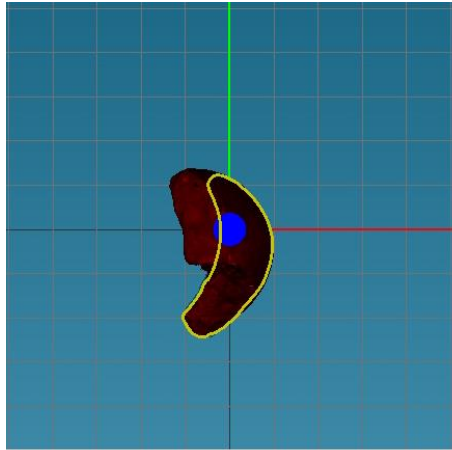


Figure 116 - 17475-11



17480-5 ST-7 L107
Burnished ext & int
Chaff

Figure 117 - 17480-5



17480-26 ST-7 L107
Burnished ext & int

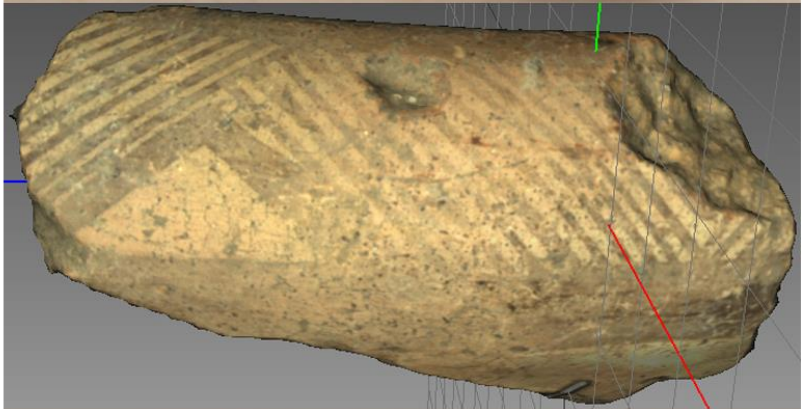
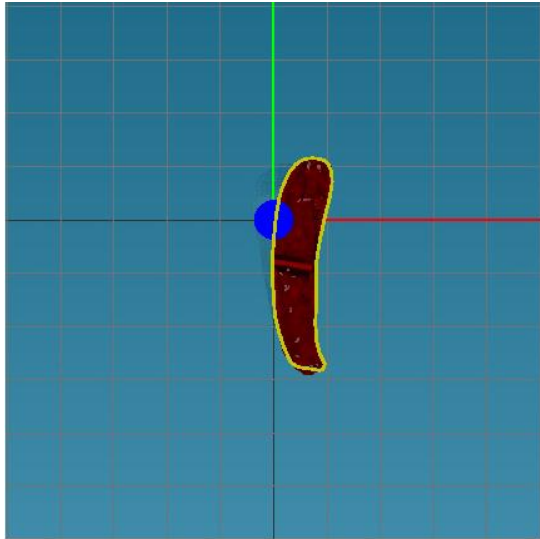


Figure 118 - 17480-26



17480-33 ST-7 L107
Burnished & Slipped ext
Burnished int

Figure 119 - 17480-33



17480-40 ST-7 L107
Burnished & Slipped ext
Burnished int
Chaff

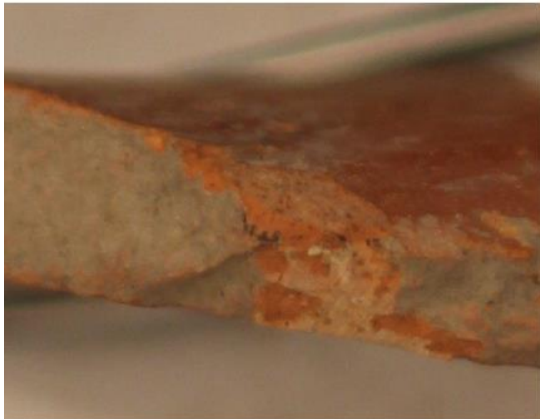
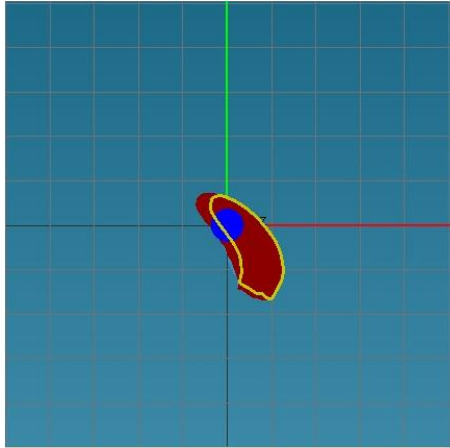


Figure 120 - 17480-40



17482-7 ST-7 L108
Burnished & Slipped
ext & int
Chaff

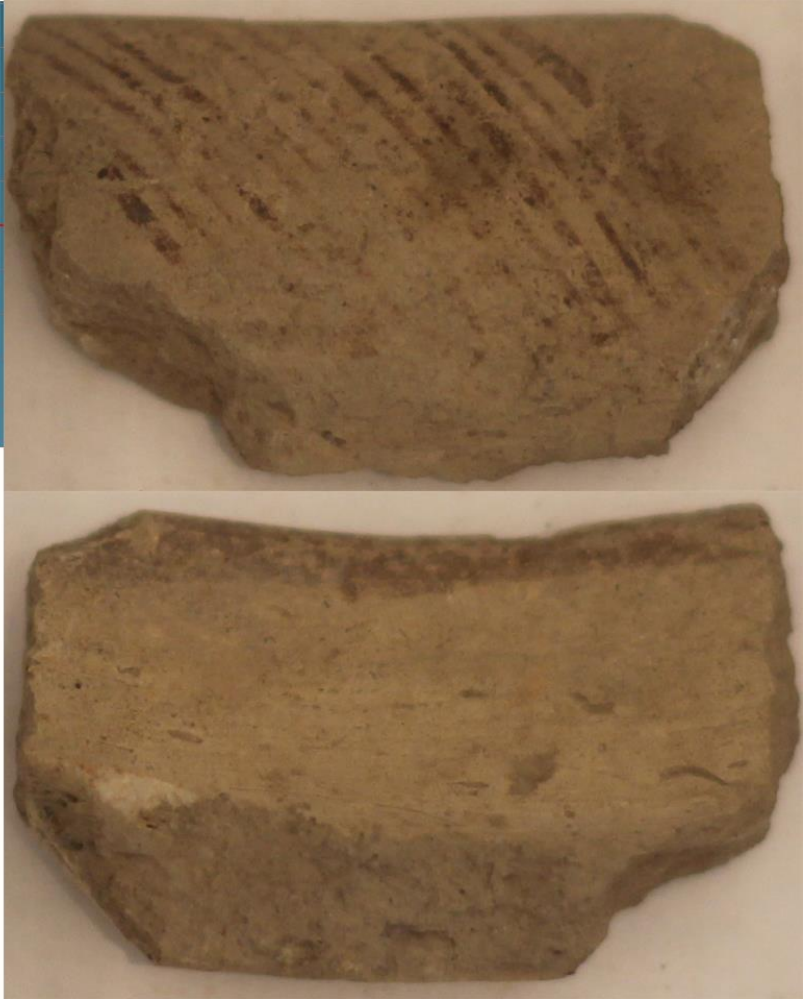
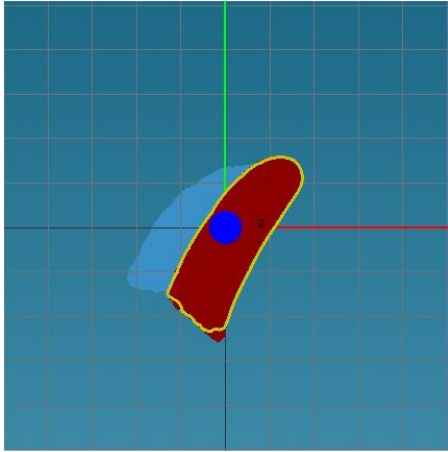


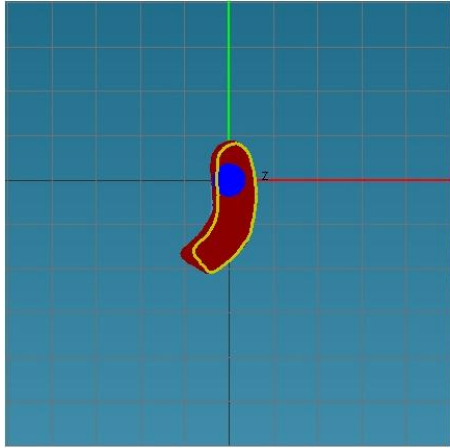
Figure 121 - 17482-7



17495-6 ST-7 L107
Burnished & Slipped
ext & int
Chaff
Mica



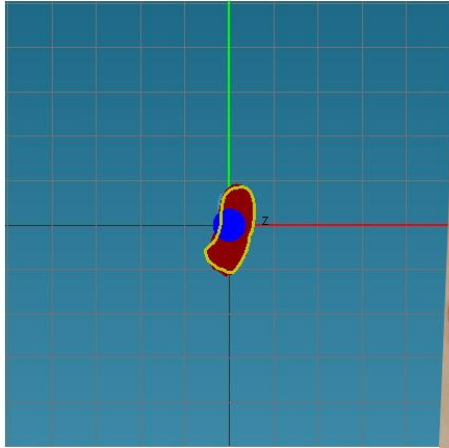
Figure 122 - 17495-6



17495-9 ST-7 L107
Burnished & Slipped
ext & int
Mica



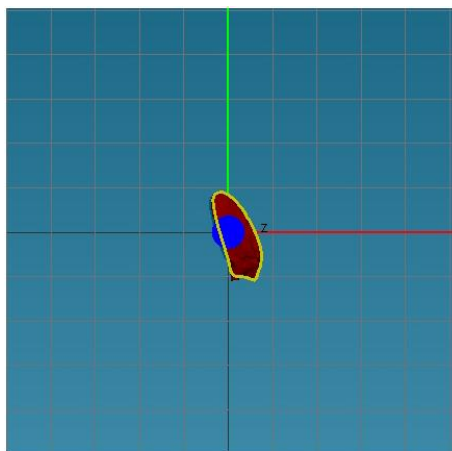
Figure 123 - 17495-9



17908-11 ST-7 L108
Burnished ext & int
chaff



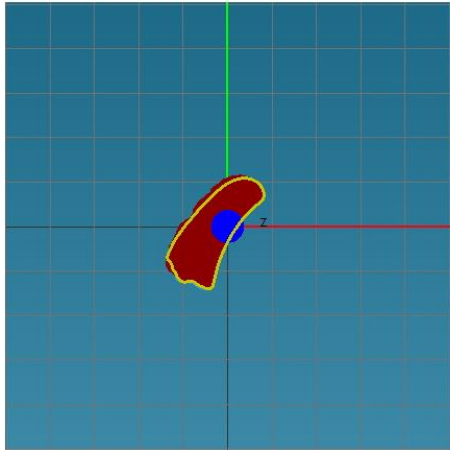
Figure 124 - 17908-11



17908-12 ST-7 L108
Burnished & Slipped
ext & int



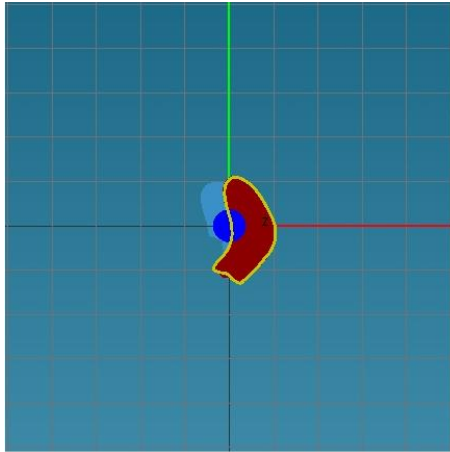
Figure 125 - 17908-12



17908-14 ST-7 L108
Burnished & Slipped
ext & int



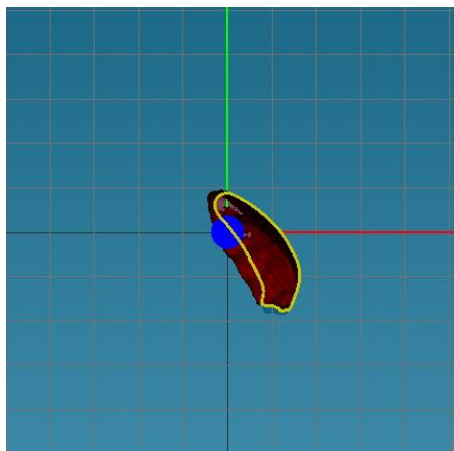
Figure 126 - 17908-14



17918-13 ST-7 L108
Chaff



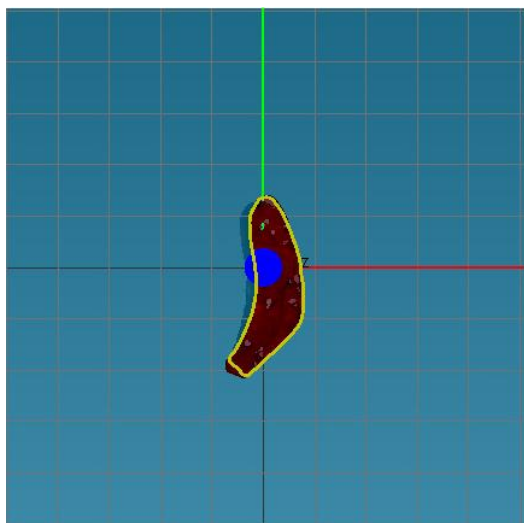
Figure 127 - 17918-13



17918-14 ST-7 L108
Burnished ext & int
chaff



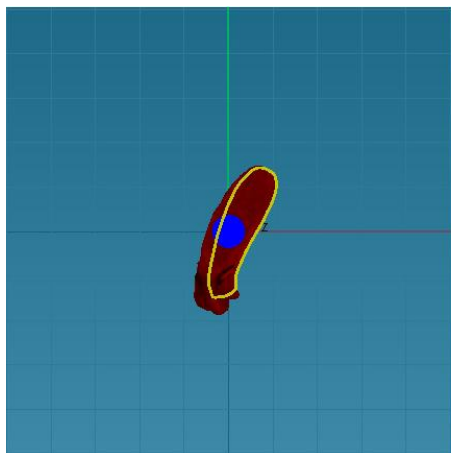
Figure 128 - 17918-14



17918-16 ST-7 L108
Burnished & Slipped ext
Burnished int
Chaff



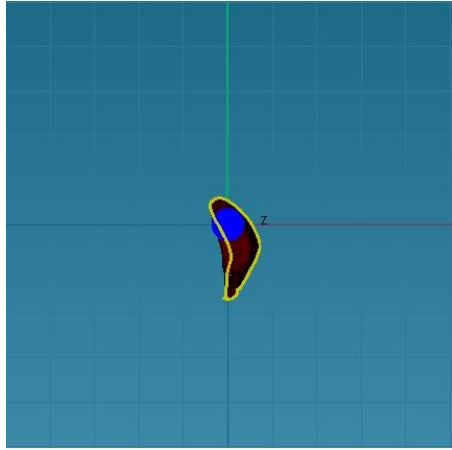
Figure 129 - 17918-16



17918-21 ST-7 L108
Burnished ext & int



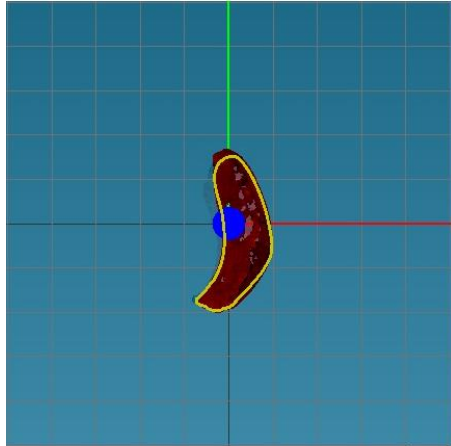
Figure 130 - 17918-21



17918-24 ST-7 L108
Burnished ext
Burnished & Slipped int
Chaff



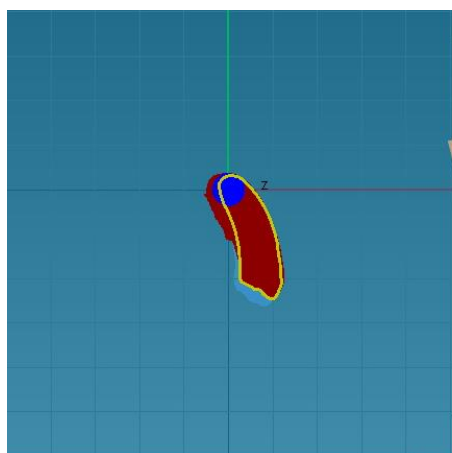
Figure 131 - 17918-24



17934-7 ST-7 L109
Burnished and Slipped ext
Burnished int
Chaff



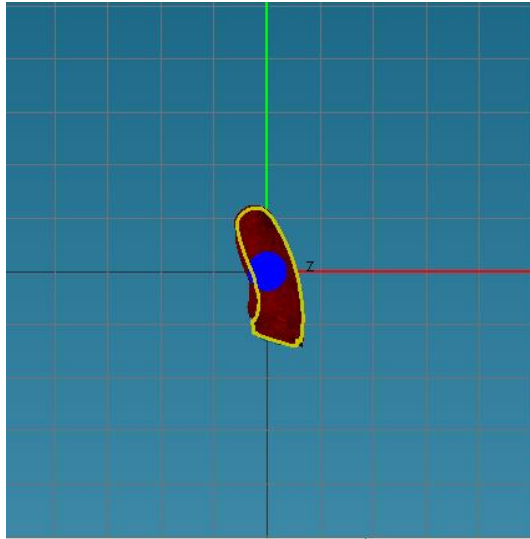
Figure 132 - 17934-7



18566-14 ST-7 L110
Burnished & Slipped ext & int



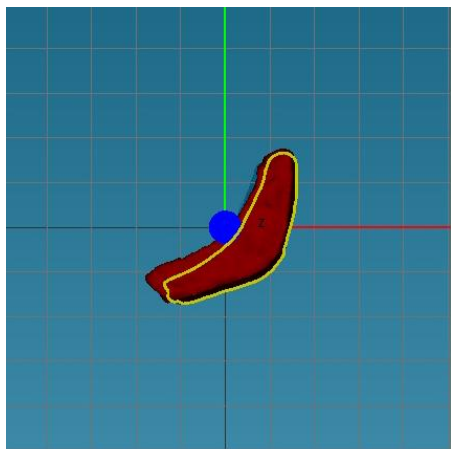
Figure 133 - 18566-14



18566-20 ST-7 L110
Burnished ext & int



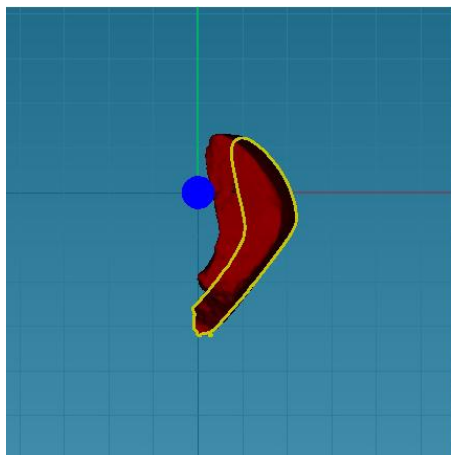
Figure 134 - 18566-20



18575-5 ST-7 L107
Burnished ext & int



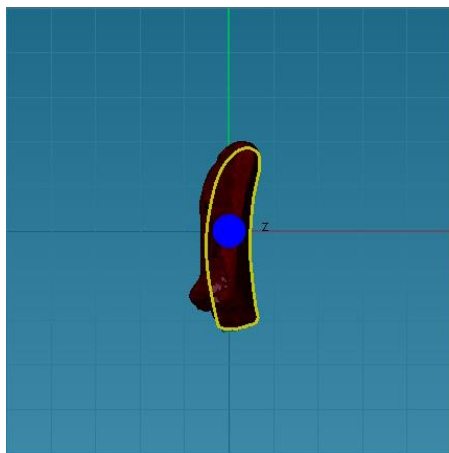
Figure 135 - 18575-5



18575-6 ST-7 L107
Burnishd and Slipped
ext & int

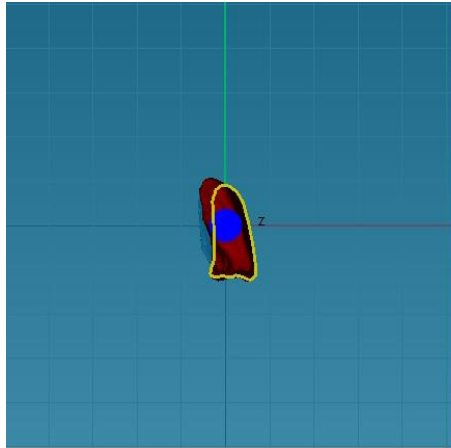


Figure 136 - 18575-6



18594-1 ST-7 L116
Burnished & Slipped
ext & int
Chaff

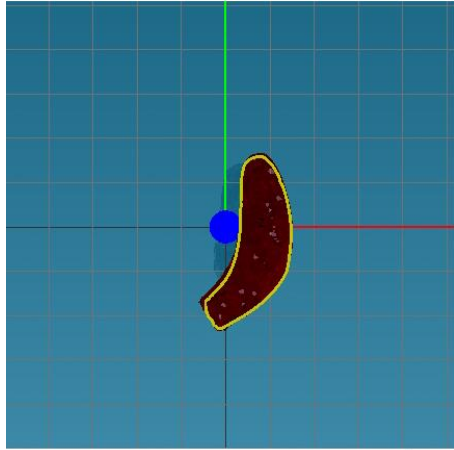
Figure 137 - 18594-1



18905-5 ST-7 L115
Burnishe & Slipped
ext & int
Chaff



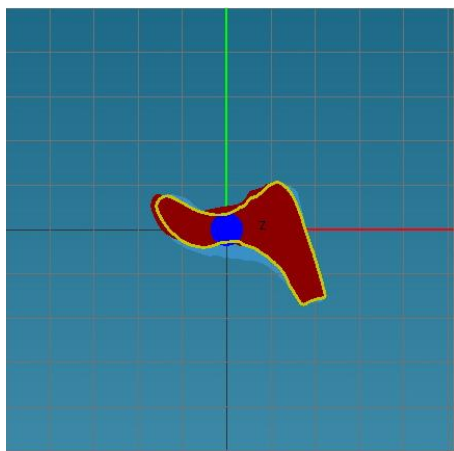
Figure 138 - 18905-5



18909-6 ST-7 L106
Burnished & Slipped
ext & int



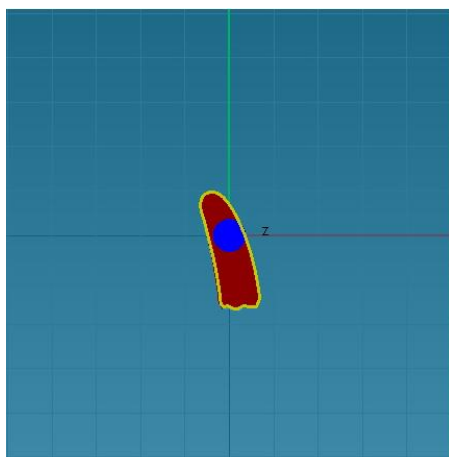
Figure 139 - 18909-6



18909-9 ST-7 L107
Burnished & Slipped
ext & int



Figure 140 - 18909-9



18916-6 ST-7 L107
Burnished ext & int
Chaff



Figure 141 - 18916-6

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