



4th Kültepe International Meeting

1-4 August 2019



Abstracts (alphabetical order)

Reflections on the Late Assyrian Dry Phase in Iron Age Anatolia

Selim Ferruh Adalı (Social Sciences University of Ankara)

Recently discussed paleoclimate proxy records from lake sediments and other sources across Anatolia yield stable oxygen isotope data. They point to a period of aridification corresponding to the mid-seventh century BC. The Late Assyrian Dry Phase refers to this period. Several Neo-Assyrian records attest to instances of this period. The present paper discusses the documentary Assyrian record concerning parts of Iron Age Anatolia, especially Tabal and Urartu, and ways as to how it may be possible to relate text analysis with paleo-climatic proxy record for the Late Assyrian Dry Phase in parts of Iron Age Anatolia. Selected elements of archaeological data relating to water and agricultural management from these regions will be included in the discussion.

Mixed-Method Approaches for Prosopographical Analysis: the co-location of people, places and things in the Kültepe Archives.

Adam Anderson (Digital Humanities at Berkeley)

In attempting to address the complex and multi-dimensional questions regarding prosopography, I explore how the text archives at Kültepe convey the proximity of people and places, and how network models allow us to combine these different data with chronological and geographical dimensions for ongoing prosopographical studies. This paper will compare the Level 2 archives with those of Level 1b in order to show the difference, in terms of scale and 'social distance', of the various cohort groups which reference the ca. 30 identifiable geographic names attested in the textual material from Kültepe. The resulting network models provide a means of distinguishing the activities of named entities, even when these include homonyms, by applying this 'social distance' to textually attested cohort groups, and evaluating the most active individuals in these groups, whether in Assur, Kaneš or the other 'ports (of trade)' (*kārum*) and 'stations' (*wabartum*) in the Anatolian hinterland.

Untangling the Ušinalam Affair: contextualizing a sparse series of cross-cultural exchanges.

Adam Anderson (Digital Humanities at Berkeley)

The so-called Ušinalam Affair is one of the most intriguing and enigmatic 'events' within the Šalim-Aššur archive (kt/94). This cultural exchange documented by a small group of commercial accounts can be very telling for the type of opportunistic business practices employed by the Assyrians. Was this a legitimate business deal (trading copper for wool), or a Ponzi scheme from the beginning? Who was Ušinalam and why did Šalim-Aššur underestimate him? Who did Šalim-Aššur appeal to when he wound up in prison? In addition to addressing these questions, this paper will show how textual 'events' such as this one, can be useful for establishing chronological cross-references across archives.

Handwriting Analysis and the case of Aššur-nādā's family

Wiebke Beyer (Universität Hamburg)

While the Old Babylonian period provides an abundance of school material, the Old Assyrian sources about teaching and school life are very low. In Aššur and Kaneš only very few texts which could probably be considered as teaching material were unearthed. Michel (2008) suggested, that Assyrian children of the first known generations of merchants received scribal education in Aššur. But with the settling in Anatolia, later generations probably developed a scribal education in Kaneš/Anatolia as well. This paper is based on T. Davis' (2007, 260) assumption, that individual handwriting is the result of practise, creativity, and imitation. In case of the Old Assyrian students it implies that their handwriting resembles to some extent the handwriting of their teacher. Consequently, a palaeographic study can shed light on the educational practice of the Old Assyrian period. In the centre of attention are the tablets of the merchant Aššur-idī and his three sons Aššur-nādā, Ilī-ālum and Aššur-taklāku. On basis of their tablets, this paper introduces a method of handwriting analysis which combines statistical and individual approaches.

In addition, the comparing of their handwriting shows that on the one hand, children did not necessarily learn from their parents. Instead, (some) siblings share similar traits, while their father's (and other siblings') writing displays different habits. On the other hand, common characteristics can also be noted on the documents of all generations of this family. These findings indicate nevertheless a certain family tradition. Consequently, the children were presumably not taught by their father, but another family member with the same educational background.

Michel, C. 2008. Ecrire et compter chez les marchands assyriens du debut du IIe millenaire av. J.-C., in T. Tarhan *et al.* (eds.), *Muhibbe Darga Armağanı*, Istanbul: Sadberk Hanım Müzesi, p. 345-364.

Davis, T. 2007. The Practice of Handwriting Identification, *The Library* 8, p. 251-276.

Seyitömer Mound Early Bronze Age IIIb Cylindrical Seals

A.Nejat Bilgen, Zeynep Bilgen (Dumlupınar Üniversitesi)

Seyitömer Höyük is located in the area of the old Seyitömer Town, 25 km away from Kütahya. Excavations were conducted between 2006-2014 by the Dumlupınar University Archeology Department. These excavations revealed important findings especially from the Bronze Age cultures of the Northwest of central Anatolia. The Early Bronze Age III culture is represented by three building levels (A, B and C) from late to early in the settlement, which was narrowed from southwest to northeast. The earliest (C) settlement, obviously destroyed by fire, continued in phases A and B by making some local changes on the same plan. The finds, most of which were uncovered in situ, are remarkable in terms of quantity and quality.

In the Early Bronze Age building level III-B, ten cylindrical seals unearthed in the main room of the building complex defined as ruler's house / palace, probably from Mesopotamia, constitute one of the most exceptional find groups. The seals are important in terms of reflecting the relations between Anatolia and Mesopotamia in the 3rd millennium BC.

The ruler's house / palace structure where these seals were found is located to the southwest of the upper platform of the mound and stands out with its dominant position at the elevation. It is a building complex consisting of a large main room in the center, a front room in front of it and numerous storage rooms around it. Among the many finds recovered from the main room of the complex are terracotta vessels; gold, silver and bronze hair pins, necklaces and rosettes, and various beads.

Nine of the seals were decorated with various beads, figurines; gold, bronze and silver. One of them was found 5 m. north of the mound and was sintered by various beads. All of the cylinder seals were formed by cooking from white ceramic clay (unglazed). All of these are blunt at both ends, horizontal circular holes, cylindrical body. In general terms, a human figure or altar is located in the seal center. The secondary figures, which consist of four-legged animal figures, four-legged-two-headed animal figures and people sitting on an "X tab" shaped stool, are depicted around the main figure. In a few examples, the scene is delimited by a line from the top and bottom. In some red, burgundy, green or yellow paint remains could be observed. It is possible to classify the seals in four groups according to their stage and

figure characteristics. Similar examples of these were found in Susa as well as in Tell Brak, Kamtarlan II, Ur, Tell Asmar, Tell Beydar, Surkh Dum-i Luri and Kish in Lower and Upper Mesopotamia. In the Early Bronze Age III-B settlement of Seyitömer Höyük no imprints of the tiled cylinder seals, as introduced above with their general characteristics were found. This suggests that the seals were brought as gifts by a Mesopotamian merchant and kept as ornaments. In addition, no bulla or similar cylinder seal was found in the settlement. Thus, it is possible to suggest that the people of Seyitömer did not use the seal for commercial purposes and that they were rather had their seat in the field of establishing social relations.

The Role of Practical Vocabularies in Old Assyrian Scribal Education

Jan Gerrit Dercksen (Leiden University)

The scribal education during the Old Assyrian period as evidenced by written documents excavated in Kültepe and elsewhere is receiving increased attention. In contrast to the well-documented South Mesopotamian school tradition, which relied heavily on the use of so-called lexical lists, no such texts have yet been found in Kültepe. Instead, an important role in the transmission of scribal knowledge seems to have been reserved for a particular type of exercise material called practical vocabulary. Examples of such PVs excavated at Kültepe (PVK) are PVK 1 published by Karl Hecker in *Studies in Honor of Nimet Özgüç* (1993), and the tablet Kt n/k 1697 published by Salih Çeçen and Hakan Erol in *Archivum Anatolicum* 12/2 (2018), which I call PVK 2.

In this contribution I will 1) provide a brief introduction to aspects of scribal education in the OA period; 2) present the known PVs and discuss their content; 3) establish their usefulness in writing practice texts and acquiring 'commercial' skills; and 4) address the relationship between these PVs and scribal traditions outside of Assur.

“Preliminary Remarks on Black Glazed Pottery Discovered in Kültepe”

Burcu Derin (Nevşehir Hacı Bektaş University)

The aim of this study is to evaluate the plain black slipped wares dating back to the 4th century BC, a unique ceramic group unearthed in Kültepe. All of the ceramics were found in the settlement areas of the mound.

Among the Late Classical - Early Hellenistic ceramics of Kültepe, the most extensive group of finds consisted of plain black slipped samples made in Attic form. The origin of this group emerged as an unadorned type that the Attic potter began to produce inspired by metal pots. This group, represented by a rich repertoire of forms in Kültepe, contains the popular forms of its era.

These forms include inward or outward rimmed bowls, sauces, dishes, fish dishes, kantharoi, ungentarium and single-handled vases. The surfaces are black glossy or matt slipped. The clay has a distinctive feature; well refined and fine sandy, coloured in light red or pink tones. There is not much decoration on the outer surfaces. Only in some instances were reserve areas left to form bands. On the inner surfaces, especially palmette and roulette ornaments made by pressing or scraping technique in the tondo of open vessels are found. This decoration is the most preferred decoration.

A City Shrouded in Myth: Kaneš in Hittite Historical Memory

Amir Gilan (Tel Aviv University)

The emergence of Hattuša as the most important political center in Anatolia in the 16th century BCE marks the most distinctive transition taking place in Anatolia in the first half of the second millennium. Until then, the city of Kaneš was the most prominent political and economic center in Anatolia. Recent excavations at Kültepe, ancient Kaneš, reveal that the city was a major international hub already in the

Early Bronze Age, well connected with Western Anatolia, Syria, and Northern and Southern Mesopotamia.

Kaneš did not survive the transition into the Old Hittite period. The town never recuperated from its destruction at the end of the Ib stratum. Layers 6 in Kültepe and Ia at the *kārum*, roughly contemporary with the earlier phases of the Old Hittite kingdom, reveal only a very modest settlement in comparison. More significantly, the site was subsequently deserted for about eight hundred years. Kültepe remained unsettled throughout the existence of the Hittite Kingdom and regained importance again only in the Iron Age, as a seat of one of the kings of Tabal.

The fact that Kültepe was never resettled by the Hittites is intriguing. The question as to why the mound was never rebuilt by the Hittites was recently addressed by Kulakoğlu (2014), who ascribed the long abandonment of Kültepe to environmental causes. Nevertheless, the long neglect of the site by the Hittites begs the question as to the role played by Kaneš in Hittite historical memory.

The present contribution will explore the various modes and strands of tradition by which the town of Kaneš remained ‘alive’ in Hittite consciousness. It will be argued that apparently not much was known in Ḫattuša about Kaneš, with some notable exceptions, such as the Anitta-Text. The evidence for continuity in the religious sphere, however, is by far more multifarious, corresponding with the impressive and well-documented continuity in the archaeological record. The presentation will explore several illuminating cases of continuity and change in the religious sphere between Kaneš and Ḫattuša, revealing some of the ways in which religious practice provided a platform in which the past was encountered and related to in Hittite Anatolia.

Cultural Exchanges in Cappadocia during Chalcolithic and Early Bronze Age: recent results of an archaeological survey in southwestern Cappadocia

Abdullah Hacı (Hitit Üniversitesi, Çorum)

Since 2017, a new survey has been conducted in the southwest of Cappadocia. The survey area characterized by important geological and geographical features that can affect prehistoric cultural development covers the Bor Plain and the highlands of the North-Central Taurus in the Niğde province. The highlands of the northern Central Taurus, which lies in the south and south-west parts of the area in question, contain fertile pastures, polymetallic ores and natural passages connecting Central Anatolia and Cilicia. On the other hand, the Bor plain located in the northwest of the study area is important for the agricultural economy.

The project aims to collect data that will enable us to analyze the cultural developments and transformations of the region starting from the Chalcolithic to the end of the Early Bronze Age. In the first two seasons important data were obtained to analyze Chalcolithic lifestyles and social structures. Our research suggests that even though Early Chalcolithic sites in Cappadocia show some local differences, Middle Chalcolithic (5200-4700 BC) sites built atop these settlements have very similar finds in terms of architectural layouts, location choices and pottery production. With distinctive cultural materials, Middle Chalcolithic groups not only settled at older settlements in the region, but also spread throughout the highlands, where there were no signs of earlier permanent settlements. The settlements located in the highlands were later abandoned at the end of the Middle Chalcolithic. These features suggest a pattern of Middle Chalcolithic expansion into the highlands under a new socio-political structure that ultimately seems to have failed at the end of the period.

Recent research has revealed that non-local finds characterize the early phase of Late Chalcolithic in Cappadocia. Flint-scraped/*Coba bowls* and Chaff-faced ware, which are mostly common in northern Syria and northern Mesopotamia, are observed at several sites. During our survey, similar finds were made in Bekçitepesi in the south margin of the Bor Plain. These finds were also observed in Güvercinkayası (Aksaray) and Fraktin Yanı (Kayseri). In Güvercinkayası, *Coba bowls* and other ware groups were recovered from Level III with non-local stamp seals and *Ubaid-like* painted pottery similar to that found at Fraktin Yanı. All these finds force us to ask various new questions about the Cappadocian Late Chalcolithic.

The architectural and small finds from some settlements, which could be considered as political centers such as Kültepe and Acmhöyük, and from producer settlements, such as Göltepe located in the periphery, suggest an increased social complexity and hierarchy in Cappadocian Early Bronze Age.

Probably, local authorities have organized the division of labor, craft specialization (particularly in mining) and the regional and interregional trade. As a result of this pattern, high quality and wide variety of local and non-local products have been recovered from many sites. The data obtained from the Early Bronze Age settlements in our study area also reflect the formation of high level social complexity in southwestern Cappadocia.

The Lower Town of Niğde-Kınık Höyük from the 3rd to 1st Millennium

Nancy Highcock (McDonald Institute for Archaeological Research, Cambridge University)

The site of Niğde-Kınık Höyük lies on the northeastern fringe of the Bor-Ereğli plain, an alluvial flatland in south Cappadocia, defined to the north by the Hasan and the Melediz mountains, to the south and east by the Taurus and Anti-Taurus chains, and to the east by the Karacadağ volcanic system. This region is well-known for its agricultural productivity, nearby rich metallic ore deposits, and its strategic position on the main routes connecting Central Anatolia with the Levant. Excavated by ISAW-New York University and the University of Pavia since 2011, the site comprises an elliptic (180 x 120 m), 20 m high mound, set on a 9ha squared terrace rising ca. 2m from the surrounding plain. Though the majority of investigation of the site has focused on the Achaemenid-Late Hellenistic periods, recent years have yielded a rich dataset concerning the earlier periods in both the walled citadel and settlement located on the lower terrace. In 2018, a sounding on the western terrace uncovered stratigraphy grounded by 14C dates, and ceramics from the Early Bronze Age through the Middle Iron Age, presenting the first evidence for a lower town occupation in south Cappadocia during these early periods. In addition, the stratigraphy and materials dating to the Iron Age illustrate the occupation of the lower town after the LBA-IA transition. While an overall urban plan consisting of a fortified citadel and a lower town are typical of coeval Syro-Anatolian Iron Age cities, Niğde-Kınık Höyük is now the first clear example in post-Hittite Central Anatolia.

This paper will present the ongoing research generated by the results of the 2018 and current 2019 season, with a focus on the Bronze (EBA, MBA, and LBA) and Early Iron Age from two different perspectives. The first will be to discuss the results from the lower town in comparison with other lower towns in pre-Classical Anatolia in order to further delineate the spatial and social connections within urban centers. The second will be to trace the potential connections between Niğde-Kınık Höyük and other sites in Central Anatolia in order to place the relatively archaeologically underexplored region of southern Cappadocia within greater networks of exchange and interaction. In particular, the presence of an Early and Middle Bronze Age lower town in this region can open up new avenues of research and reshape the overall picture of connectivities in central Anatolia.

New Discoveries in Hittite Jewelry Art and the Çitli Bracelet

Önder İpek (Atatürk Üniversitesi)

Jewelry constitutes an indispensable part of human life and a universal form of adornment. It represents the skill and technical prowess of the period to which it belonged, as well as beliefs, statements of status and artistic acclaim. In early times jewelry was worn by people for religious purposes, for magical properties, or for good luck. In addition to these, jewelry has been used as grave goods, votive objects, and for enhancing the overall appearance of women and men. As of the 17th century BCE, the Hittites, who had achieved political unity in Central Anatolia, produced various works of art. We do not know much about jewelry in Anatolia during the II. Millenium BCE. Among the written documents (temple inventories, booty lists etc.) types of jewelry have been mentioned such as hair ornaments, earrings, brooches, neck bands, pendants or amulets, anklets, bracelets, rings and necklaces. These documents also commented on gold accessories used on various garments in addition to jewelry. In Hittite representational art, a small number of ornaments such as hair bands, earrings, armlets and belts can be found.

A bracelet acquired by the Çorum Museum in 2011 is an important example of the Hittite jeweler's art. This Hittite bracelet, found in the village Çitli, is made of precious metals such as bronze, nickel, silver and gold. In spite of accounts mentioning ornaments among the gold and silver jewelry of women, this is the first archaeological evidence of a bracelet recovered to-date. The eminent feature of the bracelet is that it depicts Istar = Sauska and her servants, known from the Hittite rock reliefs and seal impressions of the 13th century BCE.

The most important evidence for dating the Çitli bracelet aside from stylistic features of the object itself comes from ring seals. Among various ring seal forms, those with an oval bezel, shaped by forging flat almost half of the ring loop, came into use in the 13th BCE. Therefore it is possible to say that the Çitli bracelet may be considered a representative example of a group of ring seals and reliefs belonging to this period.

Look to the West – New Horizons on Early Assyrian History

Guido Krysatz (Mainz University)

The Old Assyrian Pantheon differs greatly from what we know from southern Mesopotamia. This is most evident in the name and nature of Aššur, the deus eponymous of the city of Assur. But also others, like Bēl, the personal god of the royal family, or Šarra-mātān, not known at all in Southern Mesopotamia, strike the eye. Even the evidence for Amurru, well known from the south, shows a very different quality than it does in the south, and some old Assyrian families call him the “god of our fathers”. In personal names Aššur is called *malik*, defining him as a ruler, and never *šarrum*, as Adad, Ea and Su'en are called. This paper will try to highlight some of the most evident characteristics of Old Assyrian culture and show that it is linked closely to more westerly areas and even the Levant. A new attempt is made on how to interpret early Assyrian history from the time before the well-known archives especially from Anatolia came into existence.

“I will fix a toggle pin on your breast”. New data about toggle pins in the Old Assyrian sources

Cécile Michel (CNRS Nanterre & Universität Hamburg)

During the 3rd and first half of the 2nd millennium BC, men and women used to wear the same types of clothes, they however arranged their garments around their body differently, using distinctive elements to fix them: belts for men and pins for women. The Old Assyrian sources provide a wealth of information on this essential element of women's clothing. They specify their use, their composition, their weight and eventually their price. The toggle pins depicted by the texts may be compared to those excavated in the houses of the merchants at Kültepe.

When different worlds meet: exchange networks in Anatolia and Northern Levant during the 3rd millennium BC.

Luca Peyronel and Agnese Vacca (University of Milan)

The existence of an articulated network of long-distance exchange from the Aegean to the Indus Valley during the 3rd millennium BC is testified by various materials and similar artifacts retrieved in sites several thousand kilometers apart. The available evidence has been recently collected and discussed, especially highlighting the spatial distribution of the objects and it has been argued that this ‘globalization’ was the result of economic changes in the urban Near Eastern societies. The coexistence of different pattern of interactions seems to be the main characteristic of the 3rd millennium exchange system, and the global circulation of specific objects, exchange tools and technologies might be analyzed taking also into account the development of overlapping regional material cultural spheres, and the emergence of political powers, territorial control and boundaries. The paper focuses on the archaeological evidence of cultural interactions in the Northern Levant and Anatolia at the mid-3rd

millennium, discussing indicators of contacts, ceramic provinces and diffusion of shared technologies and administrative devices.

There will be blood? Assyrian-Anatolian relations observed through ethnic designation

Jascha de Ridder (Friedrich-Schiller Universität Jena)

The word *nuwā'um* was used by the Assyrian merchants as a general indication of the local population. In similar fashion, the common Akkadian *eqlum* 'field' refers to the Anatolian countryside as opposed to terms such as *mātum* "country" or *šērum* "steppe". For a long time the meaning of the term *nuwā'um* has been a topic of debate in Assyriological studies, having no universally accepted etymology. Most recently, Kloekhorst in his book, *Kanišite Hittite*, rejected the common assumption that the term is related to Luwian. Therefore, the question remains, where does it actual derive from? In this paper, the various etymologies will be re-examined, including the Luwian hypothesis. Through the application of ethnic designations, the implications for the relations between the two groups will also be part of the debate. Three main points can be distinguished regarding the meaning and etymology of the term *nuwā'um*.

- *nuwā'um* = *nū'u* "brute, stupid" (CAD N2, 356-57; AHW, 799b)
- *nuwā'um* = *onomapoetic* similar to the Greek *barbarous*
- *nuwā'um* = an unusual gentilic building for Luwian

Arguably, the first two etymologic explanations lead to a similar translation, which is considerably negative towards the native population. One early study went as far as translating it as "evil-doers" (J. Lewy, *Journal of the American Oriental Society* 57 (1937) 434). In fact, this negative attitude towards local colleagues and partners-in-trade on the part of the Assyrian merchants was one of the main objections to rejecting these two solutions. A radical different opinion sees *nu'ā'um* as an early designation of Luwian, with an atypical n/l-change in the first radical. That said, even if one accepts this unusual phonological change, one still has to account for the fact that the native Kanish population spoke a variant of Hittite and not Anatolian. In order to shed some light on the issue, this paper will discuss the textual references where *nuwā'um* is used in order to identify the context of its application. It will be observed that *nuwā'um* is used in many different contexts: it is used for Anatolians who married Assyrian women, when referring generally to debts and loans from and to Anatolians; in other cases, it refers to the Anatolians as an ethnic group; sometimes, it is used in apposition to Assyrians, yet in other cases to merchants (*tamkārū*). It may therefore not come as a surprise that we frequently find the house (*É/bēt*) of the native mentioned. These are references to some kind of credit institution, similar to the *bēt tamkārem* "house of the merchant".

Connections between Cilicia and Cappadocia during the first half of the 1st mill. BC

Mustafa H. Sayar (Istanbul Üniversitesi)

The aim of this paper is the presentation of an overview concerning the connections between Cappadocia and the Cilicia plain in the first half of the 1st millennium BC. As it is known, the Cilicia Plain (today Çukurova) is an important transition region between Anatolia and Mesopotamia and the Eastern Mediterranean. The urbanization of the Cilicia Plain where the city-state process began in the 7th century BC with the establishment of the Greek colonies on the coast and carried to a new dimension with the expansion of the Assyrian Empire in this region. The connections between Cilicia and Cappadocia is evident in different cases through the ages. One of the remarkable historical developments of the region is the interruption of the life in settlements in the Cilicia Plain by the invasion of interregional powers and the immigration of the people living on the plain, who fled to the mountains for safety.

It will be better understood how the political and economic events starting during the 1st half of 1st millennium BC. has affected the settlement geography in the region and the construction activity that is directly related to the change in the settlements in Cilicia Plain and south of Cappadocia with a description of the road connections between Plain and Highlands of Cappadocia.

A Microscopic Observation on Anatolian Archives and Their Social Networks: The Case of Peruwa

Shi Xiaowen (Mudanjiang Normal University, China)

The Assyrian texts found in Kültepe dating to the Assyrian Colony Period (2000-1750 BCE) have been studied time and again to better understand the lives of the Assyrian traders, while the indigenous people with whom they interacted are still relatively obscure. The archives of the Old Assyrian period were written in the Assyrian language. However, they were not all Assyrian archives, but some of them belonged to Anatolian traders, who adapted such tradition from their foreign neighbors who came from Northern Mesopotamia. The existence of these native archives has to some degree filled up the blank of the written history of Anatolia during that period, and provide great opportunities for us to take a close look on Anatolian society.

The archive of Peruwa is the most outstanding one among these native archives, because it was well documented, and furthermore the remains of his house had been fully excavated so that we can reconstruct the physical circumstances where the stories recorded on those clay tablets had happened. What did happen there? How was the owner and his family's life? Who were the people they've been dealing with? And how were their social standings? Such fascinating questions might be answered when a study by combined methods of philology and statistics is carried out.

Peruwa's family had the largest house (Hertel 2013: no. 102) in the lower town of Kanesh. Occupying 224 square meters, it lies in the southeast corner of the Karum. It seems that it was an area where more native people inhabited the lower town. Several neighbors of Peruwa were also identified as Anatolians, such as Sharabunuwa (Hertel 2013: no. 97), Galulu (Hertel 2013: no. 99) and Shaktunuwa (Hertel 2013: no. 100). The archive of Peruwa contains according to the excavation seasons of three parts: 7 are found among the texts with the siglum kt c/k, 57 under kt d/k and a large part of under kt f/k. As most of the f/k texts is unpublished, the present study will only refer to them when relevant in discussions and the statistical analysis will be limited to the first two parts, a total of 64 texts.

Ultimately, we have a profile of the figure Peruwa and his life. Peruwa, son of Šuppibra, is a native businessman and an official who played an active role during the latter half of *kārum* level II. He separated from his family by paying them a sum in silver. Though he had an official titled "Chief of herdsmen" we couldn't find any evidence on his official duties in his personal archive. 80 % personal names referred to in his archive are Anatolians. His principal business dealt with giving loans to natives. He had several business partners, one of them is his brother Hashui, with whom he signed a *tappautum*-loan. His debtors were mostly villagers from the vicinity of Kanesh. He also dealt with slaves and real estate transactions, which were initiated from his credit business. Peruwa kept in close contact with Assyrians, but there is no solid evidence that he was involved in Assyrian commercial trade.

Deep Sounding in Search of the Earliest Levels at Kültepe: New Results and the Early Bronze Age Ceramic Sequence in the North of Kültepe.

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* speaker

The Early Bronze Age and Chalcolithic periods in Central Anatolia and its cultural development remains largely unknown, despite the long research history in the region since early excavations of some important sites including Alişar Höyük. One of the key Early Bronze Age sites, Kültepe, is no exception. The past excavations of Professor Tahsin Özgüç revealed a monumental palatial architecture and temples of the EB III phase, demonstrating that the site was already a substantial political and trading centre long before the well-known second millennium Old Assyrian Colony period.

But, examining the origin and development on site and its wider implication (urbanisation and regional interaction process) for Central Anatolian prehistory has been thus far hindered by scanty archaeological evidence in terms of stratigraphy and material culture and of secure radiometric dates as well.

In this paper, we present our recent excavation results in a trench located in the northern part of the Kültepe mound. In particular a deep sounding within the trench (less than 3 m by 2 m) during the last

three seasons exposed ca. 5 m cultural deposits showing the whole third-millennium sequence of occupation (levels I-XV). In the whole excavated area, we identified various structures including a succession of stone/mud-walled buildings, firing installations, stone clusters, graves, pits, reflecting a differentiated spatial use through time in the area. Radiocarbon dates confirmed that this northern area was occupied throughout the third millennium BC, quite probably beginning from around the end of the fourth millennium BC, the oldest dated evidence for Kültepe.

Rich material culture was recovered along with the diverse features: ceramics, lithics, clay sealings, ornaments and shell objects. Particularly the Kültepe North ceramic assemblage offers a good glimpse into the third-millennium ceramic development. The preliminary ceramic analysis suggests that wheel-made undecorated pottery vessels first emerged around the middle of the third millennium BCE at Kültepe, while earlier handmade Burnished Ware tradition persisted. The late third-millennium ceramic specimens point to both external (West and East Anatolian, and Syro-Mesopotamian) and local (Central Anatolian) ceramic traditions as clearly indicated by multiple painted ware/styles and wheel-made types. The most important issue is the presence of distinctive Black Burnished Ware in the early levels. These peculiar ware types showing the Transitional or Late Chalcolithic features may help us to define the early EB or Late Chalcolithic/Transitional ceramic assemblage and their cultural affiliations in the region.

Overall, the changing patterns observed in our ceramic evidence with good stratigraphical and chronological anchors provide us with important reference data in order to fully understand the EB ceramic typo-technological development across the Anatolian plateau.

On the basis of the archaeological evidence at our hand with the combination of stratigraphic, architectural, ceramic and radiometric data, this study examines a continuity or discontinuity in the Anatolian Early Bronze Age, and addresses the question of when and how urbanism and interregional network developed in Central Anatolia and beyond.

Application of ancient DNA (aDNA) analysis in the reconstruction of population structure at Kültepe/Kaneš

Mehmet Somel (Middle East Technical University) & Handan Üstündağ (Anadolu University)

During the excavations between 2005 and 2013, human skeletal remains belonging to 84 individuals were found in the Lower City. Although osteological examinations, stable isotope and element analyses have been performed in this skeleton sample, no studies on ancient genomics have been done to date. The heterogeneity of the population in Kaneš during the old Assyrian period is well known from the written sources. However, it has not been proven biologically. Strontium analyses revealed some indicators to distinguish local and immigrant individuals. The way to further these analyses is to apply an alternative method. The aim of this study is to carry out a genomic analysis by using high throughput sequencing on ancient DNA extracts from bones. A genomic analysis combined with archaeological and anthropological data, can be a powerful research tool to analyze the complex population structure in Kaneš. This study aims to answer several research questions, including,

1. Identifying local and immigrant individuals
2. Determining genetic relatedness between Kaneš population and other Anatolian populations
3. Testing genetic continuity among human groups that lived at Kültepe throughout the long settlement history
4. Determining genetic relatedness/kinships among the individuals from identical burial contexts
5. Testing the existence of marriages between local and immigrant individuals
6. Examining whether there was a difference in health, activity and nutrition between local and immigrant groups.

“Broken and kept: Sealing practices in Hattus”.

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The impression of seals in fresh clay to produce a sealing is a well-known technique to mark ownership and identity on objects in order to protect their integrity. Seals are administrative tools used for millennia in Anatolia. The collections of carefully discarded clay sealings discovered in the official/élites buildings of Arslantepe from the 4th millennium suffice to demonstrate that it was intensively used before writing (Frangipane 2007).

During the k̄arum period seals were intensively used on different clay supports: on written objects such as tablets or envelopes, on bullae or on clay lumps securing the opening of objects. Out of this practical activity emerged a remarkable craft, seal engraving, and the study of the iconography have proved to be a very rich field to investigate cultural interactions, economy, belief system or the organisation of craft making (Topcuoğlu 2014).

In 1963 and 1964 the *Boğazköy Archaeological Expedition* discovered during excavations at Büyükkale, the citadel of the Hittite city Hattuşa, an assemblage of circa 150 fragments of clay sealings. These were hidden in the wall of one of the best preserved buildings from the k̄arum period under the remains of the Hittite royal palace. On the floor of this elaborate house of more than 10 rooms, archaeologists found a rich assemblage of 100 vessels, including finely modelled rhytons, confirming that this building certainly belonged to the élites (Neve 1982, 22–30).

The more than 30 different stamp seals reconstructed out of the 150 clay sealings have been cursorily published with a focus on the description of the iconography. The seals depict animals such as lions, birds or bulls, but also mythical figures. They are very similar in their style and format, with a diameter of 1 cm in diameter. A project has been initiated in order to republish this material now kept in the Museum of Anatolian Civilizations in Ankara. The context of discovery, the iconography, the type of clay sealings as well as their chemical composition (pXRF) allow to shed a new light on this unique assemblage.

In this talk, an overview of the seals and sealing practice will be presented in comparison with other assemblages to show similarity and diversity in the production, use and deposition of the seals during the k̄arum Period. This will illustrate how they are indicators of cultural interactions.

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Canaanite blades from Kültepe, Central Anatolia: Reconsidering the trade of domestic items in the Early Bronze Age

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From 2008 until 2013, I participated in the archaeological survey project in Kayseri, Turkey (KAYAP). During the field seasons, the survey members usually lodged at the excavation house of the Ankara University near Kültepe, the archaeological site of an ancient large city. After returning from the day's survey, we often reviewed the archaeological materials arranged on a terrace, which were excavated from Kültepe. One day in the 2010 field season, I discovered a large flint blade among some unearthened materials on that terrace. I confidently believed that it must be a Canaanite blade, considering its large length and width, and parallel edges. I also discovered further Canaanite blades excavated in past seasons and stored in the Museum of Kayseri, with the help of Prof. Dr. Fikri Kulakoğlu, the director of the Kültepe excavations.

The Canaanian blade, extraordinary long, wide, and straight knapped from fine flint is one of the characteristic archaeological materials through 4th and 3rd millennia BCE in the Near East. It is widely known from Southeast Anatolia, Northern Mesopotamia, and the Southern Levant. It is also found in Iran and Egypt. Despite the wide distribution, only a few workshops of the Canaanian blade are known. The Canaanian blades are extraordinary large and standardized blades of fine flint, and it is considered that they were used as sickle elements from frequent sickle gloss on their lateral edge. Actually, wooden sickles in which the Canaanian blades were inserted were excavated in Jordan. In other cases, a bundle of unused Canaanian blades was deposited. The Canaanian blades were high quality blades but were not precious goods, traded widely as mass-produced domestic agricultural tools. The production-distribution system is one of the subjects for the discussions about the Canaanian blade.

In this paper I examine and report the twenty-two Canaanian blades yielded from Kültepe up until the 2012 field season. We also collected Canaanian blades from three sites in the survey of KAYAP. To my knowledge, Canaanian blades have not been reported beyond Southeast Anatolia. I also discuss how the Canaanian blades were brought to Kültepe in Central Anatolia. The Canaanian blades from Kültepe and Kayseri Province might shed new light on the discussion of Canaanian blades, and exchange networks between western/central Anatolia, northern Levant and northern Mesopotamia.

Genesis of Beyşehir Occupation Phase: Understanding Socio-Environmental Systems of Anatolia and Interactions from Kültepe-Kaniş

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This paper aims to determine, with fossil pollen findings, in which period the foundations of the Beyşehir Occupation Phase were laid in Anatolia and meanwhile from which center or centers the socio-ecological systems (SES) emerged and propagated. In line with this objective, studies conducted in various areas of Anatolia were brought together with a study conducted specifically in Kültepe-Kaniş (Lake Engir-Cappadocia) and were evaluated and correlated with palynological, archaeological, and archaeo-botanical data.

The study obtained data from fossil pollens over these by taking drilling cores that covered the 5625 cal BP year period from Lake Engir found 6 km to the southwest of Kültepe-Kaniş. The Beyşehir Occupation Phase and the early socio-ecological system or systems that affected this period were evaluated with the archaeological heritage belonging to Kültepe-Kaniş, which was established at the end of the Late Chalcolithic Age and became a significant stable center by the end of the Bronze Age.

In Anatolia the intense use of land and gardening culture that began in 3200 ¹⁴C years BP (cal 1440 BC) and ended in 1300 ¹⁴C years BP (cal AD 650) and the Beyşehir Occupation Phase (BOP) effects were highly represented around Lake Engir. However, when evaluated together with the pollen studies carried out in various areas in this period, the rate of existence for the species of indicators found around Lake Engir (*Castanea sativa*, *Olea europaea*, and *Fraxinus ornus*) were higher or equal to some of the localities that have more suitable settings in Anatolia (Southwestern and Northwestern Anatolia), despite the ecologically strong conditions.

In the Lake Engir pollen analyses, the presence of Middle and Late Bronze Age indicator species emerged, and these findings were consistent with pollen studies conducted in various areas of Anatolia. The indicator types had higher or equal rates compared with those in this period around Lake Engir. This situation shows that the clear process of change for the socio-ecological system in Anatolia took place simultaneously with Kültepe-Kaniş (around Lake Engir) between 4500-3900 BP (about 1700 years before BOP). This information, when checked with current archaeological and philological data, shows that the socio-ecological system was established and developed for the first time parallel to a socio-economic system that covered all of Anatolia and centered around Kültepe-Kaniş and bound remote centers independent from one another. Thanks to this established, organized socio-economic and socio-ecological system, Kültepe-Kaniş has become a strong center in which information is gathered from agriculture to mining, from gardening to transportation, from animal husbandry to grazing, and

from woodworking to long-range organized trade in Anatolia and that harbors more than 50,000 populations recorded on 23,500 tablets.

In result this study shows clearly that the interchange-based socio-economical system was not limited to commercial products and objects, relationship webs encompassing the whole of Anatolia were established and transformed into a power with the production potential and developed awareness of Anatolia. And this inspired a transformation of the visible effects of people in the natural environment. These clear change and transformation that took place around Anatolia named the Genesis of Beyşehir Occupation Phase (4500-3700 ¹⁴C yr BP), is determined temporally and spatially in this study.

Petrographic and Mineralogical Analysis of Stone Objects Excavated at Kültepe

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The first use of stone tools began with primitive hominids during the Paleolithic period, approximately 3.3 million years ago. Since that point, stone tools of various types have comprised an essential part of the hominid tool kit, appearing in almost every facet of life in ancient society. In 2015, researchers excavating a dry riverbed near Lake Turkana, Kenya, discovered primitive stone tools embedded in rocks dating to 3.3mya. Prior to this discovery, the onset of the Paleolithic was typically associated with early evidence for the manufacture and use of stone tools by Homo Habilis at approximately 2.58mya. The Neolithic, otherwise known as the ‘New Stone Age,’ is characterized by the use of more extensively worked chipped stone tools. The exact transition between the Paleolithic and Neolithic remains a point of debate, centered around questions of wastage and the rate of glacier retreat in relation to site location. Generally speaking however, the transition is assigned to roughly 9-10,000 BC, or roughly the same period when Göbekli Tepe – the world’s oldest temple – was in use. Prior to the development of pottery or metal tools, the inhabitants of Göbekli Tepe constructed their temple from massive T-shaped stones, carefully crafted and arranged at the center of a subterranean chamber formed by circular retaining walls. The chalcolithic period, meaning ‘Copper-Stone Age,’ is also worth mentioning since, despite the increasing use of copper, obsidian and stone tools continued to dominate the tool assemblages of ancient societies. Dating between 5,500 – 3000 BC, it is during this period that we first see an increasing use of copper in the toolkits of ancient communities, beyond the manufacture of trinkets seen in the preceding Neolithic and prior to the discovery of bronze alloys. While none of the subsequent periods refer to any sort of ‘Stone Age,’ right up to the present day an increasingly diverse range of stones has been adopted by human societies for a variety of purposes including construction and art.

Concerning the present study, we conducted petrographic and mineralogical analysis of stone objects excavated from the site of Kültepe and dating to the period of the Assyrian Merchants during the Middle-Late Bronze Age. Petrographic and mineralogical examinations of stone objects from the Kültepe excavations had not previously been conducted, and therefore represent a potentially fruitful avenue of exploration from a geoarchaeological perspective. Within the stone tool assemblage we can identify five general categories of object: (1) Two types of saddle quern characterized by coarse and fine textures; (2) Multi-holed ore grinding mortars and their pestles; (3) Pivot stones; (4) Various sizes of whetstone; and (5) Kitchen utensils in the form of circular mortars for nuts, spices, dried fruits, and herbs. In each case, it appears that the inhabitants of Kültepe made an informed choice as to the appropriate type of stone for particular applications.

The variety of rock types within the assemblage is noteworthy. In some instances we have rocks formed under conditions of regional metamorphism, while in others we see indications of medium-grade thermal metamorphism. At other points we see the use of fresh volcanic rocks with no indication of alteration or metamorphism. Among these are coarse vesicular rocks for achieving a more coarsely ground material, while others host a very fine vesicular texture for the production of flour. We may presume that the individuals producing these tools, or those bringing the raw material for their manufacture, traveled a substantial distance to retrieve these stones and bring them back to the city. These prehistoric men were highly experienced and represent the first senior stone prospectors.