

# A lead figurine from Toprakhisar Höyük: magico-ritual objects in the Syro-Anatolian Middle Bronze Age

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## Abstract

This article examines supra-regional trends in magico-ritual objects through a mould-made lead figurine in the form of a foundation peg found in a disturbed Early Bronze IVB to Middle Bronze I transitional deposit at Toprakhisar Höyük (Altınözü, Hatay). The stylised object is interpreted as a bull standing atop a peg, pointing to the adoption of hybrid Syro-Anatolian and Mesopotamian technological, iconographic and apotropaic values. It is suggested the object is ritual paraphernalia, likely in relation to the cult of the Storm God, used in a foundation ritual. Together with this peculiar metal product, the presence of other magico-ritual objects that point to northern Mesopotamian connections at the small hinterland site of Toprakhisar Höyük, on the outskirts of the Amuq valley, is considered to be a possible material reflection of new groups in the region, including Hurrians and Amorites, which contributed to the unity and regionality of the cults and rituals of Syro-Anatolian communities of the Middle Bronze Age.

## Özet

Bu makalede, Toprakhisar Höyük'te (Hatay, Altınözü) Erken Tunç IVB–Orta Tunç I geçiş dönemine tarihlenen, tahrip olmuş bir tabakada bulunan kalıp işi adak çivisi formundaki bir kurşun figürün üzerinden, kült nesnelerinde görülen bölgelerarası ortak üslupların gelişimi üzerinde durulmaktadır. Çivi üzerinde, ayakta duran bir boğanın tasvir edildiği şekilde yorumlanan kalıp işi kurşun figürün, teknolojik, ikonografik ve koruyucu özellikleri bağlamında Suriye-Anadolu ve Mezopotamya etkili melez bir ürün olarak değerlendirilmiş ve Fırtına Tanrısı'na adanan bir kült nesnesi olabileceği vurgulanmıştır. Bu özel metal işçiliği ürünüyle birlikte Amik Ovası'nın yüksek kırsalında, Toprakhisar Höyük'te tespit edilen ritüel kimliğe sahip diğer nesneler de Kuzey Mezopotamya ilişkilerine işaret etmektedir. Bu verilerin Hurriler ve Amoritleri de içeren göçmen toplulukların maddi kalıntıları olma olasılığı değerlendirilerek, Suriye-Anadolu topluluklarının kült ve ritüeller bağlamında gelişen ortak üsluplarına ve bölgesel farklılıklarına işaret ettiği vurgulanmıştır.

Lead figurines and their moulds from Anatolian and Mesopotamian contexts have attracted much attention due to being easily made but having iconographically rich and symbolically meaningful attributes. They have been commonly accepted as the distinct materialistic expressions of daily-life ritual practices in household contexts and have often been termed 'trinkets' (Canby 1965; Emre 1971; Marchetti 2003; Makowski 2016; Heffron 2017). Their presence across a wide geographical span from western Anatolia (Troy) to southern Mesopotamia (Sippar) in a limited temporal frame from the end of the Early Bronze Age to the end of Middle Bronze II (ca 2300–1600 BC) points to the close relationship between the formation

of supra-regional trends in household ritual practices and the late Early Bronze Age and Old Assyrian trade networks, as noted by scholars working on the subject (for example, Canby 1965; Heffron 2017). The recent publication of a lead figurine from Tel Kabri further extends their geographic distribution down to the southern Levant as part of the larger trade networks of the eastern Mediterranean that developed in the Middle Bronze Age (Yasur-Landau et al. 2021). However, due to the absence of a contextual and functional study of lead figurines, their use as apotropaic wearable pendants, amulets or votive objects has been discussed in an inconclusive manner only (Emre 1971; for an overview, see Marchetti 2003; Heffron 2017).

This study contributes further to the corpus of lead objects by presenting a stylistically new example of what we believe to be a figurine in the form of a foundation peg found at Toprakhisar Höyük (Altınözü, Hatay). The object provides clues about the relatively unknown ritual practices of rural communities and how they influenced or were influenced by interregional trends of the Middle Bronze Age. Along with examples found elsewhere, it also allows us to discuss the use of such items as objects of disposal in votive deposits, specifically in performances related to foundation rituals.

### Trade, rituals and the centre and periphery

Economically driven, multi-nodal webs of interactions and cultural encounters have been widely discussed in archaeological research, from theoretical, material-based, economic and historical perspectives, for many years (see Curtin 1984). The late third millennium BC and specifically the Old Assyrian trade network have become a unique case for understanding the structural relationship between economics and social encounters through various modes of mobility (Larsen 1987; 2015; Veenhof 1997; Stein 2008; Barjamovic 2011; Highcock 2018). From privately funded entrepreneurs to state-controlled operations, a diverse range of groups were in transit within a multi-directional, entangled network that stretched across Anatolia, the Near East and the Levant, not only in the act of trade and gift exchange but also due to habitat-tracking strategies (Zaccagnini 1983; Yener 2007; Barjamovic 2011; Michel 2011; Burke 2017; Weiss 2017; Barjamovic et al. 2019). Yet due to the fascinating and perhaps overwhelming amount of textual data coming from major centres like Kültepe (Özgüç 2003; Kulakoğlu 2011) and, to a certain extent, other sites like Alişar (von der Osten 1937) and Hattusha (Schachner 2018) in central Anatolia, but limited textual and archaeological data from elsewhere (Michel 2011: 316), the research field is dominated by peer-to-peer economic interaction patterns between Assur, central Anatolian kingdoms and their affiliated merchants' quarters, with smaller centres and outlying settlements often being overlooked.

As a result, this monolithic, text-based image of the Old Assyrian trade network de-contextualises the roles and various intents of regional contributors and, in most cases, wholly excludes the role that peripheral sites played in keeping the network alive with their specialised industries, from metals and textiles, to various luxury commodities including gemstones, oil and perfume (Larsen 1987: 53; 2015: 173; see also Palmisano 2018:160). This is certainly due to the absence or limited nature of the textual and material evidence from the majority of regional centres and the total absence of data from peripheries. In practice, archaeological research

often tends to produce datasets from the centres of a regional framework. Thus the effects of modes of mobility are virtually unknown from the standpoint of peripheral sites, where a great amount of trade goods were produced prior to circulating within systems of economic and social encounters (Kristiansen 2018: 88). Furthermore, the re-emergence of city states and kingdoms in the early Middle Bronze Age ultimately directs attention to royal contexts, often excluding commoners' daily-life practices from the picture. However, lead figurines of this vibrant period stand out as a distinct group of magico-ritual objects that reflect the customs of non-elite consumers within Anatolian, Mesopotamian and Levantine communities (see Heffron 2017).

### The regional setting

Leonard Woolley's wide-scale operations and the stratigraphic sequence obtained from his soundings at Tell Atchana have provided the textual and archaeological anchors for local responses to major socio-political changes throughout the historical sequence from the Amorite kingdom of Yamhad to the Hurro-Mitanni and then the Hittite empires of the Amuq valley of Hatay (Woolley 1955; Yener 2005). New data generated by stratigraphically controlled excavations have provided the opportunity to fine-tune a coherent linkage of the Late Bronze II and Iron Age levels (Yener 2013; Yener et al. 2019). Yet the earlier second-millennium BC sequence and particularly the third to second millennium BC transition remain unknown due to limited data obtained from both excavation campaigns. The same situation exists for the end of the Early Bronze Age at the neighbouring third-millennium BC centre of Tell Tayinat (Welton 2011; 2014, Welton et al. 2011; see also Manning et al. 2020).

Nevertheless, the late Middle Bronze II textual data acquired from Alalakh's Level VII Palace detail how land tenure and the administrative management of the agricultural economy were maintained, with a substantial number of references to olive oil and wine production (Wiseman 1953; Magness-Gardiner 1994; Lauinger 2015). The textual and archaeological data from third- to first-millennium BC sites such as Ebla and Tell Tayinat emphasise the economic significance of the region as an ecological niche rich in highly valuable trading commodities, including metals, ivory, timber, olive oil and wine, that contributed to the major trade networks of the Bronze Age (Klengel 1992; Yener 2007; Batiuk 2013; Osborne 2013).

Bronze Age archaeological research in the Amuq valley of Hatay has now been strengthened by the rescue excavations conducted at the peripheral site of Toprakhisar Höyük. These have provided the opportunity to reveal centre and periphery relations at a regional level and also in the larger framework of interregional dynamics, due to

the collection and interpretation of multi-proxy data. This allows contextualisation of the often theoretically discussed tiered hierarchical systems, the role the hinterland played in territorial kingdoms and the process of empire-building strategies. In light of recent findings, links to the Old Assyrian trade network are discussed here from the standpoint of ritual paraphernalia.

### The Middle Bronze I contexts at Toprakhisar Höyük

Toprakhisar Höyük is located in the Beyaz Çay river valley of Altınözü, one of the estuaries of the Orontes river, and is flanked by low hills (fig. 1). Previous and ongoing archaeological surveys, as well as modern land-use data, have shown that this narrow river-valley system has never been subject to large-scale agricultural exploitation but is instead characterised by horticulture (Batiuk 2013; see also Akar, Kara 2020: 80). This is in sharp contrast to land-use and settlement patterns in the Amuq valley. Both in the past and today, the Beyaz Çay region's economy has been based primarily on the valuable agro-products of olive oil and, although now lost, grapes for the production of wine (Casana 2009; Batiuk 2013). This has been confirmed by the discovery of farmsteads dating to classical and later

times (Tchalenko 1953; de Giorgi 2007; Pamir 2010) and also by the prevalence of mound-type settlements that extend the settlement history of the region back to the Neolithic (Karataş, Pamir 2021). The results of the ongoing research project 'Geological and Archaeological Traces of Climate Change in the Amuq Valley of Hatay' have begun to provide a precise reconstruction of the paleogeography of Toprakhisar Höyük. The 4.1m-long undisturbed sediment core acquired from around the site contains a continuous olive pollen record (fig. 2; Avşar et al. 2021).

Toprakhisar Höyük was a small-scale hillside settlement that has been severely damaged by the growth of Toprakhisar village on top and the construction of the Yarseli Dam in the 1980s to provide water for agricultural activities. On the initiative of the Hatay Archaeological Museum, rescue excavations were begun to define the site sequence, which, according to intensive surface surveys, extends from the early Chalcolithic to Iron II, with a gap in the Late Bronze Age (Akar, Kara 2018a). The rescue excavations initiated in the severely damaged and terraced western section of the tell revealed the extremely well-preserved remains of a burnt administrative complex named Building 2 (Akar, Kara 2018b; 2020). Although the ceramic

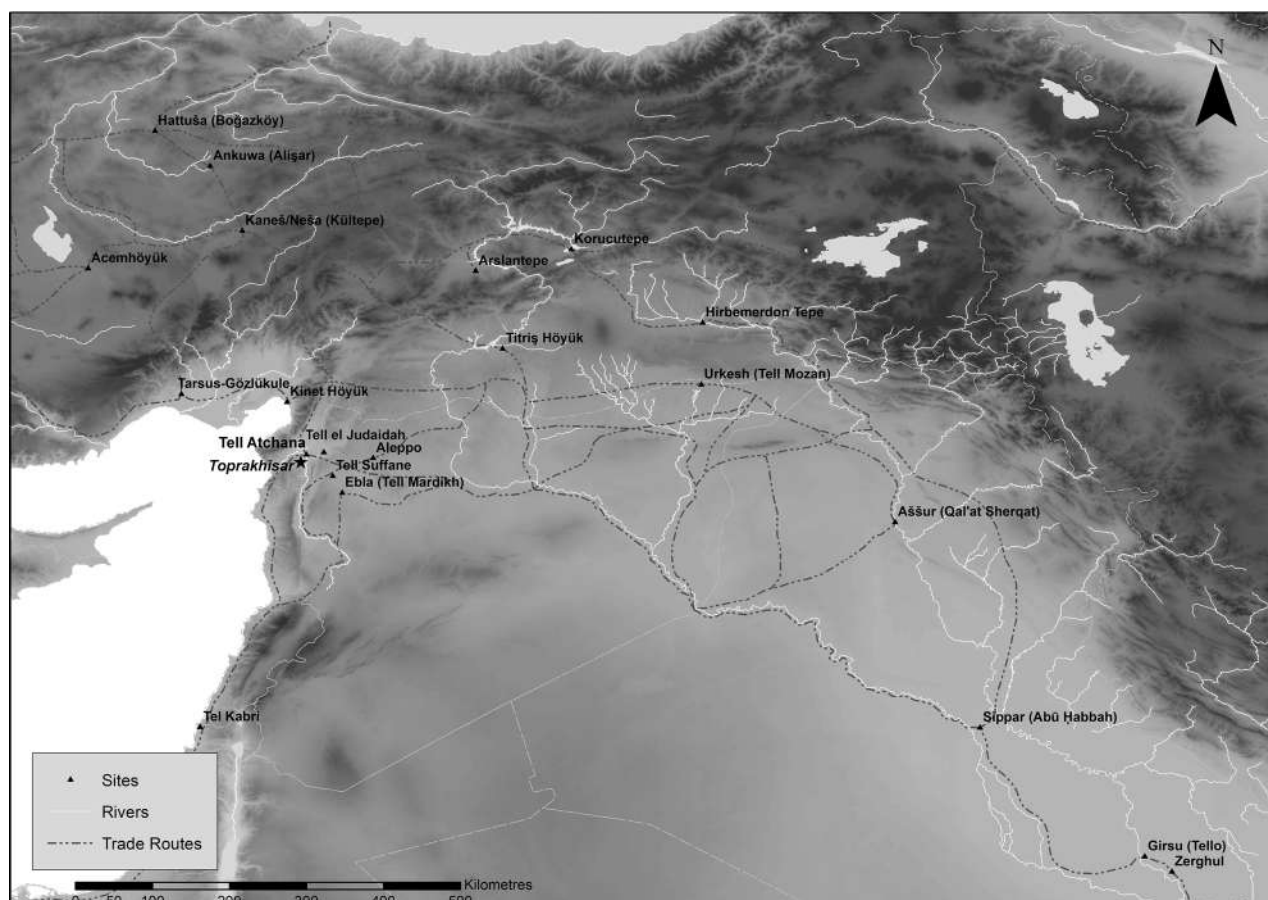


Fig. 1. Map of sites in Anatolia and the Near East in relation to the trade routes of Early Bronze IVB to Middle Bronze I (adapted from Roaf 1990: 113; prepared by M. Akar and O.H. Kirman).

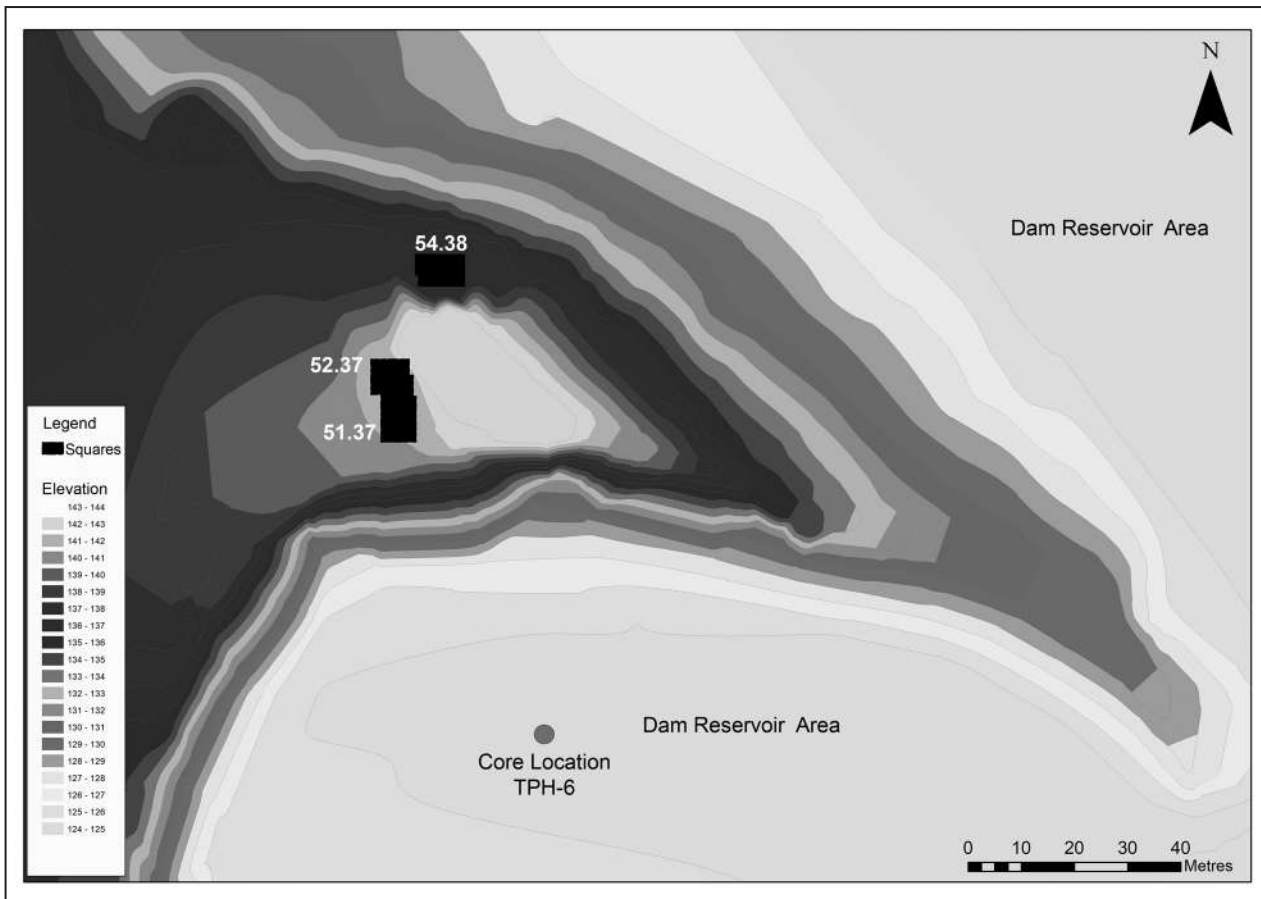


Fig. 2. Topographic plan of Toprakhisar Höyük with squares excavated in Area 1 (plan by M. Akar).

assemblage does not include index markers for establishing a fine-tuned Middle Bronze I to Middle Bronze II relative chronology, radiocarbon dates acquired from short-lived wood samples collected from around the hearths have revealed a consistent date range (2138–1980 BC: see Akar, Kara 2020: 89, fig. 10) that is roughly contemporary with the Old Assyrian trade network period at Kültepe-Kanesh.

The archaeological contexts have exposed the well-organised storage, serving and kitchen quarters of a much larger complex that extends beyond the excavation limits in easterly, westerly and northerly directions, and exceeds the size of a domestic structure. Its spatial extent, as well as the similarities observed with palatial structures, in terms of the organisation of space, at neighbouring major and secondary centres, like Ebla, Alalakh and Kinet Höyük, have been contextualised within a regional style in palatial and administrative architectural customs. The current evidence implies that secondary-character sites were also inspired by regional trends and adopted similar building traditions, representing the prestige and authority of the ruling groups (Akar, Kara 2018b: 100; 2020: 86). Thus, we have suggested previously that Building 2 functioned as an administrative centre that managed and controlled the production of the valuable agro-products of

olive oil and wine (Akar, Kara 2020: 87). The contextual study of the substantial amount of archaeobotanical remains, including olive pits and grape seeds, is currently ongoing (Evangelia Pişkin and Seren Burgaç, personal communication May 2020).

The archaeological evidence pointing to administrative management at a peripheral site is in accordance with the textual evidence acquired from the later part of the Middle Bronze Age Level VII archives at Tell Atchana, which indicates that certain privileges were granted to settlements specialised in olive-oil and wine production (Lauinger 2015: 112). Furthermore, texts state that administrative personnel from Alalakh resided in the periphery throughout the year to control the agricultural production process (Magnees-Gardiner 1994: 43; Lauinger 2015: 95). Similar textual records from Tell Mardikh, Ebla Palace G, also point to the significance of the region as an olive-oil and wine production centre from the Early Bronze Age onwards (Batiuk 2013: 471), suggesting a similar model of exploitation in the early Middle Bronze Age.

Of particular interest are the decorated horseshoe-shaped hearths found in the courtyards of Building 2. These have been identified as index markers of cultural change, as they are virtually unknown in the Amuq valley



during the Middle Bronze Age, and no such tradition has thus far been noted at Alalakh, nor at other major sites like Tell el Judaidah (fig. 3; Akar, Kara 2020: 95). Yet, remarkably, identical examples have been found at Upper/Middle Euphrates and Upper Tigris sites from the late Early Bronze Age to the Middle Bronze Age, providing a direct link in terms of symbolism encoded in cooking practices (for examples, see Kelly-Buccellati 2004; Aquilano 2016: 114; Ay 2021: 348, fig. 9).

#### Votive deposit and collective memory-building practices

In a previous article published in *Anatolian Studies*, we detailed the archaeological evidence from Building 2, which revealed foundation and termination rituals conducted during its construction and later deconstruction. A theoretical understanding of social-behaviour patterns in rural settlements and how rituals aided the creation of administratively mediated collective memories contributing to the formation of cultural memory was reviewed from the standpoint of a peripheral settlement (Akar, Kara 2020). Locally made sandstone statuettes found in the foundation ritual pits, which stylistically fall into the category of ‘stone spirits’ (Carter 1970), not only substantiate the designation of Building 2 as an important structure but also yield connections to northern Mesopotamian trends in terms of material reflections in ritual customs (fig. 4; see also Akar, Kara 2020: figs 11–15). The stone spirits in early Middle Bronze I contexts at Toprakhisar have been discussed as reflections of new groups in the peripheries, including Amorites and Hurrians (Akar, Kara 2020).

#### The context

During the 2018 field season, a new excavation area (Sq. 54.38) was opened on the northern slope of the mound where a terrace had already been cut by locals to create space for small-scale agricultural activity (fig. 2). A



Fig. 3. Horseshoe-shaped hearths from Toprakhisar Höyük (photograph by M. Akar).



Fig. 4. A ‘stone spirit’ from Toprakhisar Höyük (photograph by M. Akar).

mould-made lead object was found 20cm above the disturbed Early Bronze IVB to Middle Bronze I (ca 2300–1800) transitional surface (Local Phase 3), mixed by ploughing activity.

Three local phases encountered below the topsoil all point to storage and open-air activity spaces. Rubbish pits exposed approximately 30cm below the topsoil (Local Phase 1) disturbed the earlier phase (2), well defined by four deep early Middle Bronze I silos, ca 2m in diameter. (figs 5–6). However, the ground level from which the Local Phase 2–1 silos and pits were dug was at a higher level that was completely disturbed due to modern terracing. Local Phase 2 silos cut an earlier building phase (Local Phase 3) in the east, defined by a platform, where a large silo, as well as small-scale storage bins, were placed.

In this puzzling stratigraphic sequence, only one of the Middle Bronze I silos (Local Phase 2, L3) was excavated to its ground level, reaching ca 2.5m in depth. The silo, judging by its construction technique, is understood to be not a simple pit but a carefully built structure. Through the use of thick mortar and the diagonal placement of mudbricks, a circular underground construction was built. Based on the silo excavated, the open eastern side may point either to underground access or to an adjoining silo, though this cannot be fully understood without further extension of the excavation area (fig. 7).



Fig. 5. View of Sq. 54.38 from the north in relation to its disturbed surroundings, with section drawing of the modern terracing cut (photograph by M. Akar; drawing by O.H. Kirman).

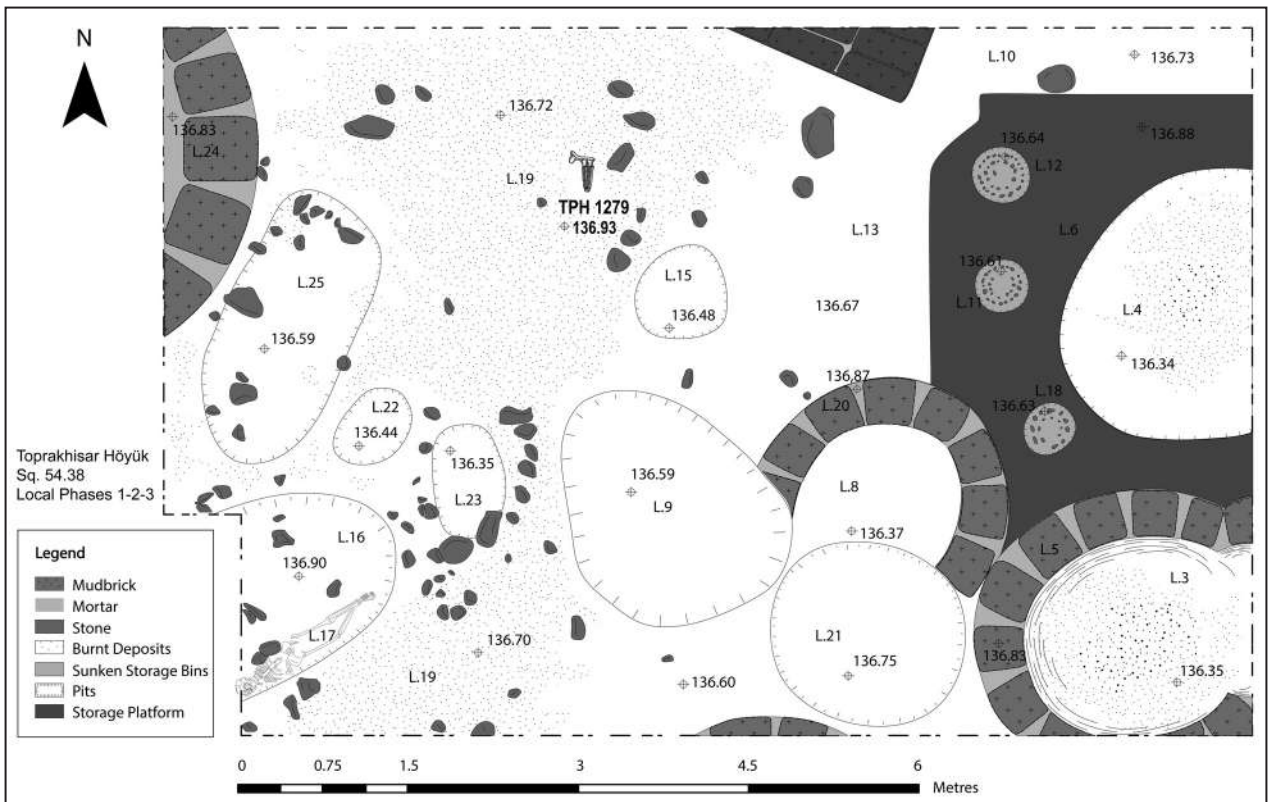


Fig. 6. Plan of Local Phases 1-2-3 in Sq. 54.38. The find location of the mould-made lead foundation peg (TPH 1279) is marked on the plan.





Fig. 7. Local Phase 1 silo (L3) excavated to its bottom level (photograph by M. Akar).

Based on preliminary observations, charred botanical remains were limited; the contents of the silos were likely emptied prior to their end use, as suggested by intentional filling. Conclusive remarks cannot be offered until the archaeobotanical study is completed.

Together with several rubbish pits, Local Phase 1 also revealed signs of stress at the site: human remains from at least four individuals were disposed of in one of the rubbish pits along the southwestern corner of the section: an atypical burial location and treatment, given the evidence from burials at nearby Tell Atchana (Ingman 2020; Ingman et al. 2021; the human remains have been sampled for ancient DNA analysis and are currently being studied at the Max Planck Institute for the Science of Human History).

The 5m of archaeological deposit above the silo phase is completely missing due to the deep modern terracing aimed at creating space for agricultural activity. Section cleaning along this high cut revealed a well-defined burnt layer with Middle Bronze I ceramic types, which may stratigraphically correspond to the same event that destroyed the Middle Bronze I Building 2, located in close proximity to the south (Akar, Kara 2018b). The post-use fill deposit inside silo L3 revealed Middle Bronze I ceramic types (fig. 8) similar to those known from Building 2 in Sqs. 51/52.37. This indicates that the Middle Bronze I silo phase encountered in Sq. 54.38 is either contemporary (based on ancient terracing) or slightly earlier than Building 2, excavated in Sqs. 51/52.37.

The Middle Bronze I silos cut late Early Bronze IVB contexts (Local Phase 3), judging by the presence of Smeared Washed, Red-Black Burnished and Painted Simple Ware sherds in high quantities, which confirm the dating of the earliest exposed phase to the late third- to early second-millennium BC transition. The context into which the Middle Bronze I silos were cut cannot be dated to later periods, since even though it is mixed, the ceramic

evidence is consistently late Early Bronze IVB or Middle Bronze I in the disturbed deposits, with similar ware types and forms known from the Tell Mardikh, Ebla and Tell Tayinat Early Bronze IVB assemblages (D'Andrea 2019; 2020; Welton 2014).

The mould-made lead object was not found inside a Middle Bronze I silo but nearby and over the highly disturbed late Early Bronze IVB surface into which they were cut (TPH 1279 on fig. 6). The overall stratigraphic evidence suggests that the object was produced and used in a temporal framework that stretches from late Early Bronze IVB to the end of Middle Bronze I (ca 2300–1800 BC). Due to the mixed nature of the context and the presence of deep silos with undefined ground levels, a more fine-tuned date range cannot be offered. However, the style, as discussed below, fits best with examples from Kültepe-Kārum II–Ib (ca 1950–1719; Kulakoğlu 2011; see also Barjamovic et al. 2012: 34, fig. 11).

### The mould-made lead figurine

The figurine (figs 9, 10) has been identified as lead through macroscopic observation, which also revealed that it was produced in a mould; while the mould has not been recovered at Toprakhisar Höyük, the figurine is assumed to have been produced in a two-part mechanism, judging by various examples from elsewhere (Canby 1965; Emre 1971). Its shaft has a narrow triangular shape with a flat bottom bent slightly backward (max. h: 3.8cm; shaft h: 2.3cm; max.w: 2.4cm; max. shaft w: 1.1cm; max. shaft th: 0.25cm). The front decoration includes multiple haphazardly aligned horizontal lines in relief from top to bottom, divided into two by a slightly deeper vertical groove. The bottom part is bordered by two opposing curved lines in relief. The upper part of the object is a stylised quadruped, specifically a bovine (interpreted here as a bull), depicted in side view. Two legs of the quadruped stand in alignment with the horizontal lines below. In the second stage of production, an additional drop of lead was carelessly melted over the back part of the quadruped (Michael Johnson, personal communication June 2020). The top part of the quadruped was then cold worked to create a smooth back and possibly also the horns and the short tail. Facial details, including the nose and mouth, are barely visible. The back of the lower part is flat and undecorated, but the quadruped was given a three-dimensional appearance during the cold-working process, expanding the body on both sides over the shaft.

### Discussion

Metal objects are very limited in the Toprakhisar Höyük material assemblage from late Early Bronze IVB to Middle Bronze I contexts. However, evidence of metallurgical activities is present in the form of pyro-techno-

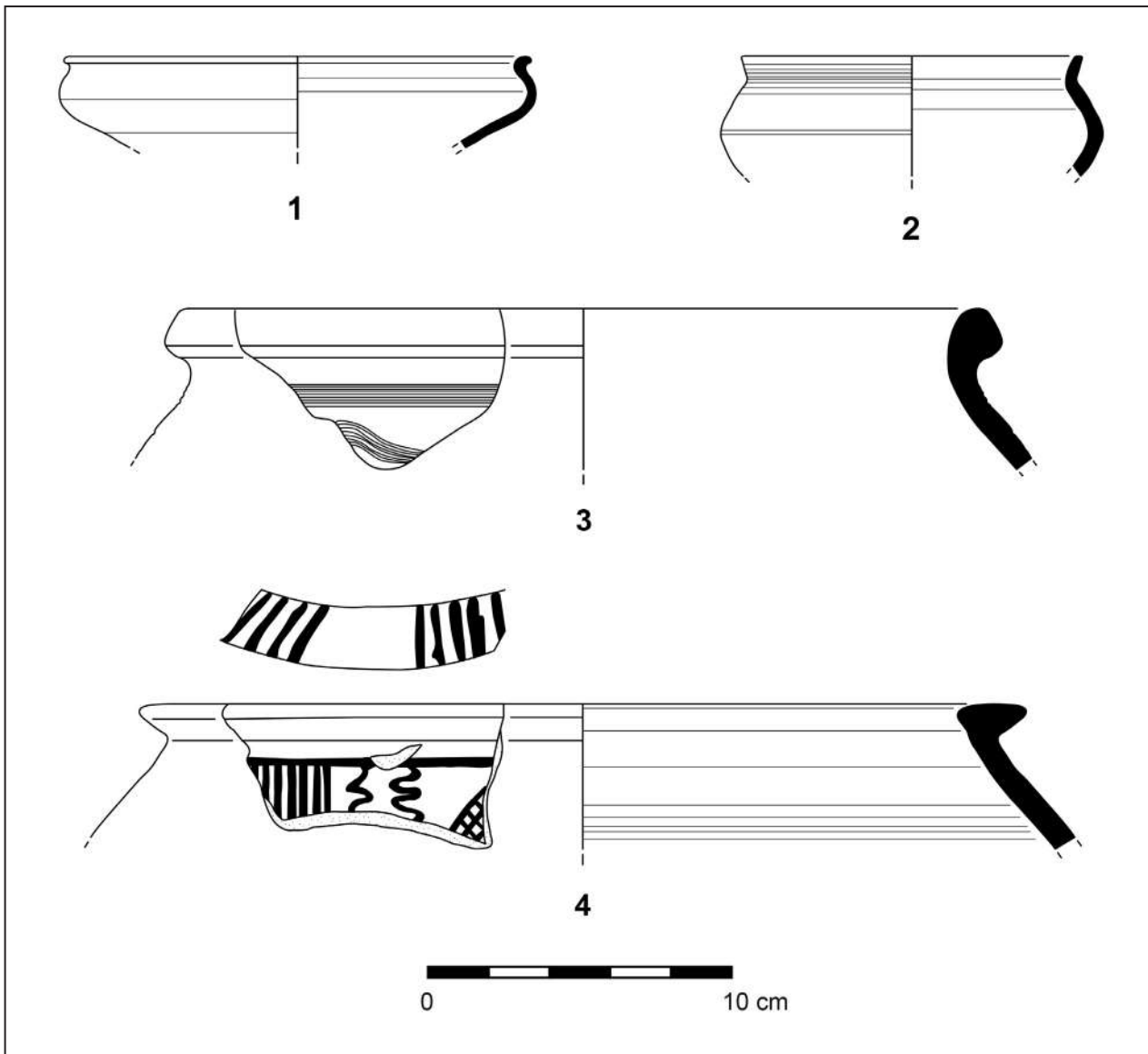


Fig. 8. Selection of Middle Bronze I pottery types from silo (L3) in Sq. 54.38: (1) TPH 1564.1; (2) TPH 1564.3 (bowls); (3) TPH 1542.7 (globular jar); (4) TPH 1564.5 (krater) (selection by M. Bulu; hand drawings by S. Ün; digitised by G. Temizkan).

logical installations, moulds, slags and crucibles in the levels exposed under Building 2 in Sq. 51/52.37 (Local Phases 4–5). Copper-alloy objects are rare and found in the form of pins; lead was used for the production of weights and spindle whorls. On the other hand, locally produced stone tools make up a large portion of the objects with utilitarian functions. The material evidence pointing to the presence of metallurgical activity and stone-carving industries shows that the Toprakhisar community had the required level of technological know-how to produce a mould-made lead object. However, whether it was produced by a travelling craftsperson (Zaccagnini 1983; Sasson 1968; 2008) or a local workshop is uncertain.

As the object was found out of context, it is not easy to assign a specific function. Nevertheless, we propose that it was designed to resemble a copper-alloy foundation peg, though smaller in size and carelessly produced in comparison to its counterparts from elsewhere. There is no loop hole on the object, the shaft is thick and edged, and no stylistic parallels with amulets, pendants or pins can be identified: thus, we do not favour these identifications. The extremely rare presence of personal ornaments in the form of stone or shell beads at Toprakhisar Höyük reinforces this conclusion.

Its resemblance to copper foundation pegs from Middle Bronze A Syro-Anatolia (fig. 11) may indicate something about the economic capacity of the settlement. A copper-alloy foundation peg is unlikely to be found at



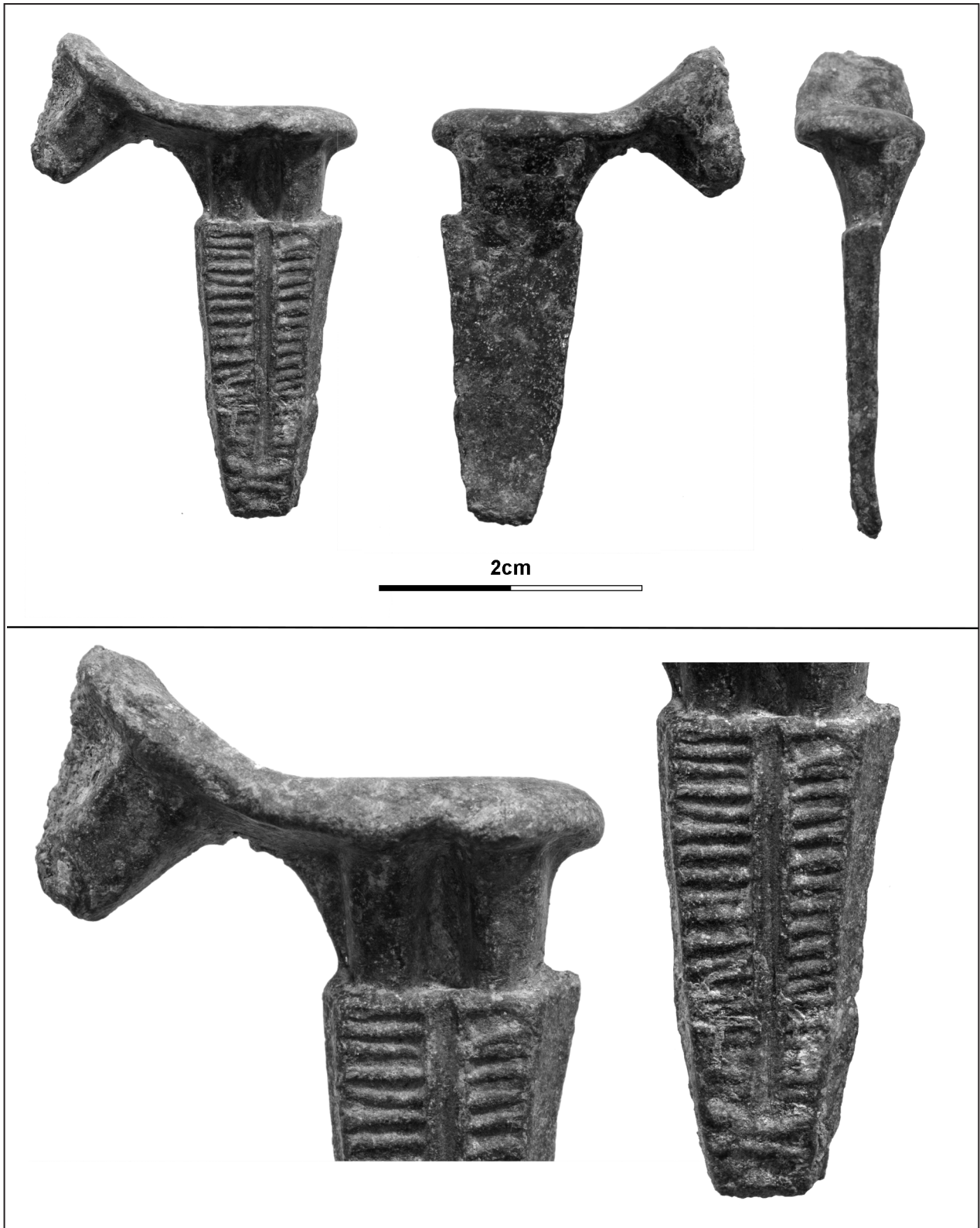


Fig. 9. The mould-made lead figurine (TPH 1279): front, back and side views, and details of the front, top and bottom (photographs by M. Akar).

a peripheral site, especially in a disposal context, since metals were precious and rare. However, in this case, a much smaller-than-normal object was produced with the

use of a non-precious metal. The symbolic meanings could then have been transferred to this object of lesser value, and it was subsequently used in a foundation ritual.

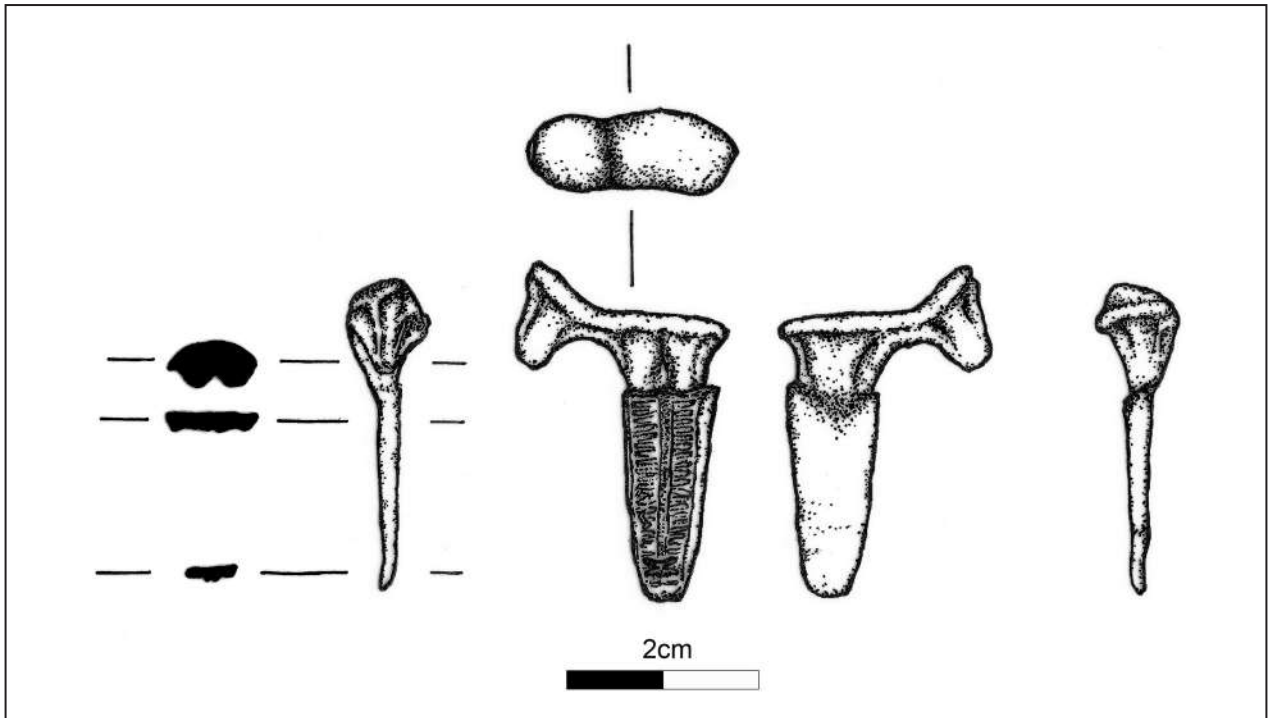


Fig. 10. The mould-made lead figurine (TPH 1279): front, back, top and side views (drawing by O.H. Kırman).

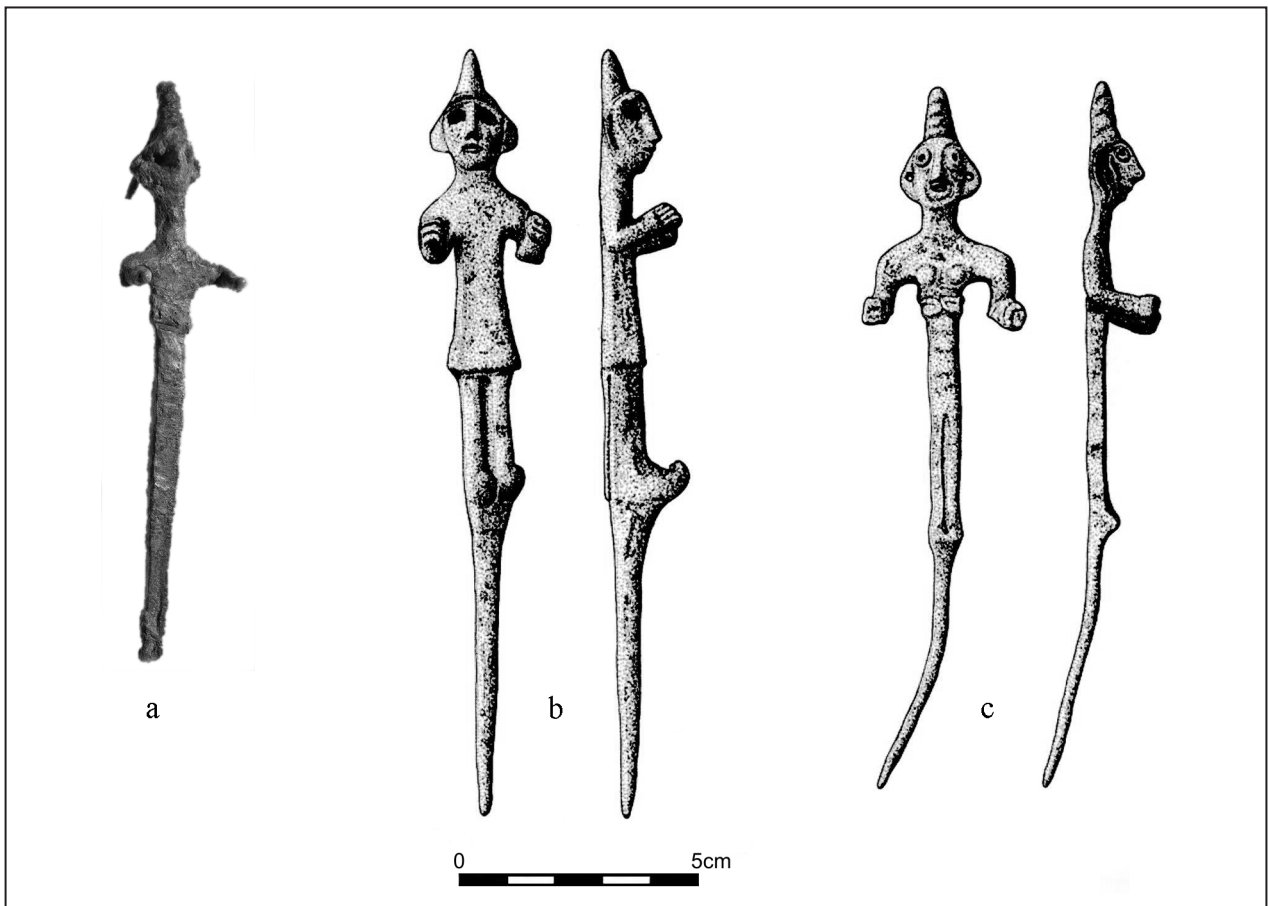


Fig. 11. Selected foundation pegs from (a) Tell Atchana (after Woolley 1955: pl. LXX, AT/39/67; image © The Trustees of the British Museum) and (b, c) Oylum Höyük (after Engin 2011: çizim 3).

This functional attribution finds a parallel in an Alişar lead figurine (e2317) that was found in the foundations of Palace M/11 (Schmidt 1931: 74, 77; Emre 1971: 10). A lead figurine was also found in a late Early Bronze III ritual pit at Küllüoba (Şahin 2016), further testifying to the disposal of such figurines in foundation or pit rituals as part of commemorative practices.

No examples of mould-made lead figurines have yet been found at Tell Atchana, Alalakh. This could be due to the limited nature of the Middle Bronze I exposures, which are constrained to palace and temple complexes and exclude evidence from household or other utilitarian contexts (Woolley 1955). However, lead objects from the region are known, with one mould and one figurine from Tell Mardikh, Ebla (Matthiae 1989: 205, pl. 158; Marchetti 2003: 407, fig. 30) and one figurine from Tell el Judaidah in the Amuq valley (Emre 1971: 17, pl. VI.2). An unprovenanced mould from northern Syria is associated with the Ebla workshop (Muscarella 1981: 238–40, no. 208; Marchetti 2003: 407, fig. 44).

Found together with a large number of clay figurines in pit F.5861, in close proximity to Northern Palace P, at Tell Mardikh (Peyronel 2008: 180), the Ebla lead figurine may also be linked contextually with ceremonial activities performed in and around the palace. An iconographic resemblance to the Tell el Judaidah male figurine, in terms of the horizontal lines applied on the clothing, is noted, yet the subject, and perhaps, accordingly, the function, may be different (Emre 1971). Further iconographic similarities for the peg part of the figurine can be found in the details of the dresses of ‘divine couple’ figurines, or their stone moulds, from Kültepe-Kārum Levels II and Ib (fig. 12; for examples, see Özgüç 1959: 53, pl. XXXIV-3; Emre 1971, pl. VI).

Considering the archaeological evidence pointing to the presence of foundation and termination rituals at the site (Akar, Kara 2020), it may be suggested that the apotropaic function of the Toprakhisar lead figurine was related to the protection of the agricultural supply, if it is to be regarded as part of a votive deposit. The presence of a large number of well-built deep silos in a limited excavation area may perhaps confirm that serious precautions were taken to preserve the yearly grain stock, aided by rituals targeting collective community experiences. This was perhaps achieved by using magico-ritual objects like the locally produced stone statuettes or mould-made lead objects, as also archaeologically defined in other excavated contexts. Such rituals are attested in much later Hittite records, for instance ‘the festival of the grain pile’ (Cammarosano 2018: 134; see also Hoffner 1974 for grain storage strategies).

In the context of the dry-farming geographies of northern Mesopotamia and Anatolia, where agricultural activity is dependent on rainfall (see Wilkinson 2003: 100), it can be suggested that the object was dedicated to a storm



Fig. 12. Mould for a lead figurine (after Kulakoğlu, Kangal 2011: cat. no. 240).

god in the form of a foundation peg: the bull’s association with diverse local storm gods is both long-lasting and well attested, with the god often depicted standing with or atop a bull, and a bull is also used as a substitute for the god in certain iconographic contexts (Frankfort 1954; Ornan 2001: 14–19; Schwemer 2008). The form of the foundation peg may be a representation of a bull standing, perhaps over mountains or the god’s temple, another common storm god motif. This interpretation should be approached cautiously, however, since the quadruped is missing specific features that could confirm a clear identification as a bull.

#### *Foundation pegs with sacred animals*

Foundation pegs were used frequently in southern Mesopotamia from the third millennium BC onwards (Ellis 1968; Tsouparopoulou 2014; 2015: 17). However, early Mesopotamian examples generally depict standing divine figures; animal representations, like the Toprakhisar example, are rarely attested (Suter 2000: 61–62). Three pegs with a standing or seated bull/calf on a plinth attributed to the second dynasty of Lagash during the reign of Gudea (2144–2124 BC) from Tello are early examples (Louvre MNB 1374, 1377). Two of the copper-alloy pegs were generated from the same mould (fig. 13). Their inscriptions reveal them to be related to the rebuilding of the temple of Inanna (De Sarzec 1884–1912: pl. 28.5; Parrot 1948: fig. 44). Another example, depicting a standing bull in a reed marsh from the reign





Fig. 13. Foundation peg with a seated bull/calf from Tello (MNB 1375; image courtesy of the Louvre Museum).

of Gudea is now on display at the British Museum (BM 135993). Although it was purchased on the antiquities market in London, it is accepted to have originated from Zerghul and to be dedicated to the temple of Nanse (fig. 14; Sollberger 1975: 178). A later example with a seated calf from the Ur III period during the reign of Shulgi (2094–2046 BC), also from Tello, has similar characteristics (Parrot 1948: fig. 44). Like Toprakhisar, all these examples have bull representations, but with a different choice of metal and style.

It is commonly accepted that in the early second millennium BC, Hurrians, a northern Mesopotamian entity, adopted religious customs and cults from the former Akkadian presence in the Khabur valley and through close encounters with southern Mesopotamian cultures (Gelb 1944: 247; Wilhelm 1989: 16, 49). They then performed



Fig. 14. Foundation peg from the temple of Nanse, Zerghul (BM 135993; image © The Trustees of the British Museum).

their own foundation rituals in relation to temple and palace constructions (Buccellati, Kelly-Buccellati 1997; Buccellati 2013). This is best represented by the possible attributions of the privately acquired lion foundation pegs in the Louvre (AO 19937) and the Metropolitan Museum (48.180) to Tell Mozan, Urkesh (Buccellati, Kelly-Buccellati 2009: 59; Buccellati 2013). The cuneiform signs visible on the plaque that the Metropolitan Museum lion guards under its paws and the accompanying stone tablet for the Louvre peg are inscribed in the Hurrian language, giving the name of the city and its ruler: Tisatal, king of Urkesh (fig. 15; Parrot, Nougayrol 1948; Muscarella 1988: 374–77). Such particular objects are in accordance with Hurrian rituals known from the late Hittite record: they were intended to purify the ground or were used in pit rituals for communicating with the underworld (Collins 2002; Miller 2004; Bachvorava 2016: 86; Kıymet 2018).

Early parallels from Anatolia are absent before the Hittite Old Kingdom period (for a comprehensive overview, see Engin 2011). Several objects from unprovenanced museum collections and limited examples from systematic excavations indicate that they were in use at least from the Middle Bronze II period onwards in southeastern Anatolia.





Fig. 15. Foundation peg from Tell Mozan, Urkesh (48.180; image courtesy of the Metropolitan Museum of Art).



Fig. 16. Drawing of the mould from Titriş Höyük (after Matney et al. 1997: fig. 20).

This evidence demonstrates that such objects were adopted in central Anatolia when the Hittites expanded their political presence to Hurrian-controlled territories, adopting various aspects of their cult and rituals in the process (Darga 1992; Özcan, Akgün 2019). The presence of foundation pegs with standing divinities at Alalakh is also noted, but for the later Middle Bronze II (Level VII) and Late Bronze I levels (Woolley 1955: 276, pl. LXX; Dardeniz 2016), in line with the epigraphic evidence from the Level VII Palace, which reveals Hurrian influence/presence through personal names (Draffkorn 1959; von Dassow 2008). However, none of these objects is lead, nor do any of them display the supra-regional style that developed throughout the late Early Bronze Age and Old Assyrian trade network period.

The bull has a long history in both Anatolian and Near Eastern iconography (Collon 1994; Yener 2009), but limiting ourselves to a contemporary date range, we should note the securely dated late Early Bronze Age mould from Titriş Höyük, which was used to produce lead ornaments (fig. 16; Matney et al. 1997: 68–69, figs 19–20). This includes a pendant carving ‘in the shape of a reed hut framed with two poles, each of which are capped with a single bull head’ (Laneri 2002: 25). This may be read as an object with apotropaic attributes related to the byre where the holy cow was housed, in parallel with Near Eastern literary evidence (Laneri 2002: 25–28). It may also be interpreted within the framework of the divine use of the bull in iconography, so linking it to the Toprakhisar Höyük example.

## Conclusion

The mobility patterns of pastoralist groups noted in the textual records from the end of the Early Bronze Age to the early Middle Bronze Age is an intriguing topic in terms of understanding the shifting political and cultural dynamics in the Near East (Wilhelm 1989; Klengel 1992; Burke 2017). The presence of distinct cultural markers such as stone spirits and decorated horseshoe-shaped hearths are regarded, in the case of Toprakhisar Höyük, as being related to the presence of new groups in the region. A close relationship between the 4.2K BP climatic event and the abandonment patterns defined in and around the Khabur valley has been suggested as a catalyst, forcing groups, including Hurrians and Amorites, into habitat-tracking behaviours. Since the Orontes river system is karstic in nature, it may have been less affected by dry periods, creating suitable conditions for groups looking for favourable environments (Weiss 2014; 2017). Current palaeo-climate research in the Amuq valley is exploring this particular topic and will shed further light on it in the future (Avşar et al. 2019; 2020).

Furthermore, the relationship between climate change and human mobility has also now become a major research focus of ancient DNA studies. The gene flow defined in the transition from the Early Bronze Age to the Middle Bronze Age that is evident in human remains from Tell Mardikh, Ebla and Tell Atchana, Alalakh, may signal a northern Mesopotamian genetic contribution, a suggestion still to be confirmed through analyses of samples from this area (Skourtanioti et al. 2020: 1168–69).

In a regional and supra-regional setting, the Kültepe tablets have already confirmed that Ebla merchants were actively involved in the trading network, with references to Amorite and Hurrian names significantly increasing in Level Ib (ca 1833–1719 BC) (Bilgiç 1992; Wilhelm 2008; Kulakoğlu 2011; Michel 2014). This evidence correlates well with that from the contemporary Level VII Palace at Tell Atchana, which includes objects that share an Anatolian look (Yener 2007) or, vice versa, vessels with a Syro-Cilician origin also found at Kültepe (Özgüç 1955: 460, fig. 29). K.A. Yener (2007) further outlines the active role that Alalakh and the region played during the Old Assyrian trade network through their strategically palace-controlled metal and ivory industries, the products of which display iconographic and technological similarities to Anatolian examples. She suggests (2007: 159) that

in terms of relational associations, intriguing signs of specialized production and some type of fluid but unspecified form of exchange, perhaps of ideas and religious practices, existed between the centre at Kanesh and Achemhöyük in central Anatolia, and Alalakh and the Mukish Kingdom in the Amuq.

This archaeological interpretation has been bolstered recently by the discovery of an Old Syrian-style stele from Avanos-Akarca in Nevşehir province (Genç, Yanar 2019), which has provided further evidence of connections between the Amuq, northwestern Syria and central Anatolia. Gernot Wilhelm, from a linguistic point of view, has suggested (2008: 193) that ‘Hurrian literary culture may well have radiated towards Hassum’s neighbours, Halab, Mukiş and Kizzuwatna and via these intermediaries influenced the culture of the Hittite capital of the late 15th to the end of the 13th centuries.’ These accumulating textual and archaeological records further point to the less understood and often bypassed connections established through the trade networks that followed the routes from Ebla to Anatolian centres, including the Amuq valley, from the mid-third millennium BC onwards (Archi 2011; Barjamovic 2019).

In accordance with the mobility patterns of Amorite and Hurrian groups, as well as with the consequent development of complex trade networks, Syro-Anatolia witnessed the formation of complex iconographies, as expressed in material reflections of cult and ritual (see van Loon 1985; Heffron 2016: 39; 2017: 300). This is well recorded for sealing practices in Anatolian trading centres (Özgüç 2015), but metallurgical evidence is sparse, and best observed in the wide distribution of lead objects and their stone moulds (Emre 1971). Lead figurines, as a product of this interconnected period, can be regarded as the material reflections of household ritual practices

adopted by a diverse range of local communities within a wide geographical framework linked to the trade networks of the late Early Bronze Age to early Middle Bronze Age. Revealing similarities, but at the same time variety, they may be regarded as the products of non-institutionalised practices adopted by the communities involved in the business of trade. Furthermore, the presence of various early Middle Bronze Age hoards in eastern Mediterranean contexts emphasises the connections between traders and technological knowledge-sharing through highly skilled craftsmanship (Philip 1998: 203).

The Hurrians as a cultural or ethnic identity remain an enigma in the archaeological record, yet the textual evidence from northern Syrian sites demonstrates that the Hurrian pantheon of deities was amalgamated with Eblaite gods and goddesses once they reached northern Syria (Salvini 1998: 115; Archi 2002: 31; Wilhelm 2008: 181). According to S. Mazzoni (2016: 311), the cult of the storm god in the region gained importance during Middle Bronze I–II periods, particularly in the context of increasing agricultural exploitation of the landscape and developing trade dynamics. The cylinder seal from the rural site of Tell Suffane carved in Syro-Cappadocian style depicting a person worshipping a bull altar perhaps indicates growing interest in the cult of the storm god, particularly in the hinterland, as well as the role that northern Syria played in cross-regional dynamics during the late Early Bronze Age and Middle Bronze I–II (Mazzoni 2005: 9, fig. 7.3; 2006: 386–87, pl. 8c–d; see also Mazzoni 2016; 2020).

While archaeological evidence for the cult of a storm god is still undetected at Alalakh for the early second millennium BC (Yener 2015), the smiting god figure occurs sporadically from Late Bronze I onwards on seals and in sealing practices (Collon 1975: 184; see also Mazzoni 2006: 299). Nearby, an earlier temple likely exists under the Iron Age temple of the storm god on the Aleppo citadel (Kohlmeyer 2009; Hawkins 2011). A storm god may also have been worshipped at the Kura-Hadad Temple of the Rock at Ebla from Early Bronze IVA onwards (Matthiae 2006: 489; see also Archi 2010). At Samandağ in the southwest, the sacred Mount Hazzi (Keldağ) stands as the sacred throne of Teshup, visible from Alalakh on a clear day (Healey 2020). At the northern end of the Amuq valley, the storm god cult may also be found at Kızılkaya (Kırıkan), where, beaten by strong winds, the remains of an early second-millennium BC rock temple stand at the summit, overlooking the Amuq valley of Hatay (Akar et al. 2020).

Along with the evidence of administrative practices from Middle Bronze I contexts, the lead figurine from Toprakhisar Höyük may be regarded as an echo of these economic and cultural encounters, as the region was part of the larger network of trade flowing (non-exclusively)

towards central Anatolia. We suggest that this was due to its agro-economy, which focused on the luxury organic products of olive oil and wine, effectively granting economic prosperity but perhaps also creating a vulnerability to breakdowns in trade networks. A standing bull figure depicted on a mould-made lead foundation peg may then be seen as one of the earliest iconographic representations of the cult of the storm god at Toprakhisar Höyük, either in the form of the Eblaite Hadad, Syro-Palestinian Ba'al, Assyro-Babylonian Adad or Hurrian Teshup (see Schwemer 2007; 2008, Green 2003).

Thus the Toprakhisar Höyük figurine can be read as a hybridised cult object that incorporates a supra-regional style and was involved in the larger trade networks of its time period. The functional designation as a foundation peg or a votive disposal object is in accordance with the building rituals of northern Mesopotamia (Ellis 1968). The iconography, on the other hand, is stylistically similar to Syro-Anatolian mould-made lead figurines and copper-alloy foundation pegs that were produced by communities involved in the business of trade, both in terms of production and style, and in the application of a

bull figure. These iconographic and functional attributes were then perhaps forged into the cult of the storm god at this hinterland site, which, we propose, attracted habitat-tracking populations during the environmentally stressed late Early Bronze Age to early Middle Bronze Age, a period that is characterised by intense cultural encounters.

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### Bibliography

- Akar, M., Aşar, U., Bulu, M. 2020: 'Amik Ovası bölgesel yüzey araştırması 2018 yılı çalışmaları' *Araştırma Sonuçları Toplantısı* 37.2: 577–87
- Akar, M., Kara, D. 2018a: 'Toprakhisar Höyük: M.Ö. 6. binyıldan 1. binyıla Amik Ovası ve Altınözü kırsal yerleşimleri arası politik, ekonomik ve kültürel ilişkiler' *Anadolu* 44: 181–209
- 2018b: 'Into the hinterland: the Middle Bronze Age building at Toprakhisar Höyük, Altınözü (Hatay, Turkey)' *Adalya* 21: 85–115
- 2020: 'The formation of collective, political and cultural memory in the Middle Bronze Age: foundation and termination rituals at Toprakhisar Höyük' *Anatolian Studies* 70: 77–103
- Aquilano, M. 2016: 'Andirons, lamps and portable hearths' in N. Laneri (ed.), *Hirbemerdon Tepe Archaeological Project 2003–2013 Final Report: Chronology and Material Culture*. Bologna, BraDypUS: 113–16
- Archi, A. 2002: 'Formation of the west Hurrian pantheon: the case of Ishara' in K.A. Yener, H.A. Hoffner (eds), *Recent Developments in Hittite Archaeology and History: Papers in Memory of Hans G. Güterbock*. Winona Lake, Eisenbrauns: 21–34
- 2010: 'Hadda of Ḫalab and his temple in the Ebla period' *Iraq* 72: 3–17
- 2011: 'In search of Armi' *Journal of Cuneiform Studies* 63: 5–34
- Aşar, U., Akar, M., Köksal, F.T., Yavuz, N., Pişkin, E. 2021: *Holosen Boyunca Yaşanan İklim Değişikliklerinin Amik Ovası'ndaki Jeolojik ve Arkeolojik İzleri Tübitak 1: Gelişme Raporu 1*. Unpublished Report
- Aşar, U., Akar, M., Pearson, C. 2019: 'Geoarchaeological investigations in the Amuq valley of Hatay: sediment coring project in the environs of Tell Atchana' in H. Sözbilir, Ç. Özkaymak, B. Uzel, Ö. Sümer, M. Softa, Ç. Tepe, S. Eski (eds), *The Proceedings and Abstracts Book: 72nd Geological Congress of Turkey, January 28 – February 1, 2019*. Ankara, TMMOB Jeoloji Mühendisleri Odası: 798–802
- 2020: 'Hatay Amik Ovası jeoarkeoloji projesi: sediman karotu çalışmalarının ön sonuçları' *Arkeometri Sonuçları Toplantısı* 35: 711–15
- Ay, E. 2021: 'A Hurrian-Mitanni temple in Müslüman-tepe in the upper Tigris and new findings' *Gaziantep University Journal of Social Sciences* 20.2: 338–61
- Bachvarova, M.R. 2016: *From Hittite to Homer: The Anatolian Background of Ancient Greek Epic*. Cambridge, Cambridge University Press
- Barjamovic, G. 2011: *A Historical Geography of Anatolia in the Old Assyrian Colony Period*. Denmark, Museum Tusculanum Press



- 2019: ‘Silver, markets and long-distance trade in the Konya region, 2400–1700 BCE’ in Ç. Maner (ed.), *9th International ANAMED Annual Symposium: Crossroads: Konya Plain from Prehistory to the Byzantine Period*. Istanbul, Ege Yayınları: 71–82
- Barjamovic, G., Chaney, T., Coşar, K., Hortaçsu, A. 2019: ‘Trade, merchants, and the lost cities of the Bronze Age’ *The Quarterly Journal of Economics* 134.3: 1455–1503
- Barjamovic, G., Hertel, T., Larsen, M.T. 2012: *Ups and Downs at Kanesh: Chronology, History and Society in the Old Assyrian Period*. Leiden, Nederlands Instituut voor het Nabije Oosten
- Batiuk, S.D. 2013: ‘The fruits of migration: understanding the “longue dureé” and the socio-economic relations of the early Transcaucasian culture’ *Journal of Anthropological Archaeology* 32: 449–77
- Bilgiç, E. 1992: ‘Ebla in Cappadocian inscriptions’ in H. Otten, H. Ertem, E. Akurgal, A. Süel (eds), *Hittite and Other Anatolian and Near Eastern Studies in Honour of Sedat Alp*. Ankara, Türk Tarih Kurumu Basımevi: 61–66
- Buccellati, G. 2013: ‘When were the Hurrians Hurrian? The persistence of ethnicity in Urkesh’ in J. Aruz, S.B. Graff, Y. Rakic (eds), *Cultures in Contact: From Mesopotamia to the Mediterranean in the Second Millennium BC*. New York, Metropolitan Museum of Art: 84–95
- Buccellati, G., Kelly-Buccellati, M. 1997: ‘Urkesh: the first Hurrian capital’ *Biblical Archaeologist* 60.2: 76–96
- 2009: ‘The Great Temple Terrace at Urkesh and the lions of Tish-atal’ in G. Wilhelm (ed.), *General Studies and Excavations at Nuzi 11/2: In Honor of David I. Owen on the Occasion of his 65th Birthday, October 28, 2005*. Bethesda, CDL Press: 33–70
- Burke, A.A. 2017: ‘Amorites, climate change, and the negotiation of identity at the end of the third millennium BC’ in F. Höflmayer (ed.), *The Late Third Millennium in the Ancient Near East: Chronology, C14, and Climate Change*. Chicago, University of Chicago Press: 261–307
- Camarosano, M. 2018: *Hittite Local Cults*. Atlanta, SBL Press
- Canby, J.V. 1965: ‘Early Bronze “trinket” moulds’ *Iraq* 27.1: 42–61
- Carter, T.H. 1970: ‘The stone spirits’ *Expedition* 12: 22–40
- Casana, J. 2009: ‘Alalakh and the archaeological landscape of Mukish: the political geography and population of a Late Bronze Age kingdom’ *Bulletin of the American School of Oriental Research* 352: 7–37
- Collins, B.J. 2002: ‘Necromancy, fertility and the dark earth: the use of ritual pits in Hittite cult’ in P. Mirecki, M. Meyer (eds), *Magic and Ritual in the Ancient World*. Leiden, Brill: 224–41
- Collon, D. 1975: *The Seal Impressions of Tell Atchana/Alalakh*. Kevelaer, Butzon & Bercker
- 1994: ‘Bull-leaping in Syria’ *Agypten und Levante* 4: 81–85
- Curtin, P.D. 1984: *Cross-Cultural Trade in World History*. Cambridge, Cambridge University Press
- D’Andrea, M. 2019: ‘The EB–MB transition at Ebla: a state-of-the-art overview in the light of the 2004–2008 discoveries at Tell Mardikh’ in M. D’Andrea, M.G. Micale, D. Nadali, S. Pizzimenti, A. Vacca (eds), *Pearls of the Past: Studies on Near Eastern Art and Archaeology in Honour of Frances Pinnock*. Münster, Zaphon Verlag: 263–98
- 2020: ‘The Early Bronze IVB pottery from Tell Mardikh/Ebla: chrono-typological and technological data for framing the site within the regional context’ *Levant* 52.1–2: 1–29
- Dardeniz, G. 2016: ‘Cultic symbolism at the city gates: two metal foundation pegs from Tell Atchana, Alalakh (Turkey)’ *Adalya* 19: 31–50
- Darga, M. 1992: *Hitit Sanatı*. Istanbul, Akbank Kültür ve Sanat Yayınları
- De Giorgi, A. 2007: ‘The formation of a Roman landscape: the case of Antioch’ *Journal of Roman Archaeology* 20: 283–99
- De Sarzec, E. 1884–1912: *Découvertes en Chaldée*. Paris, Ernest Leroux
- Draffkorn, K.A. 1959: *Hurrians and Hurrian at Alalah: An Ethno-Linguistic Analysis*. PhD thesis, University of Pennsylvania
- Ellis, R.W. 1968: *Foundation Deposits in Ancient Mesopotamia*. New Haven/London, Yale University Press
- Emre, K. 1971: *Anadolu Kurşun Figürinleri ve Taş Kalıpları*. Ankara, Türk Tarihi Kurumu Basımevi
- Engin, A. 2011: ‘Oylum Höyük kazılarında ele geçen bir grup orta tunç çağı yapı adak eşyası’ *Belleten* 75: 19–58
- Frankfort, H. 1954: *The Art and Architecture of the Ancient Orient*. London, Penguin
- Gelb, I.J. 1944: *Hurrians and Subarians*. Chicago, University of Chicago Press
- Genç, E., Yanar, U. 2019: ‘An Old Syrian period stele from Avanos-Akarca, Anatolia’ *OLBA* 27: 61–96
- Green, A.R.W. 2003: *The Storm-God in the Ancient Near East*. San Diego, University of California Press
- Hawkins, J.D. 2011: ‘The inscriptions of the Aleppo Temple’ *Anatolian Studies* 61: 35–54



- Healey, J. 2020: 'The sacred mountain of Ugarit and Alalah? Mount Kasion and related issues' in K.A. Yener, T. Ingman (eds), *Alalakh and its Neighbours: Proceedings of the 15th Anniversary Symposium at the New Hatay Archaeology Museum, 10–12 June 2015*. Leuven, Peeters: 307–16
- Heffron, Y. 2016: 'Stone stelae and religious space at Kültepe-Kaneš' *Anatolian Studies* 66: 23–42
- 2017: 'Anatolian lead figurines: a stocktaking' in E. Kozal, M. Akar, Y. Heffron, Ç. Çilingiroğlu, T.E. Şerifoğlu, C. Çakırlar, S. Ünlüsoy, E. Jean (eds), *Questions, Approaches, and Dialogues in Eastern Mediterranean Archaeology*. Münster, Ugarit-Verlag: 279–306
- Highcock, N. 2018: 'Assyrians abroad: expanding borders through mobile identities in the Middle Bronze Age' *Journal of Ancient Near Eastern History* 4.1–2: 61–93
- Hoffner, H.A. 1974: *Alimenta Hethaeorum: Food Production in Hittite Asia Minor*. New Haven, American Oriental Society
- Ingman, T. 2020: 'Mortuary practices and GIS modelling at Tell Atchana, Alalakh' in K.A. Yener, T. Ingman (eds), *Alalakh and its Neighbours: Proceedings of the 15th Anniversary Symposium at the New Hatay Archaeology Museum, 10–12 June 2015*. Leuven, Peeters: 389–406
- Ingman, T., Eisenmann, S., Skourtanioti, E., Akar, M., Ilgner, J., Gneccchi Ruscone, G.A., le Roux, P., Shafiq, R., Neumann, G.U., Keller, M., Freund, C., Marzo, S., Lucas, M., Krause, J., Roberts, P., Yener, K.A., Stockhammer, P.W. 2021: 'Human mobility at Tell Atchana (Alalakh), Hatay, Turkey during the 2nd millennium BC: integration of isotopic and genomic evidence' *PLoS ONE* 16.6: e0241883. <https://doi.org/10.1371/journal.pone.0241883>
- Karataş, C., Pamir, H. 2021: 'An evaluation of the Late Neolithic pottery assemblages from the Kuseyr plateau in Hatay region (Turkey)' in Y. Tonoike, R. Özbal, M. Erdalkıran (eds), *Neolithic Pottery from the Near East. Production, Distribution and Use. Third International Workshop on Ceramics from the Late Neolithic Near East, 7-9 March, 2019 Antalya: Proceedings*. Istanbul, AKMED: 307–320
- Kelly-Buccellati, M. 2004: 'Andirons at Urkesh: new evidence for the Hurrian identity of the early Trans-Caucasian culture' in A. Sagona (ed.), *A View from the Highlands: Archaeological Studies in Honor of Charles Burney*. Leuven, Peeters: 67–89
- Kıymet, K. 2018: 'Salat Tepe ritüellerine ilişkin bulguların Hitit-Hurri metinleri ile karşılaştırılması' *OLBA* 26: 41–96
- Klengel, H. 1992: *Syria, 3000 to 300 BC: A Handbook of Political History*. Berlin, Akademie Verlag
- Kohlmeyer, K. 2009: 'The Temple of the Storm God in Aleppo during the Late Bronze and Early Iron Ages' *Near Eastern Archaeology* 72.4: 190–202
- Kristiansen, K. 2018: 'The rise of Bronze Age peripheries and the expansion of international trade 1950–1100 BC' in J. Myrdal, K. Kristiansen, T. Lindkvist (eds), *Trade and Civilisation: Economic Networks and Cultural Ties, from Prehistory to the Early Modern Era*. Cambridge, Cambridge University Press: 87–112
- Kulakoğlu, F. 2011: 'Kültepe-Kaneš: a second millennium BCE trading center on the central plateau' in S. Steadman, G. McMahon (eds), *The Oxford Handbook of Ancient Anatolia*. Oxford, Oxford University Press: 1012–30
- Kulakoğlu, F., Kangal, S. (eds) 2011: *Anatolia's Prologue, Kültepe Kanesh Karum, Assyrians in Istanbul*. Kayseri, Kayseri Metropolitan Municipality
- Laneri, N. 2002: 'The discovery of a funerary ritual: Inanna/Ishtar and her descent to the nether world in Tütrüş Höyük, Turkey' *East and West* 52: 9–51
- Larsen, M.T. 1987: 'Commercial networks in the ancient Near East' in M. Rowlands, M. Larsen, K. Kristiansen (eds), *Center and Periphery in the Ancient World*. Cambridge, Cambridge University Press: 36–46
- 2015: *Ancient Kanesh: A Merchant Colony in Bronze Age Anatolia*. Cambridge, Cambridge University Press
- Lauinger, J. 2015: *Following the Man of Yamhad: Settlement and Territory at Old Babylonian Alalah*. Leiden, Brill
- Magness-Gardiner, B. 1994: 'Urban-rural relations in Bronze Age Syria: evidence from Alalah Level VII Palace archives' in G.M. Schwartz, S.E. Falconer (eds), *Archaeological Views from the Countryside: Village Communities in Early Complex Societies*. Washington DC, Smithsonian Institution Press: 37–47
- Makowski, M. 2016: 'Supra-regional trends in popular iconography of the ancient Near East: the case of lead plaques' *Anatolica* 42: 39–66
- Manning, S.W., Lorentzen, B., Welton, L., Batiuk, S., Harrison, T.P. 2020: 'Beyond megadrought and collapse in the northern Levant: the chronology of Tell Tayinat and two historical inflection episodes, around 4.2ka BP, and following 3.2ka BP', *PLoS ONE* 15.10: e0240799. <https://doi.org/10.1371/journal.pone.0240799>
- Marchetti, N. 2003: 'Workshops, trading routes and divine figures: on the early Middle Bronze II Syro-Anatolian lead figurines' *Orientalia* 72.4: 390–420

- Matney, T., Algaze, G., Pittman, H. 1997: 'Excavations at Titriş Höyük in southeastern Turkey: a preliminary report of the 1966 season' *Anatolica* 23: 61–84
- Matthiae, P. 1989: *Ebla: Un Impero Ritrovato*. Torino, Einaudi
- 2006: 'Un grand temple de l'époque des archives dans l'Ébla protosyrienne: fouilles à Tell Mardikh 2004–2005' *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres* 150.1: 447–93
- Mazzoni, S. 2005: 'Tell Afis, the survey and the regional sequence' *Egitto e Vicino Oriente* 28: 5–14
- 2006: 'Tell Suffane, an Early and Middle Bronze Age site in the Idlib plain' *Baghdader Mitteilungen* 37: 381–402
- 2016: 'Storm gods at Tel Afis and a Syro-Hittite seal' in P. Butterlin, J. Patrier, P. Quenet (eds), *Milles et une empreintes: un Alsacien en Orient: mélanges en l'honneur du 65e anniversaire de D. Beyer*. Turnhout, Brepols: 299–318
- 2020: 'Tel Afis and its plain: a route to the Amuq and the Mediterranean' in K.A. Yener, T. Ingman (eds), *Alalakh and its Neighbours: Proceedings of the 15th Anniversary Symposium at the New Hatay Archaeology Museum, 10–12 June 2015*. Leuven, Peeters: 343–66
- Michel, C. 2011: 'The Kārum period on the plateau' in S.R. Steadman, G. McMahon (eds), *The Oxford Handbook of Ancient Anatolia 10,000–323 BCE*. Oxford, Oxford University Press: 313–36
- 2014: 'Considerations on the Assyrian settlement at Kaneš' in L. Atıcı, F. Kulakoğlu, G. Barjamovic, A. Fairbairn (eds), *Current Research at Kültepe/Kanesh: An Interdisciplinary and Integrative Approach to Trade Networks, Internationalism, and Identity*. Atlanta, Lockwood Press: 69–84
- Miller, J.L. 2004: *Studies on the Origins, Development and Interpretation of the Kizzuwatna Rituals*. Wiesbaden, Harrassowitz
- Muscarella, O.W. (ed.) 1981: *Ladders to Heaven: Art Treasures from Lands of the Bible*. Toronto, McLelland & Stewart
- 1988: *Bronze and Iron: Ancient Near Eastern Artifacts in the Metropolitan Museum of Art*. New York, Metropolitan Museum of Art
- Ornan, T. 2001: 'The bull and its two masters: moon and storm deities in relation to the bull in ancient Near Eastern art' *Israel Exploration Journal* 51.1: 1–26
- Osborne, J. 2013: 'Sovereignty and territoriality in the city-state: a case study from the Amuq valley, Turkey' *Journal of Anthropological Archaeology* 32: 774–90
- Özcan, A., Akgün, E. 2019: 'Konya Arkeoloji Müzesi'nde bulunan yapı-adak çivileri' *TÜBA-AR* 24: 91–110
- Özgüç, N. 2015: *Acemhöyük-Burushaddum 1: Silindir Mühürler ve Mühür Baskılı Bullalar*. Ankara, Türk Tarih Kurumu
- Özgüç, T. 1955: 'Excavations at Kültepe Level II: finds' *Belleten* 19.76: 453–61
- 1959: *Kültepe-Kaniş: Asur Ticaret Kolonilerinin Merkezinde Yapılan Yeni Araştırmalar*. Ankara, Türk Tarih Kurumu
- 2003: *Kültepe-Kaniş/Neša: The Earliest International Trading Center and the Oldest Capital of the Hittites*. Tokyo, Middle Eastern Culture Center in Japan
- Palmisano, A. 2018: *The Geography of Trade: Landscapes of Competition and Long-Distance Contacts in Mesopotamia and Anatolia in the Old Assyrian Colony Period*. Oxford, Archaeopress
- Pamir, H. 2010: 'Antiokheia ve yakın çevresinde zeytinyağı üretimi ve zeytinyağı işlikleri' in Ü. Aydınoglu, A.K. Şenol (eds), *Antikçağda Anadolu'da Zeytinyağı ve Şarap Üretimi*. Istanbul, KAAM Kilikia Arkeolojisini Araştırma Merkezi: 53–74
- Parrot, A. 1948: *Tello: vingt campagnes de fouilles (1877–1933)*. Paris, A. Michel
- Parrot, A., Nougayrol, J. 1948: 'Un document de fondation Hourrite' *Revue d'Assyriologie et d'archéologie orientale* 42: 1–20
- Peyronel, L. 2008: 'Domestic quarters, refuse pits and working areas: reconstructing human landscape and environment at Tell Mardikh-Ebla during the Old Syrian period (c. 2000–1600 BC)' in H. Kühne, R.M. Czichon, F.J. Kreppner (eds), *Proceedings of the 4th International Congress of the Archaeology of the Ancient Near East, 29 March – 3 April 2004, Freie Universität Berlin 1*. Wiesbaden, Harrassowitz: 177–89
- Philip, G. 1988: 'Hoards of the Early and Middle Bronze Ages in the Levant' *World Archaeology* 20.2: 190–208
- Roaf, M. 1990: *Cultural Atlas of Mesopotamia and the Ancient Near East*. New York, Facts on File
- Şahin, F. 2016: 'An Early Bronze Age III lead figurine from Küllüoba' *Anatolica* 42: 29–38
- Salvini, M. 1998: 'The earliest evidence of the Hurrians before the formation of the reign of Mitanni' in G. Buccellati, M. Kelly-Buccellati (eds), *Urkish and the Hurrians: Studies in Honor of Lloyd Cotsen*. Malibu, Undena Publications: 99–15
- Sasson, J.M. 1968: 'Instances of mobility among Mari artisans' *Bulletin of the American Schools of Oriental Research* 190: 46–54

- 2008: 'Texts, trade, and travelers' in J. Aruz, K. Benzel, J.M. Evans (eds), *Beyond Babylon: Art, Trade, and Diplomacy in the Second Millennium BC*. New Haven/London, Yale University Press: 95–100
- Schachner, A. 2018: 'The city of Hattus during the Old Assyrian Trade Colonies period' in K. Köroğlu, S.F. Adalı (eds), *The Assyrians: Kingdom of the God Assur from Tigris to Taurus*. Istanbul, Yapı Kredi Yayınları: 84–107
- Schmidt, E.F. 1931: *Anatolia Through the Ages: Discoveries at the Alishar Mound 1927–29*. Chicago, University of Chicago Press
- Schwemer, D. 2007: 'The storm-gods of the ancient Near East: summary, synthesis, recent studies: part I' *Journal of Ancient Near Eastern Religions* 7: 121–68
- 2008: 'The storm-gods of the ancient Near East: summary, synthesis, recent studies: part II' *Journal of Ancient Near Eastern Religions* 8: 1–44
- Skourtanioti, E., Erdal, Y.S., Frangipane, M., Balossi Restelli, F., Yener, K.A., Pinnock, F., Matthiae, P., Özbal, R., Schoop, U.-D., Guliyev, F., Akhundov, T., Lyonnet, B., Hammer, E.L., Nugent, S.E., Burri, M., Neumann, G.U., Penske, S., Ingman, T., Akar, M., Shafiq, R., Palumbi, G., Eisenmann, S., D'Andrea, M., Rohrlach, A.B., Warinner, C., Jeong, C., Stockhammer, P.W., Haak, W., Krause, J. 2020: 'Genomic history of Neolithic to Bronze Age Anatolia, northern Levant, and southern Caucasus' *Cell* 181.5: 1158–75
- Sollberger, E. 1975: 'A foundation deposit from the Temple of Nanše' *Syria* 52.3–4: 175–80
- Stein, G. 2008: 'A theoretical model for political economy and social identity in the Old Assyrian colonies of Anatolia' *TÜBA-AR* 19: 25–40
- Suter, C.E. 2000: *Gudea's Temple Building: The Representation of an Early Mesopotamian Ruler in Text and Image*. Groningen, STYX
- Tchalenko, G. 1953: *Villages antiques de la Syrie du nord: le massif du Bélus à l'époque romaine* 1. Paris, Geuthner
- Tsouparopoulou, C. 2014: 'Hidden messages under the temple: foundation deposits and the restricted presence of writing in 3rd millennium BCE Mesopotamia' in T. Frese, W.E. Keil, K. Krüger (eds), *Verborgen, unsichtbar, unlesbar: zur Problematik restringierter Schriftpräsenz*. Berlin, De Gruyter: 17–32
- 2015: 'Spreading the royal word: the (im)materiality of communication in early Mesopotamia' in S. Enderwitz, R. Sauer (eds), *Communication and Materiality: Written and Unwritten Communication in Pre-Modern Societies*. Berlin, De Gruyter: 7–23
- van Loon, M.N. 1985: *Anatolia in the Second Millennium BC*. Leiden, Brill
- Veenhof, K.R. 1997: *Aspects of the Old Assyrian Trade and its Terminology*. Leiden, Brill
- von Dassow, E. 2008: *State and Society in the Late Bronze Age: Alalah under the Mittani Empire*. Bethesda, CDL Press
- von der Osten, H.H. 1937: *The Alishar Hüyük: Seasons of 1930–32*. Chicago, University of Chicago Press
- Weiss, H. 2014: 'The northern Levant during the intermediate Bronze Age: altered trajectories' in A.E. Killebrew (ed.), *The Oxford Handbook of the Archaeology of the Levant: c. 8000–332 BCE*. Oxford, Oxford University Press: 367–87
- 2017: '4.2 ka BP megadrought and the Akkadian collapse' in H. Weiss (ed.), *Megadrought and Collapse: From Early Agriculture to Angkor*. New York, Oxford University Press: 93–160
- Welton, L. 2011: 'The Amuq plain and Tell Tayinat in the third millennium BCE: the historical and socio-political context' *Journal of the Canadian Society for Mesopotamian Research* 6: 15–27
- 2014: 'Revisiting the Amuq sequence: a preliminary investigation of the EBIVB ceramic assemblage from Tell Tayinat' *Levant* 46.3: 339–70
- Welton, L., Batiuk, S., Harrison, T.P., Lipovitch D.R., Capper, M. 2011: 'Tell Tayinat in the late third millennium: recent investigations of the Tayinat Archaeological Project 2008–2010' *Anatolica* 37: 147–85
- Wilhelm, G. 1989: *The Hurrians*. Warminster, Aris & Phillips
- 2008: 'Hurrians in the Kültepe texts' in J.G. Dercksen (ed.), *Anatolia and the Jazira during the Old Assyrian Period*. Istanbul, Publications de l'Institut historique et archéologique néerlandais de Stamboul: 181–84
- Wilkinson, T.J. 2003: *Archaeological Landscapes of the Near East*. Tucson, University of Arizona Press
- Wiseman, D.J. 1953: *The Alalakh Tablets*. London, British Institute of Archaeology at Ankara
- Woolley, C.L. 1955: *Alalakh: An Account of the Excavations at Tell Atchana in the Hatay, 1937–1949*. London, Society of Antiquaries
- Yasur-Landau, A., Cline, E.H., Manning, S.W., Artioli, G. 2021. 'An Anatolian-style lead figurine from the Assyrian Colony period found in the Middle Bronze Age palace of Tel Kabri' *Bulletin of the American Schools of Oriental Research* 385: 87–97
- Yener, K.A. (ed.) 2005: *The Amuq Valley Regional Projects 1: Surveys in the Plain of Antioch and Orontes Delta, Turkey, 1995–2002*. Chicago, University of Chicago Press

- 2007: 'The Anatolian Middle Bronze kingdoms and Alalakh: Mukish, Kanesh and trade' *Anatolian Studies* 57: 151–60
  - 2009: 'Acrobats, bulls, and leaping scenes on new Alalakh amphoroid kraters' *Near Eastern Archaeology* 72.1: 48–50
  - 2013: 'New excavations at Alalakh: the 14th–12th centuries BC' in K.A. Yener (ed.), *Across the Border: Late Bronze–Iron Age Relations between Syria and Anatolia: Proceedings of a Symposium held at the Research Center of Anatolian Studies, Koç University, Istanbul May 31–June 1*. Leuven, Peeters: 11–36
  - 2015: 'Material evidence of cult and ritual at Tell Atchana, ancient Alalakh: deities of the transitional Middle–Late Bronze period' in P. Ciafardini, D. Giannessi (eds), *From the Treasures of Syria: Essays on Art and Archaeology in Honour of Stefania Mazzoni*. Leiden, Nederlands Instituut voor het Nabije Oosten: 203–15
- Yener, K.A., Akar, M., Horowitz, M.T. (eds) 2019: *Tell Atchana, Alalakh 2: The Late Bronze II City: 2006–2010 Excavations*. Istanbul, Koç University Press
- Zaccagnini, C. 1983: 'Patterns of mobility among ancient Near Eastern craftsmen' *Journal of Near Eastern Studies* 42.4: 245–64