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CONTENTS

Research Articles

Paleopathological Analysis of Craniosynostosis (CS): Two Cases of Plagiocephaly from the Archaeological Site of Kayalıpınar, Sivas, Turkey İbrahim Sarı, Sercan Acar, Ayşen Açıkkol	1
Human-Shaped Vessels from the Neolithic to the End of the EBA in Anatolia Şebnem Kurtuluş-Kıvanç	19
Continuity and Change in Glyptic Art in Light of Ancient Mesopotamian Cylinder Seals from the Yale Babylonian Collection Güzel Öztürk	39
Bronze Age Settlement and Cemetery in the Ulubey Canyon in Inland Western Anatolia: Mehmet Bey Dere, Uşak, Turkey Harun Oy	67
The Concept of Purity in Ancient Anatolian Religions: Water's Sanctity in Purification Nuriye Külahlı.....	93
Glyptic Findings with Anatolian Hieroglyphs from Kilis – Oylum Höyük Metin Alparslan.....	109
Preliminary Results on Flood Disasters in the Elbistan Plain during the Second Millennium BC: Findings from the Elbistan Karahöyük Excavations Bora Uysal.....	119
A Provincial Centre on the western border of Urartu: Palu Fortress Harun Danışmaz	131
- <i>hi</i> in The List of Sheep Presenter Names in Bastam Maryam Dara	167
Relief <i>Stelae</i> From Athens: The External Evidences Regarding Heracleia Pontica (The 5 th to 4 th Centuries B.C.) Ali Bora	179



CONTENTS

Hopper–Rubbers or Olynthus Mills from řarhöyük/ Dorylaion: Recent Evidence on Typology and Chronology Mahmut Bilge Bařtırık	211
Late Roman Red Slip Ware found in Newly Excavated Buildings A and B in Anemurium: A Building Based Evaluation Zafer Korkmaz, Mehmet Tekocak	235
“Armed” with Modern History. The Statue of the River God Meander at Miletus, 1909-2023. Nisan Lordođlu, Julia Lenaghan	271

Book Review

Review of the Early Bronze Age Book of Tepeköy Höyük Excavations in the Varto District of Muř Province Ali Çifçi.....	287
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Obituary

Mehmet İnsan Tunay (İhsan Hoca) 1941-2023 Ara Altun.....	291
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Paleopathological Analysis of Craniosynostosis (CS): Two Cases of Plagiocephaly from the Archaeological Site of Kayalıpınar, Sivas, Turkey

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ABSTRACT

This article describes two individuals diagnosed with craniosynostosis. The archaeological human remains were uncovered from Kayalıpınar excavations in Sivas's province in Turkey. The skeletons described here belong to the Byzantine period. Anterior plagiocephaly (unicoronal synostosis) observed in a female aged 30-34, and posterior plagiocephaly (unilambdoid synostosis) observed in a male aged 20-30. Both skulls show deformities due to synostosis. It is assumed that premature suture closure has no influence on the death of individuals. Craniosynostosis is a known case in clinical studies; however, its frequency in archaeological records/paleopathological literature is unclear. No example of craniosynostosis (especially plagiocephaly) has been found in ancient Anatolian populations, except for scaphocephaly. In conclusion, in addition to dental anomalies, bulging on the frontal bone and lambdoid suture fusion were found in this study, which provides a specific example and useful results for future research.

Keywords: Plagiocephaly, Craniosynostosis, Unicoronal synostosis, Unilambdoid synostosis, Paleopathology



Introduction

A congenital anomaly is defined as a physical condition that begins before birth and negatively affects the development of the foetus (Barnes, 2008). This anomaly may be hereditary or acquired at birth (Aufderheide and Rodriguez-Martin, 1998). It may also not reveal its presence after birth (Barnes, 2008). Genetic factors are among the most known causes of congenital anomalies and are one of the main causes of infant mortality. Congenital anomalies can result in physical and/or mental disturbances. Indeed, it is a crucial factor in the disturbance and mortality of children (Oliveira and Fett-Conte, 2013). As a result, the quality of life of individuals is most likely affected by these side effects (Aufderheide and Rodriguez-Martin, 1998).

Suture is a form of joint in which adjacent bones in the craniofacial system articulate with a thin fibrous tissue layer (Kumar et al. 2020). During birth, the bones surrounding the skull stand apart with structures called sutures and fontanelles. This situation causes the skull to take on a particular shape (makes for an easier birth) (Barnes, 2012).

Some problems such as the lack of suture formation or premature fusion of the sutures can be observed during the development of cranial sutures. Suture deficiency is often described as sutural agenesis and is derived from a genetic origin (Roberts and Manchester, 2010). The sutures on the skull fuse following a certain order, that is, a fusion begins in the bregma region and continues along the sagittal, coronal, and lambdoid sutures, respectively (Aufderheide and Rodriguez-Martin, 1998).

Craniosynostosis is a congenital disorder of the skull (Buchanan et al., 2017). In this study, we report a rare case of plagiocephaly (unicoronal and unilambdoid craniosynostosis of skull) in two calvaria from Kayalıpınar excavations, Sivas province, Turkey.

Craniosynostosis (CS)

A disturbance in the development and function of sutures may result in craniosynostosis (Rice, 2008). Roberts and Manchester (2010) stated that CS is defined as premature suture closure, a congenital disorder (Buchanan et al., 2017), and closure of one or more of the six most important sutures of the skull (Waldron, 2009). Single suture fusion is more common than multiple suture fusion (Buchanan et al., 2017).

CS is divided into syndromic and non-syndromic CS (Pospíšilová and Procházková, 2006; Çeltikçi et al., 2013). The second is stated to have a strong genetic component, possibly through gene-gene or gene-environment interactions (Boyadjiev, 2007). Epidemiological studies have shown that non-syndromic craniosynostosis (NCS) is more common than syndromic craniosynostosis and constitutes 90% of patients with craniosynostosis (Collmann

et al., 2011). The most common NCSs are sagittal (scaphocephaly), unilateral coronal/lambdoid (anterior/posterior plagiocephaly), bilateral coronal/lambdoid (brachycephalic), oxycephalic, and trigonocephalic (metopic) craniosynostosis (Barnes, 2012; Collmann et al., 2011).

The incidence of CS in living humans is variable and occurs in 3-14 individuals out of 10,000 births (Waldron, 2009). Among the genders, women are more affected than men (Roberts and Manchester, 2010). This appears to be a rare case in skeleton populations (Mann and Hunt, 2012).

Birth trauma, intrauterine infection (Roberts and Manchester, 2010), congenital, hereditary, and metabolic diseases (Mann and Hunt, 2012), and hematological disorders (such as thalassemia and sickle cell anemia) (Rice, 2008) can lead to craniosynostosis. It is commonly mentioned that mutations in a gene known as fibroblast growth factor receptor (FGFR) are related to craniosynostosis (especially syndromic ones). The most common FGFRs associated with craniofacial syndromes include Apert, Crouzon, Pfeiffer, and Muenke (Giuffra et al., 2011). Other syndromes such as Saethre-Chotzen and Carpenter are independent of the FGFR mutation (Buchanan et al., 2017).

Premature closure of the sutures gives rise to different skull deformities (Ortner, 2003; Collmann et al., 2011; Buchanan et al., 2017). Deformities differ according to the location of the sutures (Barnes, 2008; Waldron, 2009) and the age at the beginning of closure (Ortner, 2003). The size of the deformity depends on the time of suture closure, and it becomes clearer when it occurs during embryological development (Ortner, 2003).

Plagiocephaly

Plagiocephaly is a term used to describe an abnormal asymmetric skull shape (Pospíšilová and Procházková, 2006). David and his colleagues (1982) divided plagiocephaly into three types: frontal, occipital, and hemicranial. Plagiocephaly is described as unilateral premature fusion of the coronal or lambdoid suture (Cohen, 1995; Buchanan et al., 2017). The least common is lambdoid craniosynostosis (Boyadjiev, 2007; Buchanan et al., 2017). Unilateral lambdoid synostosis constitutes approximately 1-3% of all craniosynostosis (Collmann et al., 2011).

Paleopathologically, in skull samples with plagiocephaly, it is possible to see changes/deformities in the skull and face according to the place of fusion (Çeltikçi et al., 2013). Deformities may occur when they result in plagiocephaly due to intrauterine pressure (Cohen, 1995). The anterior and posterior sides of the skull are bilaterally flattened (Pospíšilová and Procházková, 2006). Kreiborg and Björk (1981) emphasize the marked asymmetry of the orbit, cranial floor, and calvaria. In anterior plagiocephaly, flattening is observed in the frontal region,

where fusion is observed, elevation (rim) is observed in the supraorbital margin, and bulging is noticed on frontal (the opposite side). Posterior plagiocephaly causes flattening and prominent mastoid protrusion in the affected area (David et al., 1982; Buchanan et al., 2017).

This study focuses on examples of craniosynostosis that are well known in clinical cases, but are quite rare in paleopathological studies of ancient Anatolian populations. Plagiocephaly caused by unilateral fusion of the coronal and lambdoid sutures. Studies of plagiocephaly have not been encountered in the literature (in paleopathological studies of ancient Anatolian populations), whereas scaphocephaly has been observed in a limited number of studies. Therefore, this paper includes discussing examples of craniosynostosis in the context of clinical cases and archaeological populations based on paleopathological findings.

Methods

This paper presents two cases of premature suture fusion. The skeleton collection is in the laboratory of Sivas Cumhuriyet University, Department of Anthropology. Skeletons were obtained from the Kayalıpınar cemetery area in Sivas (Yıldızeli), Turkey (Fig. 1). The archaeological site was detected as a result of surface surveys carried out in different years (Ökse, 1994; 1999). Archaeological excavations were started for the first time in 2005, and as a result of these studies, traces of different periods (Hellenistic-Early Byzantine, Hittite Great Imperial Period, Middle Hittite Period, Erhitite/Karum Period) were discovered (Fig. 2) (Müller Karpe and Müller Karpe, 2006; 2012).



Figure 1: Location of Kayalıpınar, Yıldızeli/Sivas, Turkey



Figure 2: Kayalıpınar archaeological settlement area (google.com) (04.05.2023)

Kayalıpınar individuals were recovered from the uppermost layer (Layer 1) of the archaeological site (Müller Karpe and Müller Karpe, 2012) and from tomb types such as sarcophagi, stone, pottery, and simple earthen (Müller Karpe, 2006; Müller Karpe and Müller Karpe, 2009). Many tombs have been damaged due to erosion and agricultural activities (Müller Karpe and Müller Karpe, 2006). The uncovered tombs date to the Hellenistic-Early Byzantine period (Müller Karpe and Müller Karpe, 2012). The skeletons, which analysed in this study date to the Byzantine period. Both individuals were found in west-east direction, and the heads were found looking to the west. The tomb, numbered 207, was recovered from a simple earthen tomb. The tomb, numbered 217, was surrounded by mudbrick. With the help of the wooden pieces on the tomb of this individual, it is assumed that the tomb was covered with wooden. There were no tomb gifts in the tombs.

Sex and age determination criteria (WEA, 1980; Lovejoy et al., 1985; Szilvássy and Kritscher, 1990; Kaur and Jit, 1990) were used for both individuals in the study. The regression equation as stated by Goodman and Rose (1990) was used to determine the estimated age of linear enamel hypoplasia. Identification and classification of craniosynostosis samples were performed according to Barnes (2012). Paleopathological analyses of human remains were performed macroscopically according to Ortner and Putschar (1981).

Results

Tomb number 207 was a female individual and, between 30 and 34 years old at the time of death (Fig. 3). The individual had plagiocephaly (anterior) in the skull. The left side of the coronal suture was fused from the bregma to the pterion (Fig. 4). This region was also closed endocranially. Bulging on the frontal was obvious (Fig. 4). Traces of fusion were

observed in the sagittal suture, but the other sutures on her skull were opened. While the right sphenofrontal suture was fully open, the fusion process started on the left side (Fig. 5). There were no wormian ossicles on the sutures. There was no significant difference between the two orbits in terms of width and height. Both orbital depths and orbital distance appeared normal (Fig. 6). Midface and mandible prognathism were not observed. The palate was generally narrow (not suitable for measurement). In the maxilla, the dental arches were parallel to each other. The greatest differences in the measurement values were observed in skull height (porion-bregma), mastoid length, maximum ramus height, and processus mastoideus (medial-lateral width) (Table.1). The individual exhibited a dolichocephalic skull (cranial endis; 73,33). The right foramen rotundum was slightly larger than the left (Fig. 6).

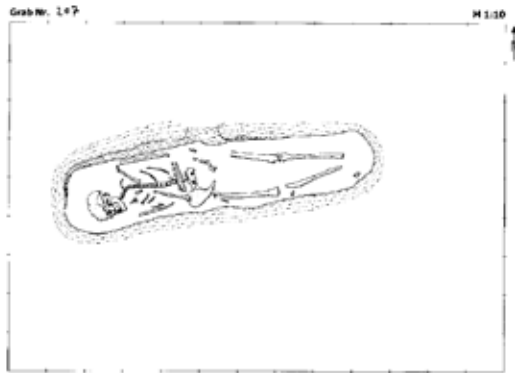


Figure 3: Architectural drawing of Tomb 207



Figure 4: Vertical view of the skull and CT of the skull (Tomb 207)



Figure 5: Right and left lateral views of the skull (Tomb 207)

The individual was examined paleopathologically. Accordingly, there were no cribra orbitalia in either orbital ceiling. There were slight traces of porotic hyperostosis in the occipital bone. Periostitis has been detected on the tibiae. In addition, enthesopathy was seen in its initial stage on both patella bones. Mild osteoarthritis on the articular surfaces of many bones has occurred. Moderate osteoarthritis was also observed on the lumbar and thoracic vertebrae bodies and mild osteoarthritis formations on the upper and lower joint surfaces of the cervical, thoracic, and lumbar vertebrae. The processus spinalis of the existing vertebrae were not discrete. At the anterior right edge of the promontorium, there was a prominent bone formation extending towards the lumbar vertebrae. Caries, abscess, antemortem tooth loss (AMTL), different accumulations of calculus, linear enamel hypoplasia, moderate and severe tooth wear, and periodontal disease were detected in the jaw and teeth of the individual. Some teeth had hypoplastic (linear) defects (showing distribution a range of the age of 4 to 6 years).

Table 1. Measurement values of female individual (mm)

Measurements	Left	Right
Maximum Skull Width	132	
Maximum Skull Length	180	
Bizygomatic Width	119	
Orbital Width	36,03	35,32
Orbital Height	35,56	34,87
Frontal Axis	110,70	
Sagittal Axis	112,48	
Occipital Axis	92,76	
Frontal Arc	12,9	
Sagittal Arc	12,4	
Occipital Arc	11,1	
Foramen Mentale Width	44,49	
Porion-Bregma Height	124	120
Mastoid Length	30,59	28,13

Mandible Body Thickness	12,58	12
Bicondylar Width	113,78	
Minimum Ramus Width	32,43	32,38
Maximum Ramus Width	41,97	40,43
Mandible Body Height (between M2-M3)	30,07	28,42
Maximum Ramus Height	66	70
Processus Mastoideus Internal-External Width	12,85	10,43
Sphenoid Wingspan	27,21	28,08

Tomb number 217 was a male individual and, at the age of 20-30 years old (Fig. 7). The skull of this individual had plagiocephaly (posterior). The left side of the lambdoid suture was fused from the lambda to the asterion (Fig. 8-9). The right lambdoid suture was nearly fused endocranially, whereas the left lambdoid suture was completely fused endocranially. Other existing sutures were opened. There were no wormian ossicles on the sutures. The cranial index could not be calculated because of the preservation status of the skull. The distance between the orbits and both orbital depths were normal. Midface and mandible prognathism were not observed. In the maxilla, the dental arches slightly protruded outward. Measurement values of male individual are shown in Table 2.



Figure 6: Anterior and basal views of the skull (Tomb 207)

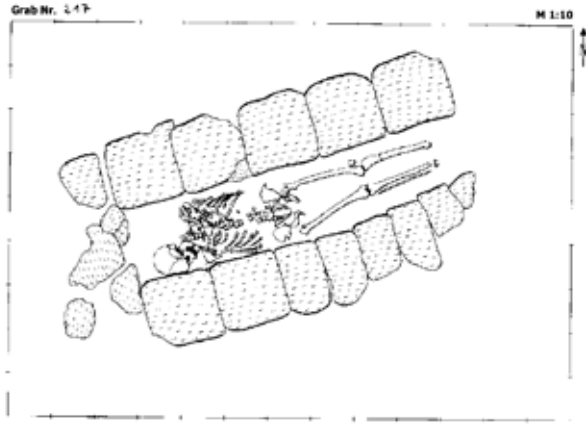


Figure 7: Architectural drawing of Tomb 217



Figure 8: Posterior view of the skull (Tomb 217)

The individual was examined paleopathologically. There were porotic hyperostosis in the occipital and parietal bones. There was a blunt trauma just above the right arcus superciliaris on the forehead. The cribra orbitalia lesion could not be examined because of the fracture of the relevant region. There was periostitis in both tibiae. Mild osteoarthritis, which was in the initial stage, was observed in the bodies of the cervical, thoracic, and lumbar vertebrae and on the lower and upper joint surfaces. Processus spinalis was not distinct in the existing vertebrae. There were caries, abscess, calculus, AMTL, mild and moderate tooth wear, and

mild periodontal disease in the jaw and on the teeth of the individual; however, hypoplasia was not observed. Sarı and Açikkol Yıldırım (2021) stated that the deciduous canine teeth in the maxilla of the individual did not fall out. In addition, the upper left permanent canine tooth (as connected to the deciduous canine tooth) performed the eruption in the lingual direction. Moreover, the upper right permanent canine completed development was impacted in the jaw (Fig. 10).



Figure 9: Posterior (CT) view of the skull (Tomb 217)

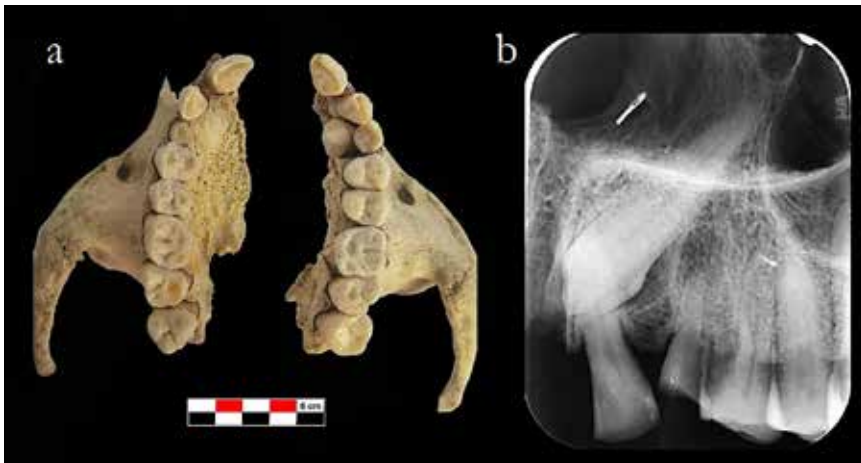


Figure 10: Impacted right upper canine and radiological view of tooth-Tomb 217 (Sarı and Açikkol Yıldırım, 2021)

Table 2. Measurement values of male individual (mm)

Measurements	Left	Right
Maximum Skull Width	126	
Sagittal Arc	12,3	
Occipital Arc	11,4	
Mastoid Length	29,92	fractured
Mandible Body Thickness	11,66	12,12
Bicondylar Width	108,46?	
Minimum Ramus Width	31,39	30,11
Maximum Ramus Width	-	42,04
Maximum Ramus Height	67	67
Processus Mastoideus Internal-External Width	11,73	11,60
Bigonial Width	78,61	

Discussion

The diagnosis of unilateral coronal synostosis on a dry skull is made when there is no coronal suture on one side (Tulasne, 1987). It is possible to say that a similar situation applies to the lambdoid suture. Existence of craniofacial asymmetry does not mean that there is a fusion anywhere in the coronal suture system. The human face, cranial base, and calvaria may be also symmetrical despite unilateral fusion of the coronal suture (Tulasne, 1987). Furthermore, an infection or injury in an individual may appear as a congenital disorder or be confused with some complications (Barnes, 2008).

Although it is impossible to determine the frequency of congenital diseases in archaeological collections, it has been determined in some studies. In the study of Menard and David (1998), the true unilateral lambdoid synostosis rate was calculated as 0.98 (2/204). Indeed, samples of occipital plagiocephaly caused deformation existed in their research. The existence of these studies also provides an opportunity to understand the social behaviours towards disabled or physically disabled individuals in ancient populations (Giuffra et al., 2011).

Craniosynostosis refers to premature fusion of skull sutures (Ortner, 2003), and the most common type of CS in archaeological context is sagittal synostosis (scaphocephaly) (Duncan and Stojanowski, 2008; Évinger et al., 2016). In this study, we focussed more on samples related to our cases (plagiocephaly) and unearthed in archaeological contexts.

Gracia et al. (2009) reported that the left lambdoid suture was fused prematurely in a child at the Sima de los Huesos (SH) site (Atapuerca, Spain) in the Middle Pleistocene. Fusion may be of prenatal or traumatic origin.

Évinger et al. (2016) pointed out that the right side of the coronal suture was completely fused in a woman aged 30-35, who was dated from 9th century in Zalavár, Hungary. More

samples of plagiocephaly were found in the obtained skeletons from the Broumov Cemetery, which was dated to the 13-18th century in the Czech Republic. Anterior plagiocephaly was detected in two individuals (1 adult and 1 child) and posterior plagiocephaly in one individual (adult) (Pospíšilová and Procházková, 2006). Another example of plagiocephaly was found in the obtained skeleton during excavations at the 16th century Fort King George archaeological site in Georgia (US). It was a male between aged 23-45. The left coronal suture fused prematurely (Duncan and Stojanowski, 2008).

In a young adult (East Indian), estimated to be 20-25 years old and unknown gender, premature suture fusion on the right side of the coronal suture was discovered (Kreiborg and Björk, 1981). Suzuki and Jkeda (1981) reported early fusion of the right side of the coronal and lambdoid sutures in a 5 or 6 year old child from Rorei on Sakhalin Island. It was also fused early in the sagittal suture in this child. In another study, at the Vrolijk Museum in Amsterdam, Netherlands, 160 skulls were examined, and unilateral coronal synostosis was determined in four individuals (two of them were adults and two children (Oostra et al., 2005).

Researchers have pointed out that there are deformities in the skull and facial bones of the individuals aforementioned and diagnosed with plagiocephaly (Kreiborg and Björk, 1981; Suzuki and Jkeda, 1981; Pospíšilová and Procházková, 2006; Duncan and Stojanowski, 2008; Évinger et al., 2016). It is possible to observe a similar outcome in a clinical study (Sakurai et al., 1998).

The number of individuals observed premature suture fusion in paleopathological examinations of ancient Anatolian populations is rare. Since plagiocephaly is the aim of this study, other craniosynostosis samples are briefly mentioned in the context of the period and population. Sevim Erol and Pehlivan (2014) noticed a sample of the premature fusion in the sagittal suture in a girl child of age 14-15 dated to 19th. The coronal suture of a young adult woman, aged of 17-25 years, from the Karagündüz (Early Iron Age) population fused early (Sevim et al., 2002). A sample of scaphocephaly was encountered in a 3-4-year-old child (probably a girl) from the Heracleia Perinthos (Byzantine) population (Demirel and Özkanlı, 2014). The presence of scaphocephaly was determined in an adult woman from the Beybağ (Ottoman) population (Karaöz Arihan, 2021). The presence of scaphocephaly was detected in an adult male individual (Young Ottoman) unearthed from the Istanbul Karacaahmet Cemetery (Sağır et al., 2009). Şenyürek (1951)-Kaledoruğu-No 1 (Copper Age)- detected premature suture fusion in the sagittal and coronal sutures of a child (probably a girl) aged approximately 7 years. Şenyürek-Alacahöyük-No 9 (Copper Age) also reported a premature suture fusion in the sagittal suture with 17-18 years old female.

Many features related to syndromic craniosynostosis are catalogued in clinical and paleopathological studies. When evaluated at the skeleton level, these can include early fusion of the skull sutures, skull deformities, midface hypoplasia, mandibular prognathism, cleft palate, shallow orbit, hypertelorism, fusion and enlargement of hand and foot bones, fusion of the elbow (ankylosis), and fusion of cervical vertebrae (Kreiborg and Björk, 1982; Rice, 2008; Giuffra et al., 2011; Oberoi et al., 2012; Kumar et al., 2013; Évinger et al., 2016; Kumar et al., 2020). Moreover, early fusion of spheno-occipital and petro-occipital synchondrosis may occur in individuals with Apert and Crouzon syndromes (Rice, 2008). Craniosynostosis, anomalies in the eye and midface, and abnormalities in the hands and feet may be similar in Crouzon, Pfeiffer, Apert, Jackson-Weiss, and Muenke syndromes (Giuffra et al., 2011).

Similarly, features such as impacted teeth, ectopic eruption, crowding, delayed tooth eruption, supernumerary teeth (hyperdontia), enamel hypoplasia, congenital tooth deficiency (hypodontia), and malocclusion, both deciduous and permanent teeth, can be seen in syndromic cases (Rice, 2008; Oberoi et al., 2012; Kumar et al., 2020).

The paleopathological results of the two individuals were given in this study. As a result, no correlation was found between the data obtained and the syndromic CS symptoms reflecting the human bone. However, Kreiborg and Björk (1982) stated that in an 18-year-old and possibly female individual with Crouzon syndrome, in addition to skull deformities, both deciduous canine teeth are preserved in the maxilla, whereas the permanent canines are located on the palate. Apart from the preservation of both deciduous canines in the upper jaw of the male individual (tomb no 217), the upper right permanent canine was also impacted. Although these results are in good agreement with the study of Kreiborg and Björk (1982), the current data are not sufficient to mention from any syndrome.

Besides, the mouth and dental health of both individuals were not good. Caries, abscess, dental calculus, AMTL, tooth wear, and periodontal diseases from jaw and dental pathologies were observed in both individuals. Although many factors are responsible for the formation of enamel defects (Mays, 1998; Schultz et al., 1998), systemic metabolic stress, localised trauma and hereditary anomaly was taken into consideration as the main components (Goodman and Rose, 1990). The female individual (tomb no 207) may have experienced a health problem between the ages of 4 and 6 that would affect her growth and development. Based on our findings, it is difficult to say whether this situation is associated with premature suture fusion.

Conclusions

This study is an important source of suture fusions in the archaeological record. As the number of examples exhibiting these pathologies is scarce, each new finding will be crucial

for the evaluation of ancient populations. The characteristics of the specimens in the study are not sufficient to support the presence of syndromic craniosynostosis (e.g. syndactyly, shallow orbit, fusion of elbow, fusion and enlargement of hand and foot bones). On the basis of the available data, it is not possible to say whether two individuals who have observed craniosynostosis have visual disturbances (visual discomfort), cognitive, or any health problems (such as headache) or their social status in the society in the course of their lives. Nevertheless, bulging on the frontal bone and linear enamel hypoplasia on the teeth were remarkable. Considering the reasons for their occurrence (linear enamel hypoplasia), it is likely that the female individual has some health problems at the age of 4–6 years. Another interesting finding was the preservation of deciduous canine teeth and impacted permanent canines. As a result, it is assumed that the lower frequency of lambdoid suture fusion in the archaeological record has increased the importance of this study.

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References

- Aufderheide, A.C., and Rodriguez-Martin, C. (1998). *The Cambridge Encyclopedia of Human Paleopathology*. Cambridge University Press.
- Barnes, E. (2008). Congenital Anomalies. R. Pinhasi ve S. Mays (Ed.) in, *Advances in Human Paleopathology* (p.329-362). John Wiley & Sons, Ltd.
- Barnes, E. (2012). *Atlas of Developmental Field Anomalies of the Human Skeleton: A Paleopathology Perspective*. Wiley-Blackwell.
- Boyadjiev, S.A. (2007). Genetic Analysis of Non-Syndromic Craniosynostosis. *Orthodontics Craniofacial Research*, 10, 129-137. <https://doi.org/10.1111/j.1601-6343.2007.00393.x>
- Buchanan, E.P., Xue, Y., Xue, A.S., Olshinka, A., & Lam, S. (2017). Multidisciplinary care of Craniosynostosis. *Journal of Multidisciplinary Healthcare*, 10, 263-270. <https://doi.org/10.2147/JMDH.S100248>
- Cohen, M.M. (1995). Perspectives on Craniofacial Asymmetry: V. The Craniosynostoses. *International Journal of Oral and Maxillofacial Surgery*, 24(3), 191-194. [https://doi.org/10.1016/S0901-5027\(06\)80125-6](https://doi.org/10.1016/S0901-5027(06)80125-6)
- Collmann, H., Solomon, B.D., Schweitzer, T., Kress, W., & Muenke, M. (2011). Nonsyndromic Craniosynostoses. M. Muenke, W. Kress, H. Collmann ve B.D. Solomon (Ed.) in, *Craniosynostoses: Molecular Genetics, Principles of Diagnosis, and Treatment*, 19 (p.165-176). Monographs in Human Genetics. Karger, Basel.

- Çeltikçi, E., Börcek, A.Ö., and Baykaner, M.K. (2013). Kraniyosinostozlar/Craniosynostosis. *Türk Nöroşirürji Dergisi*, 23(2), 132-137.
- David, D.J., Poswillo, D.E., & Simpson, D.A. (1982). *The Craniosynostoses: Causes, Natural History, and Management*. New York, Heidelberg, Berlin: Springer-Verlag. <https://doi.org/10.1007/978-1-4471-1323-2>
- Demirel, F.A., and Özkanlı, B. (2014). Herakleia Perinthos (Marmara Ereğlisi) Toplumunda Erken Sutura Kaynaşması. *Antropoloji*, 28, 87-107. https://doi.org/10.1501/antro_0000000304
- Duncan, W. N., Stojanowski, C. M. (2008). A Case of Squamosal Craniosynostosis from the 16th Century Southeastern United States. *International Journal of Osteoarchaeology*, 18, 407-420. <https://doi.org/10.1002/oa.943>
- Évinger, S., Hajdu, T., Biró, G., Zádori, P., Marcsik, A., Molnár, E., & Wolff, K. (2016). A Case of Unilateral Coronal Synostosis from Medieval Hungary (9th century A.D.). *Anthropologischer Anzeiger*, 73(1), 81-88. <https://doi.org/10.1127/anthranz/2015/0533>
- Giuffra, V., Sbrana, F., Caramella, D., Giustini, D., Tixier, B., & Fornaciari, G. (2011). Syndromic Craniosynostosis in a Modern-Age Skeleton from Siena, Italy. *The Journal of Craniofacial Surgery*, 22(5), 1743-1745. <https://doi.org/10.1097/SCS.0b013e31822e62a3>
- Goodman, A.H., and Rose, J.C. (1990). Assessment of Systemic Physiological Perturbations from Dental Enamel Hypoplasias and Associated Histological Structures. *Yearbook of Physical Anthropology*, 33, 59-110. <https://doi.org/10.1002/ajpa.1330330506>
- Gracia, A., Arsuaga, J.L., Martínez, I., Lorenzo, C., Carretero, J.M., Bermúdez de Castro, J.M., & Carbonell, E. (2009). Craniosynostosis in the Middle Pleistocene human Cranium 14 from the Sima de los Huesos, Atapuerca, Spain. *Proc. Natl. Acad. Sci. U.S.A.* 106(16), 6573-6578. <https://doi.org/10.1073/pnas.0900965106>
- Kaur, H., and Jit, I. (1990). Age Estimation from Cortical Index of the Human Clavicle in Northwest Indians. *American Journal of Physical Anthropology*, 83, 297-305. <https://doi.org/10.1002/ajpa.1330830304>
- Karaöz-Arhan, S. (2021). Paleoantropolojik Açından Kraniosinostozlar ve Osmanlı Dönemi Beybağ Skafosefali Örneği. A. Çatalcalı Ceylan, F. Özbay, Z. Özomay ve M. Batuhan Kurt (Ed.) in, *Sosyal ve Beşerî Bilimlerde Araştırma ve Değerlendirmeler, Cilt 1* (p.131-150). Gece Kitaplığı.
- Kreiborg, S., and Björk, A. (1981). Craniofacial Asymmetry of a Dry Skull with Plagiocephaly. *European Journal of Orthodontics*, 3(3), 195-203. <https://doi.org/10.1093/ejo/3.3.195>
- Kreiborg, S., and Björk, A. (1982). Description of a Dry Skull with Crouzon Syndrome. *Scandinavian Journal of Plastic and Reconstructive Surgery*, 16(3), 245-253. <https://doi.org/10.3109/02844318209026215>
- Kumar, G.R., Jyothsna, M., Ahmed, S.B., & Lakshmi, K.S. (2013). Crouzon's Syndrome: A Case Report. *International Journal of Clinical Pediatric Dentistry*, 6(1), 33-37. <https://doi.org/10.5005/jp-journals-10005-1183>
- Kumar, I.G., Raghunath, N., Ravi, S., Jyothikiran, H., & Pradeep, S. (2020). The Apert and Crouzon syndromes: general and dental aspects and management in orthodontics and dentofacial orthopaedics: A review article. *International Journal of Applied Dental Sciences*, 6 (3), 243-252.
- Lovejoy, C.O., Meindl, R.S., Pryzbeck, T.R., & Mensforth, R.P. (1985). Chronological Metamorphosis of the Auricular Surface of the Ilium: A New Method for the Determination of Adult Skeletal Age at Death. *American Journal of Physical Anthropology*, 68, 15-28. <https://doi.org/10.1002/ajpa.1330680103>

- Mann, R.W., & Hunt, D.R. (2012). *Photographic Regional Atlas of Bone Disease: A Guide to Pathologic and Normal Variation in the Human Skeleton* (Third Edition). Springfield Illinois: Charles C. Thomas, Publisher.
- Mays, S. (1998). *The Archaeology of Human Bones*. Simultaneously published in the USA and Canada by Routledge New York.
- Menard, R.M., & David, D.J. (1998). Unilateral Lambdoid Synostosis: Morphological Characteristics. *The Journal of Craniofacial Surgery*, 9(3), 240-246. <https://doi.org/10.1097/00001665-199805000-00011>
- Müller-Karpe, A. (2006), "Untersuchungen in Kayalıpınar 2005" (mit Beiträgen von V. Müller-Karpe, E. Rieken, W. Sommerfeld, G. Wilhelm, M. Zeiler). *Mitteilungen der Deutschen Orient-Gesellschaft*, 138, 211-247.
- Müller-Karpe, A. & Müller-Karpe, V. (2006). Kızılırmak (Maraşanta) Kıyısındaki Bir Hitit Kentinde Yeni Araştırmalar. *Arkeoloji ve Sanat Dergisi*, 123, 1-12.
- Müller-Karpe, A., & Müller-Karpe, V. (2009). Untersuchungen in Kayalıpınar und Umgebung 2006-2009 (mit Beiträgen von E. Rieken, T. Mühlenbruch, C. Salzmann, M. Zeiler, J. Wangen), *Mitteilungen der Deutschen Orient-Gesellschaft*, 141, 173-238.
- Müller-Karpe, V., & Müller-Karpe, A. (2012). Kayalıpınar'da Yapılan Araştırmalar. 29. *Araştırma Sonuçları Toplantısı*, 2, 407-418.
- Oberoi, S., Hoffman, W.Y., & Vargervik, K. (2012). Craniofacial Team Management in Apert Syndrome. *American Journal of Orthodontics and Dentofacial Orthopedics*, 141(4), 82-87. <https://doi.org/10.1016/j.ajodo.2012.01.003>
- Oliveira, C.I.F., & Fett-Conte, A.C. (2013). Birth Defects: Risk Factors and Consequences. *Journal of Pediatric Genetics*, 2(2), 85-90. doi: 10.3233/PGE-13052
- Oostra, R.J., van der Wolk, S., Maas, M., & Hennekam, R.C.M. (2005). Malformations of the Axial Skeleton in the Museum Vrolik: II: Craniosynostoses and Suture-Related Condition. *American Journal of Medical Genetics*, 136A, 327-342. <https://doi.org/10.1002/ajmg.a.30769>
- Ortner, D.J. & Putschar, W.G.J. (1981). *Identification of Pathological Conditions in Human Skeletal Remains*. Smithsonian Institution Press, City of Washington.
- Ortner, D.J. (2003). *Identification of Pathological Conditions in Human Skeletal Remains*. (Second Edition). Academic Press. Washington.
- Ökse, A.T. (1994). Sivas İli 1992 Yüzev Araştırması. *XI. Araştırma Sonuçları Toplantısı*, 243-258.
- Ökse, A.T. (1999). Sivas İli 1997 Yüzev Araştırması. *XVI. Araştırma Sonuçları Toplantısı* 1, 467-490.
- Pospíšilová, B., & Procházková, O. (2006). Paleopathological Findings of Dry Skulls with Plagiocephaly. *Acta Medica*, 49(4), 219-226. <https://doi.org/10.14712/18059694.2017.136>
- Rice, D.P. (2008). Clinical Features of Syndromic Craniosynostosis. D.P. Rice (Ed.) in, *Craniofacial Sutures: Development, Disease and Treatment* (s.91-106). Frontiers of Oral Biology (Vol.12), Basel, Karger.
- Roberts, C., & Manchester, K. (2010). *The Archaeology of Disease* (Third Edition). The History Press.
- Sağır, M., Özer, İ. & Güleç, E. (2009). Osmanlı Dönemi Kafataslarının Paleopatolojik Analizi. *24. Arkeometri Sonuçları Toplantısı*, 65-78.
- Sakurai, A., Hirabayashi, S., Sugawara, Y., & Harii, K. (1998). Skeletal Analysis of Craniofacial Asymmetries in Plagiocephaly (Unilateral Coronal Synostosis). *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery*, 32, 81-89.


- Sarı, İ., & Açıkkol Yıldırım, A. (2021). Dental Anomalies in Ancient Populations: The Kayalıpınar Samples (Eski Toplumlarda Diş Anomalileri: Kayalıpınar Örneği). *Antropoloji*, 41, 99-107. <https://doi.org/10.33613/antropolojidergisi.883636>
- Schultz, M., Carli-Thiele, P., Schmidt-Schultz, T.H., Kierdorf, U., Kierdorf, H., Teegen, W.R. & Kreutz, K., (1998), "Enamel Hypoplasias in Archaeological Skeletal Remains", (edited by Alt, K.W., Rösing, F.W., Teschler-Nicola, M. (2012): *Dental Anthropology: Fundamentals, Limits, and Prospects* (in), Austria: Springer-Verlag/Wien, 293-312.
- Sevim, A., Pehlevan, C., Açıkkol, A., Yılmaz, H. & Güleç, E. (2002). Karagündüz Erken Demir Çağı İskeletleri. *17. Arkeometri Sonuçları Toplantısı*, 37-48.
- Sevim Erol, A. & Pehlivan, S. (2014). A Sample of Premature Suture Fusion in the Cranium / Kafa İskeletinde Erken Suture Kaynaşmasına Bir Örnek. *Turkish Journal of Forensic Sciences*, 13 (4), 33-37.
- Suzuki, T. & Ikeda, J. (1981). A Palaeopathological Study of The Craniosynostosis A case of plagiocephaly. *Journal of the Anthropological Society of Nippon*, 89(4), 479-492.
- Szilvássy, J. & Kraitscher, H. (1990). Estimation of Chronological Age in Man Based on the Spongy Structure of Long Bones. *Anthropologischer Anzeiger*, 48(3), 289-298.
- Şenyürek, M.S. (1951). Two Cases of Premature Suture Closure Among the Ancient Inhabitants of Anatolia. *Bulleten*, 15(58), 247-262.
- Tulasne, J.F. (1987). Skulls with Unilateral Coronal Synostosis. D. Marchac (Ed.) in, *Craniofacial Surgery* (p.98-104). Springer, Berlin, Heidelberg.
- Waldron, T. (2009). *Palaeopathology*. Cambridge University Press.
- Workshop of European Anthropologists, (1980). Recommendations for Age and Sex Diagnoses of Skeletons. *Journal of Human Evolution*, 9 (7), 517-549.

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Human-Shaped Vessels from the Neolithic to the end of the EBA in Anatolia

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ABSTRACT

Humankind shaped the earth both physically and culturally during the 2.5 million years from the day they appeared to today. This million-year-old heritage accumulation found by the archaeological excavations makes us understand the cultural development of humankind. Human-shaped vessels are one part of this heritage, and a part of religious belief that developed alongside cultural growth. This work studies the human-shaped vessels of Anatolia from the beginning of its creation to the end of the Early Bronze Age.

Keywords: Human-Shaped Vessels, Neolithic, Chalcolithic, Early Bronze Age, Anatolia



Introduction

Humankind differs from other living beings in many ways, such as biological, sociological, anthropological, and evolutionary. However, the most relevant difference according to archaeology is tool making. The first tool maker is approximately 2.5 million years old (Arsebük, 1999, pp. 36-37). From the first tool-making homo genus to homo sapiens, cultural development is slow, and with the new homo species, homo sapiens, the tool-making process accelerates. After approximately 2,5 million years of hunting and gathering the way of life of homo species, nearly 12,000 years ago, homo sapiens started to settle and farm plants and animals. Childe called this agricultural transformation the “Neolithic Revolution” and it is the beginning of the Neolithic Period (Childe, 1951; Duru, 2016, p. 3). One of the important inventions of the Neolithic Period was pottery production. Before the invention of pottery, people probably used baskets made from plant fibres, tree branches, and/or animal skin. However, these organic materials are too perishable and did not survive; their existence is also known through pottery decorations. Around 7000 BC, people used clay for utensil manufacturing. Clay is a material that can be shaped easily while being damp and hard as stone after the baking process, yet it can break easily. The common and easily shaped raw material and the fragile feature of pottery make it the most abundant remnant for archaeologists (Duru, 2016, p. 102).

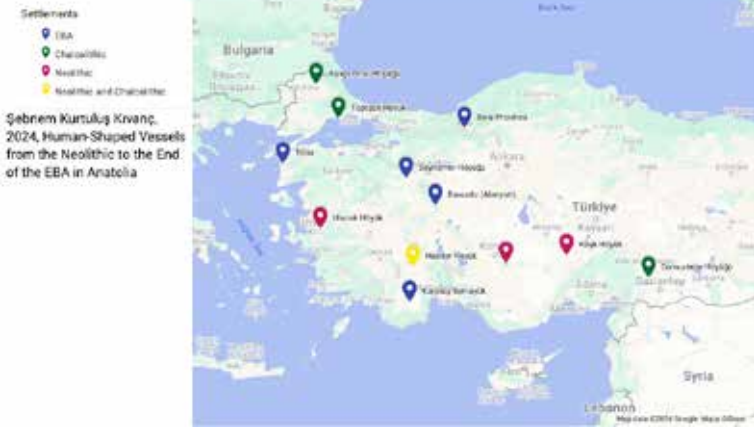
Humankind reflects herself in the drawings since the start of cave art. From the beginning of pottery production onwards, along with symbolic drawings, anthropomorphic vessels emerged. These are usually found on the ritual areas of a settlement, such as a burial gift or in a temple building, and they should have been produced for use as ritual vessels, such as libations. Therefore, they must have been produced separately from the utensils used daily.

In this study it is aimed to make a collection of Anatolian anthropomorphic vessels that are in the shape of humans from the beginning of the Neolithic to the end of the Early Bronze Age and review the chosen material from a complete perspective. The included publications had been chosen whether a human-shaped container was found from a settlement. The vessels discussed here are unique in terms of both their shape and purpose of usage. Therefore, a literature search was conducted by scanning published works of excavated settlements in Anatolia. After the selection of the vessels that are subject to this publication among other anthropomorphic vessels, they were sorted from old to new. This order is important to observe the development of human-shaped vessels. If there was no certainty about the stratum and age of the vessel, they were included in the order by examining similar vessels from neighbouring settlements. However, in the case of special-purpose vessels, the comparison method may be insufficient. In these cases, alphabetical order is used.

Neolithic Period (from 8000/7200 to 6000/5900 B.C.)

Neolithic human-shaped ritual vessels have elaborative craftsmanship. In Anatolia, special vessels belonging to the Neolithic Period were found in the Burdur and Antalya regions at first. Hacılar is one of the first settlements excavated in the area, and one of the earliest examples of human-shaped vessels is found at Level VI of Hacılar Höyük. In addition, Ulucak Höyük, Çatal Höyük, Köşk Höyük and Aşağı Pınar Höyük are other settlements where vessels of this type were found. There are five woman-shaped ritual vessels dating to the Neolithic Period.

Human-Shaped Vessels



Map 1: Settlements mentioned on the article.

One of the earliest examples (Fig. 1) was found at Köşk Höyük, Niğde, Level III, dated to the Early Neolithic Period. The paste of the vessel is red/light brown, fine sand tempered, burnished, and red brown coated. The woman portrayed has exaggerated body parts. The mouth and the bottom of the vessel are flat. On the conical neck of the vessel, the face of the woman is pictured. The body of the vessel is in the exaggerated shape of a woman, and she is in a sitting position. The woman has a long cylindrical hat. Eyes are large and almond shaped. Sclera painted white on pink; light brown pottery shards were applied to the pupils. She has a necklace. She holds her breasts, and her huge hips indicate she is overweight (Silistreli, 1989, pp. 371-372; Umurtak, 1996, pp. 488-489). In Köşk Höyük, dancing female figures are imprinted on vases as reliefs. All figures have similar attributes that indicate the local artists' work. The female figures depicted have exaggerated breasts with an exaggerated and protruding belly and large hips. In Anatolian art, these attributes show fertility. Because these dancing figures are also similar to the figure on the female-shaped vase, U. Silistreli considered these figures and the figure on the female-shaped vase as the mother-goddess (Silistreli, 1989, pp. 362-363).



Figure 1: Female – Köşk Höyük, the Early Neolithic Period (Kulakoğlu, Yıldırım, Sipahi, Şahoğlu, & Keskin, 2019)



Figure 2: Standing Female – Ulucak Höyük, Late Neolithic Period (Çevik & Çilingiroğlu, 2013)



Figure 3: Facepot – Çatalhöyük, Late Neolithic Period (Yalman et al., 2013, pp. 156, Fig. 9/27)



Figure 4: Female-head Shaped Cup – Hacilar, Late Neolithic Period (Çaylı, 2013)

Two unique examples come from Ulucak Höyük, İzmir, Level IVb dated to the Late Neolithic Period. Both anthropomorphic pots are in the shape of a woman. One of the women is sitting, and the other one is standing and holding her breasts. Both vessels are red on white. Standing woman's (Fig. 2) eyes are lost. The nose is pictured as a relief, and no mouth was presented. Both vessels were worn off by the fire. The sitting woman's upper body is lost (Çilingiroğlu, 2012, pp. 30-35, 58). In Ulucak Höyük Level IVb, anthropomorphic figurines are also intensely discovered. Both vessels and the figurines found in the Höyük have a religious basis. There are typological similarities like women hold their breasts and having big hips, but these characteristics are not enough to compare vessels to figurines (Abay, 2003).

“The Facepot” (Fig. 3) were found in Çatalhöyük, Konya, dated to the Late Neolithic Period. This completed vessel is small and oval in shape. It has a basket-handle. Its paste is light brown. There are two human faces on narrow sides and two bucrania on wide sides. Eyes on the faces are not elaborately described, but the nose and mouth are portrayed in detail. One of the faces is finished completely and the other is incomplete. The incomplete face has deep downward lines on both sides of the mouth, which indicates that s/he is an old person. Bucrania reach out to the foreheads of the faces. Yalman et al. mentioned that both bulls have eyes and ears described (Yalman, Tarkan, & Gültekin, 2013, p. 182).

The anthropomorphic vessel found in Hacılar Höyük, Burdur, is unique because vessels of this type of normally belongs to Level I, the Early Chalcolithic Period. However, this one belongs to Level VI, which is the Late Neolithic Period. When the vessel (Fig. 4) is placed upside down, the head of the woman is in the upright position. Thus, the mouth of the vessel is on the neck of the woman. The vessel has four small handles on the neck of the woman. The eyes and eyebrows were incised. The nose protrudes in the shape of a triangle, no mouth described. J. Mellaart mentions that she has a bun on the back of her head, which is known from other female figurines of Level VI (Mellaart, 1970, pp. 107-108).

Chalcolithic Period (from 6000/5900 B.C. to 3400/3300 B.C.)

Similar to the Neolithic Period, the Chalcolithic Period anthropomorphic vessels are also used for rituals and/or libation purposes, and all of them show elaborate craftsmanship. This type of vessels was found at Domuztepe Höyüğü, Hacılar Höyük, Aşağı Pınar Höyüğü, Toptepe Höyük and in the Bolu Region. There are six human-shaped vessels dated to the Chalcolithic Period.

The earliest Chalcolithic vessel came from Domuztepe, Kahramanmaraş. It is found from the late deposition of “Death Pit”, where approximately 35 or 40 people were buried, dated to the Late Neolithic to Early Chalcolithic. The vessel (Fig. 5) itself is dated to the Early Chalcolithic Period. A substantial part of the vessel's mouth is missing, but one eye of the

patient is saved. The decoration on the neck is also missing except for a diagonal line. The breasts and hands of the figure are represented as small lumps. Her fingers are marked with lines. The woman figure has brown decorations on her hips, two lines of net designs around her knees, and three lines on her wrists. These motifs can be her dressing or tattoos on her body. Her loins are shown as a triangle. Her legs were produced separately and attached to the body afterwards (Carter & Campbell, 2006, pp. 315-316).



Figure 5: Standing Female – Domuztepe, the Early Chalcolithic Period
(Carter & Campbell, 2006, p. 322, Fig. 10)



Figure 6: Female holding a pot – Hacilar, the Early Chalcolithic Period
(Sadberk Hanım Müzesi, 2021)

Human-shaped vessels from the Hacilar Höyüğü, typical of Levels I and II. Three vessels¹ dated to the Early Chalcolithic Period were found in Hacilar Höyük; all of them are

1 Many anthropomorphic vessels date to the Early Chalcolithic in Hacilar, but there are debates about whether some of them were real or fake, or even found in Hacilar or other peripheral settlements. The artefacts found in the excavations done by J. Mellaart are known as the real ones (Mellaart, 1970). Duru mentions that after the scientific excavations ended, both illegal excavations and fake artefact production continued (Duru, 2010 p. 34). Aitken et al. (1971) studied the authenticity of Hacilar style vessels and figurines. They used the thermoluminescence dating method on the vessels and shards of the Ashmolean Museum to determine whether the vases were fired in antiquity or in recent times (Aitken et.al.,1971, p. 89). In this article, we concentrated on three of the 66 vessels that are dated back to the Early Chalcolithic Age by thermoluminescence dating based on the above-mentioned studies. The other two vessels mentioned here can be seen in Aitken et al. (1971).

red painted on a beige surface. The one (Fig. 6), which is in the Sadberk Hanım Museum in Istanbul today, is nearly complete except at the bottom. The paste has sand and plants in it, and the vessel had been fired relatively poorly. The mouth of the vessel is the woman's head, and the neck is also the woman's neck. The zigzag motif on the mouth of the vessel could be the hair of the woman. The eyebrows and pointed nose are in relief and painted red. Obsidian pieces indicate the eyes. Ears are in the shape of half circles; her chin is a low relief. The body of the vessel shows an exaggerated body of a woman with large hips. Her breasts were represented as small circular lumps. She holds a zigzag designed deep pot in her hands (Mellaart, 1970, p. 181; Umurtak, 1996, pp. 489-490).

The two-headed vessel of Hacılar Höyüğü is also red painted on a beige pot. The shared body shows an exaggerated human body, similar to other Hacilar vessels of the Early Chalcolithic. The two separated necks of the vessel have two different faces. The eyes of the women were made clear with obsidian pieces and the ears with painted lines. There are no mouths, but the noses are specified in relief; the chins are in low relief. Arms are separated as outgrowth from shoulders and merge into the body under the small circular pointed breasts (Aitken, Moorey, & Ucko, 1971, p. 89).

The third vessel of Hacilar Höyüğü is another red-painted beige vessel, dated to the Early Chalcolithic. Similar to other Hacilar pottery, this pot also shows an exaggerated body of a human. The neck of the vessel is the figure's head, and the eyes and mouth are marked with incised lines. The nose and ears are in relief. The figure has relatively short arms, elbows are pointed to the back, hands are positioned on the sides of the chest, and fingers are marked as lines with paint (Aitken et al., 1971, pp. 89-93).

It was reported that there was a large central building with two rooms in Level 2 of Aşağıpınar Höyüğü; which had been subjected to a major fire; and a quadrangular hearth with a raised platform on both sides near the south wall of the northern room of this building. Just behind the small hearth in the south room of the building; a female-shaped vessel with a double body (Fig. 7) was found. The woman's arms joining at the abdomen, triangular face, and breasts are depicted in relief. Apart from the female figure that gives the vessel its original shape, human figures are also depicted in relief. No detailed information is given about the function and dimensions of this vessel. However, since another male-shaped vessel was found in the same structure, it is thought that the building had a special purpose that could not be understood. Because anthropomorphic vessels were used for ritual purposes, it is possible that this vessel was also used in rituals (Özdoğan, Parzinger, & Karul, 1998, p. 144).

Although the female-shaped vessel recovered from the Middle Chalcolithic Level 5 of Toptepe is stylistically divergent, it is interesting because the room in which it was found was not a temple or a shrine. The vessel (Fig. 8) has a cylindrical neck, a rectangular body, and four

cylindrical feet. The vessel is made of coarse, sandy, and straw-tempered unbaked clay. Based on the weight of the vessel, M. Özdoğan states that it was dried in the sun, then moved to the room it was in and never removed again (Özdoğan & Dede, 1998, p. 148). The vessel is 84 cm high in total, with a 15 cm neck and 11 cm feet. The body measures 34x38x58 cm. Matte red paint decoration is visible on all surfaces of the vessel, except the back. The neck of this jar is the head of a woman. The eyes, ears, and nose are carved in relief. The holes in the ears may indicate that the figure wore earrings. The rectangular body of the vessel is the body of the woman. The long-dressed figure's arms and hands, carved in low relief, are illustrated as joined under her breasts, which are depicted as tiny protrusions. The wavy decorations on the shoulders are interpreted as the woman's hair. The long dress, depicted in the same red paint, continues to the feet of the vessel. It had horizontal bands and was decorated with spirals and zigzags. There are fringes on the skirt (Özdoğan & Dede, 1998, p. 149; Umurtak, 1996, p. 494).

One of the human-shaped vessels (Fig. 9) comes from an unknown settlement in the Bolu region. This is made from brick-red clay, light brown slipped and polished. On the neck of the vessel there is a face of a woman. Her hands are on her belly, and her breasts are small lumps. Her eyes are incised as lines, and her ears also serve as grips with holes. There is no mouth described (Renda, 1993, p. 69 Fig. A 75).



Figure 7: Two bodied female – Aşağıpınar, the Middle Chalcolithic Period (Özdoğan, 1998, p. 92, Res. 18)



Figure 8: Standing Female with rectangular body– Toptepe, Chalcolithic Period (Özkaya & San, 2007, p. 202)



Figure 9: Female-shaped vessel – Bolu Province, the Chalcolithic Period
(Renda, 1993, p. 69, Fig. A 75)

Early Bronze Age (from 3400/3300 B.C. to 2000 B.C.)

Six vessels² are dated to the Early Bronze Age (EBA) of Anatolia. They mostly date to EBA II and EBA III. Most of the Early Bronze Age vessels come from the Troia/Hisarlık Tepe. One of the vessels originates from Eastern Anatolia, and the other two vessels originate from Western Anatolia. These types of vessels have been found in Bavurdu, Troia, Karataş-Semayük and Seyitömer Höyüğü.

One of the female-shaped vessels comes from Middle/West Anatolia, from the Bavurdu Afyonkarahisar region. It is shaped as a woman carrying a pitcher on her back (Fig. 10), dated back to the EBA II period. The vessel has red-coloured, uncoated paste, tempered with fine sand and a small amount of mica. The body is shaped as a swollen round. A disc-shaped face is attached at the end of the neck of the vessel. The eyes are round holes, and the mouth is a line. The eyebrows and nose are carved in relief, and the nostrils are emphasised. A beak-mouthed pitcher is placed right next to the neck as the mouth of the vessel. The handle of the small pitcher is attached to the neck of the vessel, which is also the neck of the figure. The two small protrusions on the swollen body of the vessel could be the woman's breasts. The woman's hair forms a bun at the back of her head. The bulging ears have holes. On the left side of the vessel, there are two smaller lumps that indicate the presence of a handle. As with similar vessels of the period, it should be assumed to be a ritual vessel (Duru, 1974, pp. 683-685).

Troia yielded the richest finds in terms of human-shaped vessels among the EBA settlements. The common features of Troia's woman-shaped vessels are the carving of the face, breasts, belly button, and arms. There are two types of human-shaped vessels found in Troia. In one type, the lid is flat and fits over the mouth of the vessel, and the face is shaped

2 There are many human-shaped vessels, and vessel parts are dated to the Early Bronze Age of Anatolia, especially Troia. In this study, female-shaped vessels from Troia and Seyitömer Höyüğü are examined by choosing one example of similar woman-shaped vessel groups as representative, while single vessels from other settlements are examined.

on the neck of the vase. In the second type, the lid is deep, covering the entire neck of the vessel. In this type of vase, the face is placed on the lid (Dörpfeld, 1902, p. 256).

An example of the first group of Troia vessels is called the small face vase (Fig. 11). The neck of this vessel is the face of a human figure. The ears are not depicted on the face. The seven vertical lines on the back of the head must be the hair of the portrayal (Schmidt, 1902, p. 14). The eyes are carved as spherical protrusions with a hole in the centre. The raised eyebrows cover the top of both eyes, meet in the centre, and descend downwards to form the nose. The mouth is shown as a thin line just below the nose. The arms are small buds emerging from the body; the hands are not depicted in these unrealistic formations. Three small punctate lumps on the spherical body of the vessel emphasise the breasts and navel of the human figure.

The representative of the second group of Troia is a double-handled jar (Fig. 12). It measures 26.4 cm in length, 7.3 cm in rim diameter, 22.2 cm in body diameter, and 7 cm in base diameter. There are breaks on the rim, side of the body, and base. The paste is grey and lumpy. A lid in the shape of a human face must have been placed on it (Blegen, Caskey, & Rawson, 1951a, p. 45).

One example of Troia's human-faced lids is completed with seventeen fragments joined together. The handle that should be on the top of the head, the left ear, more than half of the bottom and side, and the back are missing. The paste is coarse, mica tempered, and burnished. The exterior surface is black slipped and glossy. The slightly mushroom-shaped lid has a conical top. The edges of the top of the mushroom shape are decorated with fine lines. The human face on the lid depicts arched eyebrows meeting between the eyes and descending to form a relief nose. The mouth is indicated as a straight line, and the upper lip is slightly protruding. The eyes are small round lumps, and the ears are semicircular. The current height of the lid is 12.1 cm, the diameter of the mushroom-shaped projection on the head is 12.5 cm, the diameter of the upper part of the ears is 10.7 cm, the diameter of the lower part of the lid is 11.2 cm, and the wall thickness is 0.6 cm (Blegen et al., 1951a, p. 50).

The vessel found at Karataş-Semayük (Fig. 13) was made of local paste. It resembles the human-shaped vessels of Troia and is thought to have been dated to a slightly earlier period than the vessels from Troia IIg. The human face on the vessel is carved in relief. The eyebrows, nose, eyes, and mouth of the figure are carved in relief. The mouth is round and small, whereas the eyes are large and oval. The relief nose is formed by combining the eyebrows and extending them downward. The lower ends of the handles of the double-handled vessel are depicted as the hands of the figure. Therefore, it can be assumed that the handles of the vessel form the arms of the figure. The bottom of the vessel is broken but completed (Mellink & Angel, 1968).



Figure 10: Disc-faced female – Bavurdu, the Early Bronze Age
(Şahoğlu & Sotirakopoulou, 2011, p. 311, Fig. 298)



Figure 11: Facepot with winged handles – Troia, the Early Bronze Age
(Schmidt, 1902, p. 14, No. 306)



Figure 12: Female-shaped, two handled vessel – Troia, the Early Bronze Age
(Blegen, Caskey, & Rawson, 1951b, Fig. 74/33.214, 33.218)

The example of the woman-shaped vessels found at Seyitömer Höyüğü (Fig. 14) is a woman carrying a baby on her back and a bowl in front of her. There is a crescent-shaped crown with teeth carved in relief on her head. It is thought that the straight lines coming down from this crown may be the hair of the image. The ears are carved in crescent-shaped

relief with horizontal holes. There are round reliefs around the eye sockets. The tip of the nose points upwards, the nostrils are prominent, and the mouth is open in a shouting position. Her arms extend straightforward from the shoulder level. She holds a double-handled vessel, which is connected to the body by a spout, in front of her chest. The baby, which she carries on her back, is not described on the face except for its gaping mouth and ears. On the unusually long arms of the baby, the wrists and fingers are outlined, and the baby is positioned hugging the mother's neck. Two lines are running down on the baby's back (Z. Bilgen, 2021).

A vessel from Suluca-Karahöyük also has a human face depiction. Although one half of the vessel is missing, the human face can be clearly seen. Two small lumps indicate the eyes. The relief nose is extraordinarily long for a human face. The vessel's clay is sand and small stone mixed, light brick red. It is coated in reddish brown slip (Çizikçi, 2018, pp. 25-26). The depiction on a cult vessel found at Pulur/Sakyol was identified as a bird by H. Z. Koşay. However, this depiction is similar to the human face figures found on the vessels of Troy, with joined eyebrows and noses. Therefore, the depiction on the Pulur/Sakyol vessel should also be considered a human figure (Koşay, 1976, p. 308).



Figure 13: Facepot – Karataş-Semayük, the Early Bronze Age (Mellink & Angel, 1968, Pl.82/Fig. 15)



Figure 14: Woman with a baby on her back – Seyitömer Höyüğü, the Early Bronze Age (A. N. Bilgen, Bilgen, & Çırakoğlu, 2015, pp. 128, Fig. 145)

Conclusions

The study of human-shaped vessels offers a different view about the cultural and religious life of prehistoric civilisations from Neolithic to the end of EBA Anatolia. It is possible to trace the development both in numbers, decorations, and symbolism of anthropomorphic vessels, which are not suitable for daily use, from the Neolithic Period onwards. The vessels dating to the Early Chalcolithic have similar typological characteristics with the Neolithic vessels and are mostly used for ritual purposes. The most significant common characteristic of the female-shaped pots found in Anatolia is the description of wide hips of a woman on the lower part of the vessels, probably emphasising the fertility and/or maternity. There is no foot depiction in the early examples. In time, advanced decorations began to appear on these vessels, deepening the symbolism. Most of the vessels, which have geometric decorations, have some symbolic meaning such as parallel lines as the neck of the dressing (Fig. 2) or zigzags as the hair of the figure (Fig. 6) on the female-shaped body of the vessel. All vessels of the Neolithic and Chalcolithic Periods are made of clay and have fine artisanship.

The human-shaped vessels found in Western Anatolia and dated to the Early Bronze Age are strongly associated with Troia and show typological similarities with their predecessors. The feet are also not depicted on the vessels of this period, and the bodies of the vessels expanding towards the lower part are interpreted as the hips of the woman. This depiction of the female body probably continued to symbolise fertility. In addition, the protruding breast depiction, which was rare in the Neolithic and Chalcolithic Periods, is common for this period, especially in Troia. Moreover, the elaborately crafted depiction of a woman carrying an infant on her back, as seen in Seyitömer Höyük, shows the development of a differentiated approach in the symbolic meaning of vessels compared to earlier periods.

When considering the human-shaped figurines, it can be said that both the figurines and the vessels were likely used for ritualistic purposes and symbolised females with exaggerated body parts. Because both female-shaped vessels and figurines are recognised as indicators of prehistoric belief systems and are often found in areas special for worship. However, it is important to note that especially during the Neolithic, both religious and daily activities occurred within the houses. Thus, it is impossible to say the difference between ritual and daily objects. Even in this condition, human-shaped vessels should have had a particular purpose other than daily activities. Both female-shaped figurines and vessels in Anatolia represent a diverse cultural and ceremonial tradition that played vital roles in the Neolithic, Chalcolithic, and EBA societies.

In summary, human-shaped vessels have been discovered in Anatolia from the Neolithic Period to the end of the EBA, presenting different typological characteristics compared with everyday vessels. Anthropomorphic vessels increased in number and evolved over time. It

is not fully understood their exact purpose and usage. However, they were found mostly in shrines, graves, and/or other sacred places, suggesting that they were produced to be used in special rituals related to fertility, both childbirth and agriculture, as female figures are mostly associated with fertility.

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References

- Abay, E. (2003). The Neolithic Figurines from Ulucak Höyük: Reconsideration of the Figurine Issue by Contextual Evidence. *NEOLITHICS 2/03. The Newsletter of Southwest Asian Neolithic Research*, 2, 16-21.
- Aitken, M. J., Moorey, P. R. S., & Ucko, P. J. (1971). The Authenticity of Vessels and Figurines in the Hacilar Style. *Archaeometry*, 13(2), 89-142.
- Arsebük, G. (1999). İnsanın Evrim Süreci ve En Eski Kültürleri. *TUBA-AR*, 2(1), 31-69.
- Bilgen, A. N., Bilgen, Z., & Çırakoğlu, S. (2015). Erken Tunç Çağ Yerleşimi (V. Tabaka). In A. N. Bilgen, Z. Bilgen, G. Coşkun, F. Çevirici-Coşkun, & S. Çırakoğlu (Eds.), *Seyitömer Höyük I. İstanbul: Arkeoloji ve Sanat Yayınları*.
- Bilgen, Z. (2021). A Preevaluation of Libation Vessels Discovered at Seyitömer Mound Early Bronze Age Layer III Sanctuaries. In L. K. Harrison, A. N. Bilgen, & A. Kapuci (Eds.), *Early Bronze Age in Western Anatolia*.
- Blegen, C. W., Caskey, J. L., & Rawson, M. (1951a). *Troy: the Third, Fourth, and Fifth Settlements Part 1*: Princeton University Press.
- Blegen, C. W., Caskey, J. L., & Rawson, M. (1951b). *Troy: the Third, Fourth, and Fifth Settlements Part 2*: Princeton University Press.
- Carter, E., & Campbell, S. (2006). *Report on the 2004 Excavation Season at Domuztepe*. Paper presented at the 27. Kazı Sonuçları Toplantısı.
- Çaylı, G. (2013). *Ankara İli Anadolu Medeniyetleri Müzesi'nde Bulunan Seramik Eserlerin İncelenmesi Üzerine Bir Araştırma*. (Yayımlanmamış Yüksek Lisans Tezi). Gazi Üniversitesi, Ankara.
- Çevik, Ö., & Çilingiroğlu, Ç. (2013). Ulucak: A Prehistoric Mound in Aegean Turkey. Retrieved from <https://www.asor.org/blog/2013/01/07/ulucak-a-prehistoric-mound-in-aegean-turkey/>. 2 Kasım 2022
- Childe, V. G. (1951). *Man Makes Himself*: New American Library New York.
- Çilingiroğlu, Ç. (2012). *The Neolithic Pottery of Ulucak in Aegean Turkey: Organization of Production, Interregional Comparisons and Relative Chronology*: Archaeopress.
- Çizikçi, S. Y. (2018). *Suluca-Karahöyük MÖ 3.-2. Binyıl Kült Eserleri*. (Yayımlanmamış Yüksek Lisans Tezi). Ondokuz Mayıs Üniversitesi,

- Dörpfeld, W. (1902). *Troja und Ilion: Ergebnisse der Ausgrabungen in den Vorhistorischen und Historischen Schichten von Ilion 1870-1894*. Athen: Beck & Barth.
- Duru, R. (1974). A Human-shaped Rhyton from Kumrulu. In *Mansel'e Armağan* (Vol. 1, pp. 679-690).
- Duru, R. (2016). 'Tarım'dan 'Yazı'ya Burdur Yöresi ve Yakın Çevresi'nin Altın Yılı (MÖ 8000-MÖ 2000).
- Koşay, H. Z. (1976). *Keban Projesi Pulur Kazısı, 1968-1970 = Keban Project Pulur Excavations, 1968-1970*. Ankara: Orta Doğu Teknik Üniversitesi.
- Kulakoğlu, F., Yıldırım, T., Sipahi, İ. T., Şahoğlu, V., & Keskin, L. H. (Eds.). (2019). *Uğur Silistreli Anı Kitabı: Anadolu Arkeolojisi Üzerine Yazılar*.
- Mellaart, J. (1970). *Excavations at Hacilar Vol. 1*.
- Mellink, M. J., & Angel, J. L. (1968). Excavations at Karataş-Semayük in Lycia, 1967. *American Journal of Archaeology*, 243-263.
- Özdoğan, M. (1998). Tarihöncesi Dönemlerde Anadolu ile Balkanlar Arasındaki Kültür İlişkileri ve Trakya'da Yapılan Yeni Kazı Çalışmaları. *TUBA-AR, 1*(1), 63-93.
- Özdoğan, M., & Dede, Y. (1998). An Anthropomorphic Vessel from Toptepe. In M. Stefanovich & H. H. Todorova, H. (Eds.), *James Harvey Gaul—In Memoriam* (pp. 143-152).
- Özdoğan, M., Parzinger, H., & Karul, N. (1998). Kırklareli Höyüğü 1997 Yılı Kazısı. *20. Kazı Sonuçları Toplantısı, 1. Cilt*, 139-164.
- Özkaya, V., & San, O. (2007). Körtik Tepe. In C. Lichter (Ed.), *Vor 12000 Jahren in Anatolien: Die ältesten Monumente der Menschheit*: Badisches Landesmuseum.
- Renda, G. (1993). *Çağlar Boyu Anadolu'da Kadın Anadolu Kadınının 9000 Yılı*. İstanbul: T.C. Kültür Bakanlığı.
- Sadberk Hanım Müzesi. (2021). Kadın Biçimli Kap. In: Sadberk Hanım Müzesi,.
- Şahoğlu, V., & Sotirakopoulou, P. (Eds.). (2011). *Karşıdan Karşıya. MÖ 3. Bin'de Kiklad Adaları ve Batı Anadolu*.
- Schmidt, H. (1902). *Heinrich Schliemann's Sammlung Trojanischer Altertümer*. Berlin: Georg Reimer.
- Silistreli, U. (1989). Köşk Höyük'te Bulunan Kabartma İnsan ve Hayvan Figürleriyle Bezeli Vazolar. *Belleten*, 53(206), 361-374.
- Umurtak, G. (1996). Anadolu'nun Batı Bölgelerinde ve Trakya'da Tunç Çağları Öncesi Yerleşimlerde Bulunmuş Olan Ayrışık Kaplar. *Anadolu Araştırmaları*(14), 479-517.
- Yalman, N., Tarkan, D., & Gültekin, H. (2013). The Neolithic Pottery of Çatalhöyük: Recent Studies. In I. Hodder (Ed.), *Substantive Technologies at Çatalhöyük: Reports from the 2000-2008 Seasons* (pp. 147-182).

Neolithic Period Tables

Table 1: Köşk Höyük – Female


Type	Female-Shaped Vessel	
Settlement	Köşk Höyük – Niğde	
Level	III. Level – Early Neolithic	
Material	Baked Clay	
Color	Dark red/Rusty Brown	
Condition	Restored	
Measures	Mouth D. 15.6 cm, Body D. 31.3cm, Height 41.7 cm	
Museum	Niğde Museum, Inv. No: 1.2.91	

Table 2: Ulucak Höyük – Standing Female


Type	Female on a standing position	
Settlement	Ulucak Höyük – İzmir	
Level	Level IVb – Late Neolithic	
Material	Baked Clay	
Color	White, decorated with red lines	
Condition	A part of the mouth is missing	
Measures	-	
Museum	İzmir Archaeology Museum	

Table 3: Çatalhöyük – Facepot



Type	Facepot with bucrania and ears of a bull	
Settlement	Çatalhöyük - Konya	
Level	Area 4040 – Late Neolithic	
Material	Baked Clay	
Color	Yellowish light brown	
Condition	Restored	
Measures	-	
Museum	-	

Table 4: Hacilar Höyük – Woman head

Type	Woman head	
Settlement	Hacılar - Burdur	
Level	Hacılar VI – Late Neolithic	
Material	Baked Clay	
Color	Red, burnished	
Condition	Restored	
Measures	Height 12 cm	
Museum	Ankara, Anatolian Civilizations Museum	

Chalcolithic Age Tables

Table 5: Domuztepe – Standing Female


Type	Standing woman	
Settlement	Domuztepe - Kahramanmaraş	
Level	Death Pit (South) – Early Chalcolithic	
Material	Baked Clay	
Color	Dark Brown decorated	
Condition	Broken, missing some parts, restored	
Measures	Height 20 cm	
Museum	-	

Table 6: Hacılar – Female


Type	Pot holding woman	
Settlement	Hacılar - Burdur	
Level	Hacılar I – Early Chalcolithic	
Material	Baked Clay	
Color	Red on cream with brown painted decorations	
Condition	Restored, bottom is missing	
Measures	Height 28.7 cm	
Museum	Sadberk Hanım Museum	

Table 7: Aşağıpınar Höyüğü – Two Bodied Female


Type	Two bodied female-shaped vessel	
Settlement	Aşağı Pınar – Kırklareli	
Level	2 nd Level – Middle Chalcolithic	
Material	Baked Clay	
Color	-	
Condition	Restored	
Measures	-	
Museum	Kırklareli Museum	

Table 8: Toptepe Höyüğü – Female with a Rectangular Body



Type	Female with a rectangular body	
Settlement	Toptepe - Tekirdağ	
Level	5 th Level – Middle Chalcolithic	
Material	Sundried Clay	
Color	Decorated with red paint	
Condition	Restored	
Measures	Neck H. 15 cm, Body 34x38x58 cm, Leg H. 11 cm	
Museum	Tekirdağ Museum	

Table 9: Bolu Province – Female-shaped Vessel

Type	Female-shaped vessel	
Settlement	Bolu Province	
Level	Chalcolithic	
Material	Baked Clay	
Color	Brick-red clay, light brown slipped and polished	
Condition	Restored	
Measures	Height 26.5 cm, Belly Diameter 20 cm	
Museum	Ankara Anatolian Civilizations Museum	

Early Bronze Age Tables

Table 10: Bavurdu – Disc-faced Female


Type	Disc-faced female holding a jug	
Settlement	Bavurdu - Afyonkarahisar	
Level	EBA II	
Material	Baked Clay	
Color	Red, not coated	
Condition	Good	
Measures	Height 17.9 cm, Max. Width 11 cm	
Museum	Afyonkarahisar Archaeology Museum, Inv. No.: E 747	

Table 11: Troia/Hisarlık Tepe – Face-pot


Type	Face-pot with winged handles	
Settlement	Troia/Hisarlık Tepe - Çanakkale	
Level	Troia II (?) – EBA II	
Material	Baked Clay	
Color	-	
Condition	Good	
Measures	Height 11 cm, Mouth D. 6 cm, Body D. 30 cm	
Museum	-	

Table 12: Troia/Hisarlık Tepe – Female


Type	Female-shaped two handled pot	
Settlement	Troia/Hisarlık Tepe - Çanakkale	
Level	Troia III – EBA III	
Material	Baked Clay	
Color	Gray, grainy	
Condition	Good	
Measures	Length 26.4 cm, Mouth D. 7.3 cm, Body D. 22.2 cm	
Museum	-	

Table 13: Karataş-Semayük – Face-jar



Type	Face-jar	
Settlement	Karataş-Semayük - Antalya	
Level	37 th Opening – EBA II	
Material	Baked Clay	
Color	-	
Condition	Bottom part is missing, restored	
Measures	-	
Museum	Antalya, Elmalı Museum	

Table 14: Seyitömer Höyüğü – Female with a baby attached

Type	Female with a baby on her back	
Settlement	Seyitömer Höyüğü - Kütahya	
Level	V. Level B stage – EBA III	
Material	Baked Clay	
Color	Light brick-red	
Condition	Restored	
Measures	-	
Museum	Kütahya Archaeological Museum	



Continuity and Change in Glyptic Art in Light of Ancient Mesopotamian Cylinder Seals from the Yale Babylonian Collection

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ABSTRACT

The advent of cuneiform writing in ancient Mesopotamia facilitated the reconstruction of the region's political history, contributing to a profound understanding of societal lifestyles and perceptions. Among extant archaeological artefacts, seals, distinguished as exemplary small artworks, have garnered research attention comparable to cuneiform documents. These artefacts, adorned with diverse themes and styles, offer a narrative richness not fully captured by the written records of the ancient world. Over the past two decades, expanded archaeological excavations in the ancient Near East have significantly augmented our knowledge of glyptic art, yielding well-stratified and securely dated examples from various settlements. This study meticulously examines a collection of cylinder seals of ancient Mesopotamian origin, generously donated to the Yale Babylonian Collection in 2016, belonging to the antiquities trader E.S. David. The primary aim of this study is to analyse the scenes engraved on seals iconographically and stylistically. Concurrently, it delves into technical aspects, such as the variety of raw materials in seal production, production technology, seal size, and form, and queries the existence of chronological developments and changes in seal styles. This multifaceted approach unveils insights into the worldview, culture, artistic style, mythology, technology, and everyday life of the societies associated with seals. In addition, this study investigates similarities and innovations in the technology and style of seal engraving within a chronological framework. Furthermore, this study focuses on the examination of similarities and innovations observed in both the technology and style of seal engraving within a chronological context. This study contributes to a deeper understanding of the intricate interplay between technological advancements, artistic expression, and cultural evolution within ancient Mesopotamia.

Keywords: Continuity and Change, Glyptic Art, Jemdet Nasr and Early Dynastic periods



Introduction

Cylinder seals, as defined in archaeological literature, are cylindrical, thread-passed artefacts featuring diverse depictions and occasional inscriptions on the impression surface, utilised by ancient societies. In the ancient Near East, engraving motifs or scenes on seals involved crafting designs through carving. Consequently, when pressed onto a soft surface, the patterns on the seal appeared in relief. The historical use of cylinder seals in the ancient Near East traces back to approximately 3500 BC in the southern Mesopotamian steppe and Susa in Iran. This practise is credited to the Sumerians, the earliest civilization in the region, who pioneered the system of writing on moist clay (Nissen, 1977, 15-16; Collon, 1987, 5; Collon 1995).

The most fundamental reasons for the transition from stamp seals to cylinder seals in ancient Mesopotamian societies can be explained as follows:

1. The stamp seal, which has a more restricted impression surface than a cylinder seal, limits its capacity to present detailed narratives or communicate substantial messages to society (Moortgat, 1969, 9; Nissen, 1977; Collon, 1987, 5).

2. The change in the society's economic system and the inability of both types of seals (stamp and cylinder) to be functional simultaneously played a role. To express this more clearly, stamp seals, with their relatively small and limited impression areas, could only partially secure the objects they intended to protect. On the other hand, using cylinder seals allowed the entire surface of an object to be sealed, providing a more comprehensive safeguard. In this way, materials transported from one region to another or stored could be protected against fraud or theft. In conclusion, cylinder seals perfectly meet both fundamental needs, providing better control and a broader space for expression (Nissen, 1977, 15-16; 2004, 87-89; Porada, 1993).

Seals, not only enduring in circulation for centuries post-creation, serve as enduring references, reflecting formal, stylistic, and iconographic evolution, but also emerge as crucial sources, imparting intricate details on Mesopotamian history, social life, culture, art, belief systems, and technology, paralleling cuneiform documents. Foremost in facilitating the chronological classification of Mesopotamian glyptic art are cylinder seal inscriptions featuring the names of historical figures, seal impressions on cuneiform tablets, and evidence gleaned from excavations in ancient sites.

The archaeological artefacts that form the starting point of the study consist of a group of seals of Near Eastern origin belonging to the antiquities trader E.S. David. The collection was donated to the Yale Babylonian Collection for scientific study in 2016 by his son, E.S. David after his death (Lassen, 2019, 7). The collection consists of 360 pieces of cylinder seals dating from the 4th millennium BC to the Sassanid Period.

The study covers a total of 25 cylinder seals with subjects such as various animal rows, working women, hero-animal combats, lion-goat combats, banquets, and various geometric motifs. The earliest examples of the seals in this study are dated to around 3100 BC according to the Middle Chronology, whereas the latest examples can be dated to around 2350 BC. This historical interval aligns with the Jemdet Nasr (hereafter JN) and Early Dynastic (hereafter ED) periods in Mesopotamian chronology (Table 1).

The seals that constitute the subject of this study have been analysed not only for their iconography and stylistic features but also for their technical characteristics, such as the variety of raw materials, production technology, size, and form. This study unveils, for the first time, the temporal and cultural context reflected in the artistic and iconographic features of seals within the Yale Babylonian Collection, drawing comparisons with other Mesopotamian seals. This approach facilitates an understanding of the cultural and artistic traits of the societies using these seals during their respective periods, while also providing insight into the inferred social lives and technological advancements achieved in their artistic endeavours. Thus, the cultural or artistic similarities or differences between societies living in different geographies and periods are emphasised considering the cylinder seals constituting the focus of this research.

Table 1: South Mesopotamia chronology from the 4th to the end of the 3rd Millennium BC (Lebeau, 2011, 12, Table 1; Sallaberger and Schrakamp, 2015) and scenes of cylinder seals.

Approximate Dates BC (Middle Chronology ca.)	Historical Period Mesopotamia (south)	Cylinder Seal Scenes
4000-3100	Uruk	
3100-2900	Late Uruk/JN	rows of horned animals; rows of fish and spider; working women; geometric patterns
2900-2700	ED I	rows of horned animals
2700-2600	ED II	contest between nude heros and animals
2600-2500	ED IIIa	Banquet scene, contest between nude heros and animals or bull-men and animals; lion and goat contest; geometric patterns
2500-2350	ED IIIb	
2350-2112	Akkadian and Post-Akkadian	



Figure 1: Map of the sites frequently referenced in the text (created by using the ArcGIS/ArcMap software).

Chronology, Materials, and Techniques of Cylinder Seals

1-Late Uruk/JN (Proto-Literate) Period (circa 3100-2900 BC)

The Uruk period characterised the majority of the 4th millennium BC in southern Mesopotamia. Throughout much of this period, archaeological remains serve as primary sources, as written records only emerge for the Late Uruk period (Uruk IVa-b) and the subsequent “transitional” period (Uruk III/JN) (Selz, 2020, 164). The earliest examples from the second half of the 4th millennium BC align chronologically with the late Uruk period. Seals from this period are predominantly carved from soft limestone, with the largest seals (at least in diameter) utilised by Near Eastern societies carved during this period (Collon, 1987, 14; Collon, 2003, 3-4.). Towards the end of the 4th millennium BC, as urbanisation reached its peak and the widespread use of writing paralleled this development, there was an explosion in the use of cylinder seals. Seals were no longer limited to elite administration but were also used to stamp goods traded over long distances, such as baskets, containers, and bags. These seals belong to the period known as JN but extend as far as the ED I period. The name JN period is derived from the mound of Jemdet Nasr, located near the city of Kish,

south of Baghdad, where the remains of this period were first discovered. In Mesopotamian chronology, this cultural phase has been classified within the phase initially defined by Delougaz as the Proto-literate period¹ (Delougaz, 1942, 8, foot note. 10).



Figure 2: JN period cylinder seals. Rows of horned animal scenes (photos and modern impressions by author).

- a.** Cylinder seal. Yellow marble. Two antelopes are standing facing left with a plant in between and a shrine in front.
Height 2.3 cm. Diameter 8.1 cm. Yale Babylonian Collection, D002.
- b.** Cylinder seal. Black serpentine. Two antelopes stand with their backs to each other, with two spouted vases and stars, and a shrine in front.
Height 2.7 cm. Diameter 6.3 cm. Yale Babylonian Collection, D-005.
- c.** Cylinder seal. Green jasper. An antelope is standing facing left, with a star in front and a shrine.
Height 1.6 cm. Diameter 3.1 cm. Yale Babylonian Collection, D-007.
- d.** Cylinder seal. White marble. Three antelopes are depicted standing, and there are two drill hole patterns in the gap.
Height 2.5 cm. Diameter 6.4 cm. Yale Babylonian Collection, D-008.

¹ From a stratigraphic perspective, this term encompasses the cultural phases from the Late Uruk period to the end of ED I, which marks the period in Mesopotamia when writing first emerged and phonetic principles began to be utilised. See also Frankfort, 1955, 12-24.

The increasing number of excavations in the Near East has not only expanded our knowledge of the period's seal art but also revealed that the cylinder seals of this period are more widely distributed than those of the Uruk period. All JN seals have holes, and there is no evidence of any handle attachments on the upper part of these seals. The cylinders from this period are small and stout. Nevertheless, the seal engraving technique of this period exhibits a more rudimentary, schematised, and less meticulous craftsmanship compared with that of the preceding period. It can be noted that the subject repertoire was much more limited compared to the Uruk period.



Figure 3: Transition phase cylinder seals. (photos and modern impressions by author)

- a. Cylinder seal. White marble. Rows of horned animal scenes. Two antelopes are standing. Height 1.6 cm. Diameter: 3 cm. Yale Babylonian Collection, D-015.
- b. Cylinder seal. Grey-brown stone. A goat is standing facing left, with a star and plant motif in front and two other stars on top. Height 2.7 cm. Diameter 3.2 cm. Yale Babylonian Collection, D-016.

Until the early 1990s, it was generally accepted that JN period seals were shaped using a cutting wheel (Nissen, 1977; Collon, 1986; 1987; Gorelick & Gwinnett, 1992). However, Margaret Sax's recent studies have conclusively proven that the cutting wheel was not invented before the Old Babylonian period, more precisely, between the late 1700s and 1600s BC (Sax & Meeks 1994; 1995; Sax et al. 1998). Thus, it is understood that seal manufacturers of this period used the technique of drilling and filing extensively while creating the depictions on the cylinders (Pittman & Aruz, 1987, 14-16).

Fourteen of the seals examined for the first time in this study carry the characteristics of the JN period glyptic art. These seals share similarities in form and material with the wide and stout Uruk period seals. Furthermore, they exhibit distinct features, being crafted in thin, long, concave shapes and fashioned from either white or pink marble or glazed steatite stones.

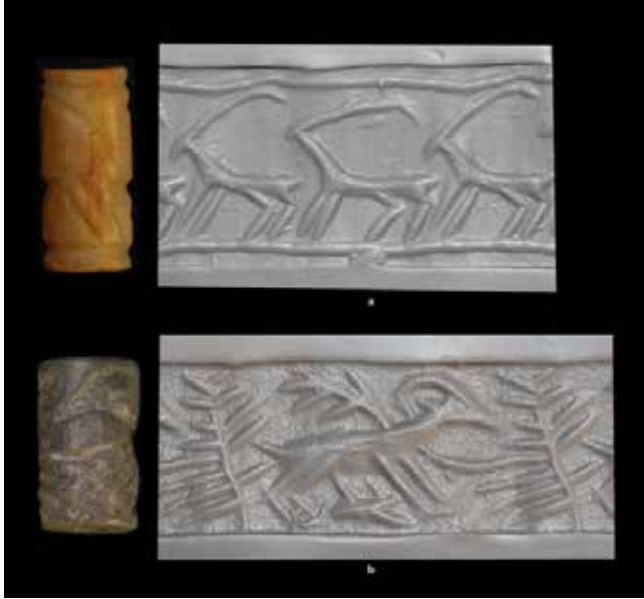


Figure 4: ED I period cylinder seals. Horned animal scenes (photos and modern impressions by author).

- a.** Cylinder seal. Pink marble. Two antelopes are standing. Height 3.8 cm. Diameter 4.8 cm. Yale Babylonian Collection, D-014.
- b.** Cylinder seal. Serpentine. An ibex is standing facing right with plants. Height 2.5 cm. Diameter 4.3 cm. Yale Babylonian Collection, D-018.

2-ED I/Post-JN Period (circa 2900-2700 BC)

Texts in southern Mesopotamia shed light on the period known as the Early Dynastic (ED) period in Mesopotamian chronology, extending from the early 3rd millennium BC until the political unification of the Akkadians under Sargon. Based on archaeological data from the excavations at Tell Asmar (ancient Eshnunna), Tell Agrab, and Khafajah (ancient Tutub) in the northeastern Diyala region of Baghdad, this period is traditionally divided into three main phases: ED I, ED II, and the final phase, ED III, according to Frankfort (Frankfort, 1955, 2; Collon, 1987, 20; Amiet, 1980). Moortgat, on the other hand, proposed a different chronological distinction

for the cultural phases established by Frankfort and made the following classification²: ED I = Transitional phase; ED II = Mesilim period; ED IIIa=Fara period (Moortgat, 1967).

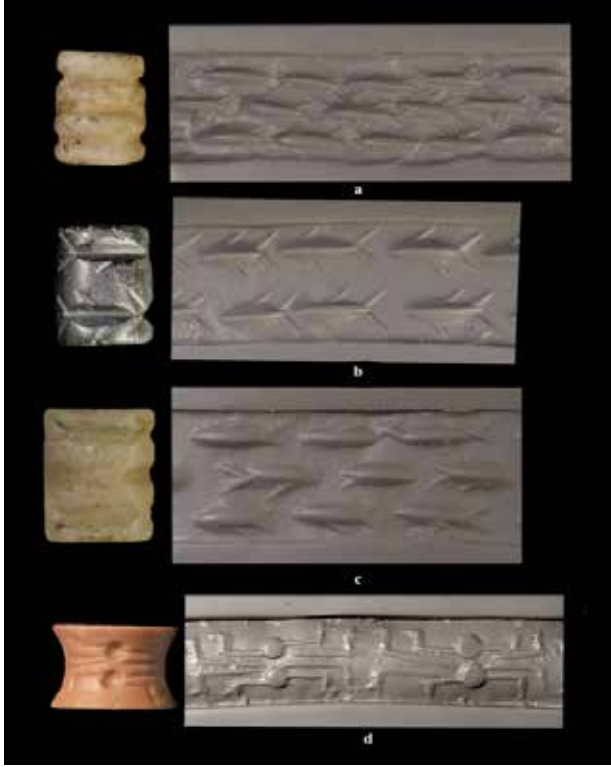


Figure 5: JN period cylinder seals. Rows of fish and spider scenes (photos and modern impressions by author).

a. Cylinder seal. Quartz. Three rows of fish.

Height 1.7 cm. Diameter 4.2 cm. Yale Babylonian Collection, D-030.

b. Cylinder seal. Black serpentine. Two rows of fish scenes.

Height 2 cm. Diameter 4.6 cm. Yale Babylonian Collection, D-031.

c. Cylinder seal. Onyx marble. Three rows of fish scenes.

Height 2.5 cm. Diameter 5.7 cm. Yale Babylonian Collection, D-032.

d. Cylinder seal. Concave sites. Red jasper. Rows of two spider scenes.

Height 2.5 cm. Diameter 5.8 cm. Yale Babylonian Collection, D-027.

2 Another widely accepted designation for the ED period in Mesopotamian chronology is the “Pre-Sargonic Period”. See de Genouillac, 1934, 70. Other scholars prefer to divide the ED period into only two stylistic phases: earlier ED and later ED. See Orthmann, 1975, 30.

When evaluated in terms of the subject repertoire and characteristic artistic features, the distinction between ED I and ED II period cylinders can be easily and clearly made. However, distinguishing between ED II and ED III period cylinders is often more challenging. However, as Frankfort noted, determining exactly when a new style emerged in the historical timeline of illustrated artworks or tracking the transition phase from one style to another may not always be possible. This is because changes typically occur gradually, and it is difficult to decide when we are still within the realm of the old tradition and when new trends are being expressed. Therefore, in Mesopotamian glyptic art, the Early Dynastic I period is initiated with the emergence of features termed “brocade style” entirely unique to this period.

The cylinders of the ED I period retain their formal, slender, and long shape. The heavy use of drills, prevalent in the early periods, was almost entirely abandoned in the glyptic art of the ED I period. Both principal motifs and filling motifs have been reduced to groups of incised lines created by the engraving technique.

This study includes two examples illustrating the seal style and technique of the ED I period among the examined cylinder seals. The subjects are almost invariably composed of horned animal rows or geometric patterns, which are the simplest and most traditional composition schemes.

3-ED II (Old Sumerian) Period (circa 2700-2600 BC)

The ED period marked a profound transformation in Mesopotamian glyptic, witnessing the introduction of novel subjects and forms of expression. Towards the period’s conclusion, foundational elements were established, shaping subsequent developments in art. Conversely, the growing abundance of Sumerian texts, particularly from the ED II period onward, offers insights into the culture of the ED II and subsequent ED III periods. Serving as the earliest records of Sumerian history, these written sources designate the ED period as the Old Sumerian period in Mesopotamian chronology.

Formally, compared to the preceding phase, cylinders from the ED II period exhibit differences in size. These seals typically maintain the slender and elongated form observed in ED I seal. Materials used for these seals include limestone, marble, calcite, onyx marble, alabaster, and lapis lazuli (Porada, 1948, 9).

ED II seals predominantly depict scenes of contests and banquets. In contrast to the ED I period, the seal style of this period features figurative decorations executed with deep incisions, replacing shallow and flat cuts. Three of the cylinder seals scrutinised in this study exemplify the seal style prevalent during ED II.

4-ED III (Old Sumerian) Period (circa 2600-2350 BC)

The ED III period is further divided into two subphases, denoted as IIIa and IIIb, based on evidence obtained from excavation sites such as Khafajah, Kish, and Ur (Frankfort, 1955, 2; Porada, 1948, 8; Collon, 1987, 20). The division of the period in this manner is also consistent with the stylistic differences in the cylinders featuring contest friezes. The first group, dated to the ED IIIa period, exhibits less modelling compared to the later examples from the ED IIIb period. However, such a definitive classification cannot be made for friezes in which the central figure is an eagle. The craftsmanship is rough, and the common practise is to divide the composition area into two friezes.

Differences in the dimensions of the cylinders were observed in the ED III period. In comparison to previous periods, numerically smaller cylinders are more favoured during this period. The types of stones preferred as seal materials in the ED II period continued to be used in this period. The six-cylinder seals (Figs. 8-9 and 11) that constitute the subject of this study reflect the stylistic and typological traditions of ED III period glyptic art.

Composition, Scene, and Style of Cylinder Seals

1-Miscellaneous Animal Row Scenes

Themes within JN period glyptic art often depict animal processions with a structure resembling a barn or temple, as shown in Figs. 2a-c. Occasionally, these scenes portray solitary animals (Figs. 2d; 3a-b). Although the seals in this category lack commonalities, they consistently draw inspiration from the temple herd theme prevalent in Uruk period cylinder seals. In contrast to Uruk seals, which intricately depict animal bodies and limbs, the JN period employs larger and smaller drills in a distinctive manner, as showcased prominently in Figs. 2a-b and 2d. These techniques are predominantly observed on compact seals crafted from coloured limestone or marble.

From a technical standpoint, the main figures or motifs are affixed to the seal composition area using a drill. It is evident that even the later use of a file fails to completely erase the drill traces. The animals in these seals are dynamically portrayed, with crossed front legs and bent hind legs, imparting movement and preventing a static expression.

Empty spaces within the seal composition, marked by one large and one small hole, likely represent containers in which animals drink water. These spaces are often filled with various plants, ceramic, or astral motifs. Conversely, the depiction of animal bodies in Figs. 3a and 3b, featuring three large shallow ovals created with a wide-tipped drill, and the shallow carving of other patterns with a file signify the emergence of the glyptic art style of the ED I period. These advancements in seal engraving allow us to consider that the examples in Fig. 3 may belong to a slightly later phase, possibly the transition phase (from JN to ED I), compared with those in Fig. 2.

The rows of animals engraved on JN period seals not only indicate which types of animals were part of the economy in Sumerian society, where agriculture and livestock were fundamental livelihoods (and thus the fauna of the period), but also provide data on the dietary diversity of the society. In studies focussing on the regional variations of animal species represented in stamp and cylinder seal iconography, the accurate identification of species relies on the small details incorporated by the seal artist. Portable Light Dome (PLD) technology has facilitated a comprehensive reassessment of faunal assemblages on seals. Pioneering studies successfully conducting such research have revealed that, in most cases, apart from the lions depicted almost everywhere, other species correspond to the local fauna community (Speleers, 1917, 113). On the other hand, it has been determined that the horned animals commonly engraved on cylinder seals since the Uruk period and the following JN and ED I periods are Arabian antelope (*Oryx leucoryx*). This animal was observed in large herds throughout the Arabian Peninsula and its northern regions until the 20th century, but its population rapidly declined and eventually extinction in the wild (Boschloos et al., 2012, 34).

The seals with the theme of horned animal rows examined in this study, along with ancient Near Eastern examples from collections such as the Ashmolean Museum (Buchanan, 1966, pl. 3. 23-25, 28-29, pl. 4.30-32.), British Museum (Wiseman, 1962, pl. 6b-d, g-h), Yale Babylonian (Buchanan, 1981, 63-64, nos. 176, 178-180), Pierpont Morgan (Porada, 1948, pls. V.22-25, VI. 26a), Kist (Collon, 2003, 35, nos. 029-031 and 48, no. 064), and Newell Collections (von der Osten 1934, pls. III. 24, IV. 27-28), as well as cylinder seals unearthed in the Khafajah excavations in the Diyala region (Frankfort, 1955, pls. 4.15, 5.22-30, 6.31, 7.37-43, 9.61-63, 9.66-67, 9.71-75, 19.202-206, 20.207-208), represent parallel examples in terms of composition, iconography, technique, and style.

In ED I seals, subjects mainly consist of the simplest and most traditional composition schemes, such as rows of antelope and wild goat or geometric and plant patterns. The composition and drawing style reflect characteristics similar to the brocade style. The use of drills for the eyes, heads, noses, and hooves was uncommon during the ED period (Fig. 4).

Thick horizontal or diagonal lines created using a file in JN cylinder seals often result in a distinct “circle” motif, typically representing the drill hole. The drill hole, used to depict the body part of stylised human or animal motifs, is combined with straight or diagonal lines created using a file. This is how limbs, such as arms and legs, are formed. One example of scenes created using these techniques is the friezes depicting rows of fish or spiders (Fig. 5). Stylised spider depictions are associated with Uttu. This is because, in many mythologies, including Sumerian mythology, Uttu is associated with a spider and weaving (Collon, 1987, 16). The theme is also known from parallel examples where similar stylistic features are exhibited, such as the Pierpont Morgan (Porada, 1948, pl. 6.29), Kist Collection (Collon 2003, 34, no. 026), and Khafajah (Frankfort, 1955, pl. 9.64).

The theme of rows of fish, first seen in Mesopotamia around 3100 BC, is known from the Khafajah and Ur (Frankfort, 1955, pls. 4.11, 18.180, 183, 32. 329; Legrain, 1951, pl. 3. 38-41). Interestingly, the Mitanni civilization in the 14th century BC exhibited a preference for these themes, notably in significant Syrian cities like Qatna (Al-Maqdissi, 2008, 217, cat. no.128a).

These themes not only offer insights into the periods and regions where they were prevalent in seal art but also illuminate the underlying motivations for different societies engraving the same compositions on seals across diverse periods and locations. Furthermore, they facilitate the comprehension of the origins and trajectories of regional interactions during various historical periods and across different geographical areas.

2-Working Women Scenes

One of the main subjects of seals during the early JN period is the frieze of “working women” seated on mats or stools, engaged in activities such as pottery or textile production (Fig. 6). This scene, also called ‘women with pig tails’ in glyptic art, is a different seal type encountered for the first time in the art of this period. This composition consists of two or more figures, each with a pigtail, sitting with arms extended forward and raised upwards, and regularly placed spherical hollows or vertically striped objects among them. Some of these spherical images on the seals are thought to represent vessels used by agricultural and animal husbandry in Sumerian society for the preparation of churns or dairy products (Porada, 1948, no. 7; Collon, 1987, 16). The two vertical lines seen in front of some figures represent a weaving loom. Dumbrill argued that scenes with compositions, as seen in Fig. 6b, reflect a musical scene. Dumbrill interprets the consistent positioning of the arms of the seated figures in these types of scenes as an attempt to depict movement integrity, perhaps even rhythmic consistency (Dumbrill, 2015, 19-20). He points out that the large spherical objects in front of the figures likely represent a drum, and the smaller spheres around the larger ones could indicate different musical pitches. The lines below or above the large “drums” are placed to indicate emphasis. However, due to the lack of written sources on Sumerian religious hymns from the JN period, we cannot be certain of the accuracy of this hypothesis.

When examining cylinder seals of Mesopotamian origin, it is noteworthy that there exists a substantial concentration of seals of equal or lesser quality portraying identical subjects as those under investigation in this study. Examples found in collections such as Kist (Collon, 2003, 30, cat. nos. 015-017), Yale Babylonian (Buchanan, 1981, cat. nos. 145, 147), J. Pierpont Morgan (Porada, 1948, pl. 3.12, 16E), Newell (von der Osten, 1934, pl. IV.29-30) or Danish Collection (Møller, 1992, 85, pls. 30-31), Ashmolean Museum (Buchanan, 1966, pl. 2.17-19), and the British Museum (Wiseman, 1962, pl. 3c-e), as well as those recovered from Khafajah (Frankfort, 1955, pl. 45.480), are some of the examples that exhibit characteristics parallel to this seal type in terms of composition, iconography, and style.



Figure 6: JN period cylinder seals. Working women scenes (photos and modern impressions by author).

- a.** Cylinder seal. Coral stone. Three squatting “pig-tailed” women facing left with their arms extended, two more pots before a woman. The other two have a loom (?) in front of them.
Height 1.8 cm. Diameter 5 cm. Yale Babylonian Collection, D-025.
- b.** Cylinder seal. Red jasper. Three squatting “pig-tailed” women, each seated on benches or mats at work on one of the two pots before her.
Height 1.8 cm. Diameter 4.9 cm. Yale Babylonian Collection, D-024.

3-Contest Scenes

During the early phase of the ED II period, two recurrent themes surfaced in glyptic art, enduring through subsequent periods and frequently amalgamating within a single seal. The first theme encompasses the struggle between animals, while the second revolves around the contest between nude heroes and animals. In ED II seals, the contest scene was depicted in two ways:

1. The first group is characterised by a continuous frieze with interconnected figures (see Figure 7a and 7b). The seals of this group have a naked hero or a bull-man in the centre of the compositional area, depicted symmetrically and centred, holding a goat or a lion on both sides. The composition continues symmetrically with heroes added on either side of the horned animals, grasping the attacking lions by their tails. (Fig. 7a). The division of scenes into panels or friezes by horizontal lines to create composition areas is a feature commonly encountered in cylinder seals of this period and later cylinder seals that continued to evolve.

On another seal from the ED II period, the bull-man in the centre of the composition restrains the lions on either side by holding them by the throat. On either side of the lions, a composition consisting of a second bull man holding a horned animal with the other hand while lunging at the head of the lions with a dagger is connected to the stage to form an indivisible frieze. The depiction of lions from the profile in friezes with a theme of struggle is a characteristic feature of glyptic art of this period. However, showing the heads of lions from above, as seen in Fig. 7b, is a significant indication that the glyptic art of the ED III period was beginning to form (See Wiseman, 1962, pl. 20). Therefore, comparing this seal to Fig. 7a suggests that it could be dated to the transition from ED II to ED III. Furthermore, we can see evidence of a gradual development in glyptic art, with animal bodies depicted highly stylised and lacking detail on ED II seals, as in the detailed depiction of the neck hairs of lions in late ED II and the transition to ED III. Among the examples recovered from Farah in the Diyala region, we can see cylinder seals similar in scene, composition, and style to the seal evaluated in this study (Frankfort, 1955, Fig. 4)

In the contest theme scenes of the ED II period, heroes often wear headgear with a flat top and protrusions on both sides. The protrusions on both sides of the headdress model are a characteristic feature of ED II art. The bull-man is a creature combined with the human face, arms, trunk, and posture of the horns, tail, and hind legs of a bull. In the cylinder seals of this period, the bodies of the bullmen are always depicted as naked, but with a two-tiered belt around their waists. The upper part of their body is consistently shown from the front, head, and the lower part, including the tail, is depicted in the profile.

Cylinder seals depicting contest scenes with composition, iconography, and style similar to the seals classified under the first group in this study are found in various collections, such as the Ashmolean Museum (Buchanan, 1966, pl. 13.153), British Museum (Wiseman, 1962, pl. 15c), Pierpont Morgan Collection (Porada, 1948, pl. 10.55), and Kist Collection (Collon, 2003, 55, no. 079; 58, no. 086).

2. On the seals in this group, we see the scene of a contest between the hero and antelope or the bullman and lion. The most specific feature that distinguishes this group from the first one is the carving of the three-figure contest scenes in two pairs (Fig. 7c). In these pairs, the hero is depicted either naked or, as a characteristic feature of ED II art, sometimes with a short skirt. We typically observe a hero with a short skirt among mountain goats and a naked hero among lions. In ED II- period contest scenes, heroes frequently wear short skirts in the front and long skirts in the back to allow freedom of movement. The closest parallel example in terms of scene, composition, and iconography to this seal, evaluated under the second group in this study, was recovered from Tell Asmar (see Frankfort, 1955, pl. 46.489) in northern Mesopotamia.



Figure 7: ED II period cylinder seals. Contest scenes (photos and modern impressions by author).

a. Cylinder seal. Haematite. In the centre, a nude hero wearing a two-horned headdress, holding goats on either side of his. A lion attacks the goats from behind, and behind the lions are two nude heroes with two-horned head-dresses holding the lions by their tails. The end of the composition is panelised with two horizontal lines. A scorpion is in the lower panel.

Height 2.4 cm. Diameter 8.3 cm. Yale Babylonian Collection, D-041.

b. Cylinder seal. Quartz or Selenite. At the centre of the composition is a scene of a triple struggle between a bullman and lions on either side of his. Behind both lions, another bullman plunges a dagger into the lions' heads, while with his other hand, he holds a horned animal (goat or antelope) by the throat and restrains it. Another bullman stands on the left. There are two daggers in the spaces between the bullman and the legs of the lions.

Height 3.4 cm. Diameter 8.6 cm. Yale Babylonian Collection, D-039.

c. Cylinder seal. Quartz. In a two-group composition. Left: A hero, wearing a skirt with a short front and a long back, with a two-horned headdress, who also holds the reversed ibexes by the head. Right: A nude hero between two lions holding them by the necks. A motif of daggers between the hero and the animals.

Height 2.6 cm. Diameter 6.5 cm. Yale Babylonian Collection, D-042.



Figure 8: ED III period cylinder seals. Contest scenes (photos and modern impressions by author).

a. Cylinder seal. Yellow marble. Contest scene.

Height 4.3 cm. Diameter 4.5 cm. Yale Babylonian Collection, D-048.

b. Cylinder seal. Serpentine. Animal contest scene. Two crossed lions are attacking a rampant goat with its head thrown back.

Height 2.4 cm. Diameter 4.1 cm. Yale Babylonian Collection, D-091M.

In ED III period seals portraying the hero-animal contest theme, despite the uniformity of the scene, the seal composition area was divided into friezes by two horizontal lines, contributing to formal richness (Fig. 8a). Conversely, diversity within this group of seals is achieved through heroes and animals depicted in closer proximity, in a more upright manner, and some presented in a distinct fashion compared to the art of the preceding period. Particular attention is drawn to the innovation presented by the glyptic art of the period, especially the alignment of all heads at the same level, regardless of the posture of the figures (Fig. 8a). As a result, the animals and heroes stand more upright, and the friezes are woven more tightly. The hero figure wearing the headdress with a flat top and protrusions on both sides disappears during the ED III period, and instead, the hero with hair often featuring stiff upright curls emerges as a characteristic feature of glyptic art in this period (see for parallel examples: Wiseman, 1962, pl. 16a, 18a; Frankfort, 1955, pl. 27.273; pl. 52. 550). Another distinctive feature of seals belonging to this group is the depiction of lions with their heads seen from above, giving them a larger and more majestic appearance. In conclusion, while the theme remains consistent, execution varies almost uniquely in each example.

In seals of the ED III period, the contest between animals is one of the most popular scenes. The theme of the contest between lions and mountain goats is characteristic for the bodies of animals in attacking positions to be mostly crossed (Fig. 8b). In the centre of the seal composition area, a pair of crossed lions are seen attacking goats by their necks, depicted with their heads turned backwards. Similar scenes and iconography to those belonging to this group can be observed in seals of ancient Near Eastern origin in private collections, such as the Kist Collection (Collon, 2003, 62-63, nos. 094-097), British Museum Collection (Wiseman 1962, pl. 5k), and Khafajah (Frankfort, 1955, pl. 24.247).

4-Banquet Scenes

From prehistoric periods, banquets have served as pivotal social activities, revealing and influencing social complexity, power dynamics, economic disparities, and cultural transformations (Suter, 2018, 141). In this study, two examined cylinder seals are dated to the ED III period, identified through the portrayal of banquet scenes and the stylistic attributes of the figures (Fig. 9). The banquet theme stands as a fundamental subject in both ED II and III.

Seals portraying banquet and drinking scenes feature a composition area divided into two registers, one at the bottom and one at the lower, demarcated by two horizontal lines. In Fig. 9a, the upper frieze of the banquet scene depicts two figures seated on stools, facing each other, drinking beer from a vat placed in the middle through straws. A standing figure behind them is interpreted as a representation of members of their entourage of lower rank than the seated banqueters. One of the most characteristic scenes common to the ED II and ED III periods; The theme illustrates an eagle with extended wings grasping two antilops on the

lower register of this seal. This theme is sometimes engraved on cylinder seals and other depicted artefacts of the ED II and III period with similar compositional and iconographic characteristics, sometimes alone as the main scene of the seal, and sometimes in one of the two friezes together with seals with banquet scenes or contest scenes (see for parallel examples: Buchanan, 1979, fig. 327; Wiseman, 1962, pl. 24-26; Collon, 2003, 65, no. 100; 66, nos. 102-103; 67, nos. 104-105).

In Mesopotamian glyptic art, an eagle holding two horned animals with its talons is often associated with the god Ninurta. Ninurta was a prominent deity in Mesopotamian mythology, particularly in the Sumerian and Akkadian traditions. The eagle, a symbol of power and dominance, is found holding horned animals and may represent Ninurta's prowess in warfare and his role as a protector of the gods. The second important feature of Ninurta is its association with agriculture and fertility. Complementary motifs linked to the feast, such as the eagle clutching horned animals and plants consumed by these creatures, offer crucial insights into interpreting the scene depicted on this seal. When the scene on this seal is examined alongside depictions on ED votive plates, these images collectively references to New Year festivals and the celebration of the agricultural cycle.

In some seals dated to the ED III period, banquet scenes are depicted with a male and a female figure. However, it is not possible to determine the gender of the figures that make up the scene on the seal evaluated in this study. This is because the heads of the figures are all depicted in a simple and cursory manner, and they all wear a similar skirt, usually ending in fringes. The figures with skirts that end with fringes, as depicted on the seals of this period, can also be observed on relief plates and statuettes dating back to the ED period (see for parallel examples: Hansen, 2003, 59-64, cat. nos. 24a-d-26; Moortgat, 1969, cat. nos. 70-75 and 122).

In the two-frieze seals dated to the ED III period, examples can be observed where this scene sequence is reversed, meaning that the composition area is divided as in the upper scene of the seal with the eagle frieze (see Wiseman 1962, pl. 26e). It cannot be definitively stated whether these seals belong to the early or late phases of the ED III period because the depiction of figures in these friezes has remained almost the same throughout the entire period. The second seal featuring banquet theme differs from the initial example (Fig. 9b). In both friezes of the two-frieze composition area (bottom and lower), the primary banquet scene is intentionally repetitive. Each frieze depicts two figures seated opposite each other, engaged in drinking beer from a large vase on a pedestal via tubes. In contrast to the attendant positioned behind the seated figures in Fig. 9a, this seal portrays the attendant in a seated position. In addition, the filled vessel, unlike Fig. 9a, where it aligns with the figures' knees, is at the level of their torsos. The narrower width of this seal indicates that the engraver adapted the scene to the composition area, arranging the figures more closely together in a

compact layout. Despite these variations, the stylistic and technical features of the figures in this seal mirror those in Fig. 9a. Analysing the Mesopotamian glyptic corpus, we can say that the seals with the banquet scene evaluated within the scope of this study predominantly reflect the southern Mesopotamian glyptic principles in terms of iconography and stylistics.



Figure 9: ED III period cylinder seals. Banquet scene with seated figures drinking beer through straws. (photos and modern impressions by author).

a. Cylinder seal. Pink marble. Two registers divided by two horizontal lines. Bottom register: Banquet scene with seated figures drinking beer from a large vessel through straws. Behind the figure on the right is a standing figure. Lower register: A spread eagle looking left grabs the hindquarters of two antelopes sitting on their haunches; a plant is placed between the heads of the antelopes.

Height 3.1 cm. Diameter: 4 cm. Yale Babylonian Collection, D-058.

b. Cylinder seal. Grey stone. Two registers divided by two horizontal lines. On both registers: Banquet scene with seated figures drinking beer from a large vessel through straws; behind the figure on the left is another seated figure.

Height 3.5 cm. Diameter 4.6 cm. Yale Babylonian Collection, D-060.

The ceremonial character of the banquet scenes depicted on the seals of the ED II and III periods, in which two figures sitting opposite each other are shown drinking beer from a vessel in the centre, is corroborated by the depiction of similar scenes on votive plaques found in the temples of this period. Banquets held to celebrate military victories, hunting, or agricultural festivals (see Strommenger 1964) lack clear participant identities. In the Sumerian social structure, rulers held the title of priest-king, and perhaps for this reason, gods are identifiable in only a few ED III seals. Based on a comparison of votive plaque imagery with textual data (Beld, 2002), J. Asher-Greve posited that the banqueters depicted on votive plaques most likely represented the king and queen of the respective city-state (Asher-Greve, 1985, 97-108). Regardless of the purpose for which they are organised, banquet scenes can be said to reinforce the acceptance of authority figures in leadership positions and the hierarchy within society (Michalowski, 1994; Suter, 2018, 142).

5-Geometric Pattern

As Frankfort noted, the most striking innovation of JN seals is a series of geometric designs often found on long, slender cylinders made of glazed steatite (Frankfort, 1955, 17). While similar seals with such designs are known from other settlements, none have been discovered in as abundant quantities and precisely dated contexts as those in Khafajah (Frankfort, 1955, 17-18). A common practise involved using a file horizontally and diagonally to create open-ended incisions on the curved edges of the cylinder seal, resulting in the characteristic geometric patterns typically obtained on the seal (Collon, 2003, 4).

The lattice pattern identified on the two elongated seals examined in this study appears to have been engraved using this particular technique (Fig. 10a-b). Cylinder seals with such designs are also known from the Kist Collection (Collon, 2003, 41, no. 046) or Danish Collection (Møller, 1992, 86, pl. 41), the Ashmolean Museum (Buchanan 1966, pl. 5.69-70), and excavations in the Diyala region (Frankfort, 1955, pls. 8.57, 72.788, 89.946) and Ur (Legrain, 1951, pl. 5.69-70).

Within the cylinders of the ED III period, the tradition of incorporating geometric and abstract designs from the JN period persists. These designs adorn slender, elongated seals within this category, showcasing intricate visual details and exemplifying high-quality craftsmanship. They serve as compelling evidence of the decorative creativity achieved in glyptic art during this period. Typically, the composition area of these seals is segmented into friezes by two parallel horizontal lines. Seal decoration often includes bands featuring a woven pattern and a thematic arrangement of “eye” shaped circles positioned in a *tête-bêche* configuration (Fig. 11a-b). The motifs on the seal are typically fashioned using a finely tipped file, frequently marked with diagonal lines, and tube-shaped drills. Tools like drills and files, prevalent since the JD period, have persisted in use for engraving scenes on ED III

seals. Consequently, a trend emerged to adhere to geometric and other designs reminiscent of those observed in ED I seal. The composition, scene, and style of these cylinder seals can be paralleled in the seals from the Diyala Region excavations and the Kist and Yale Babylonian Collections (see Frankfort, 1955; Buchanan 1979, fig. 354; Collon, 2003, 52-53, cat. nos. 072, 074).

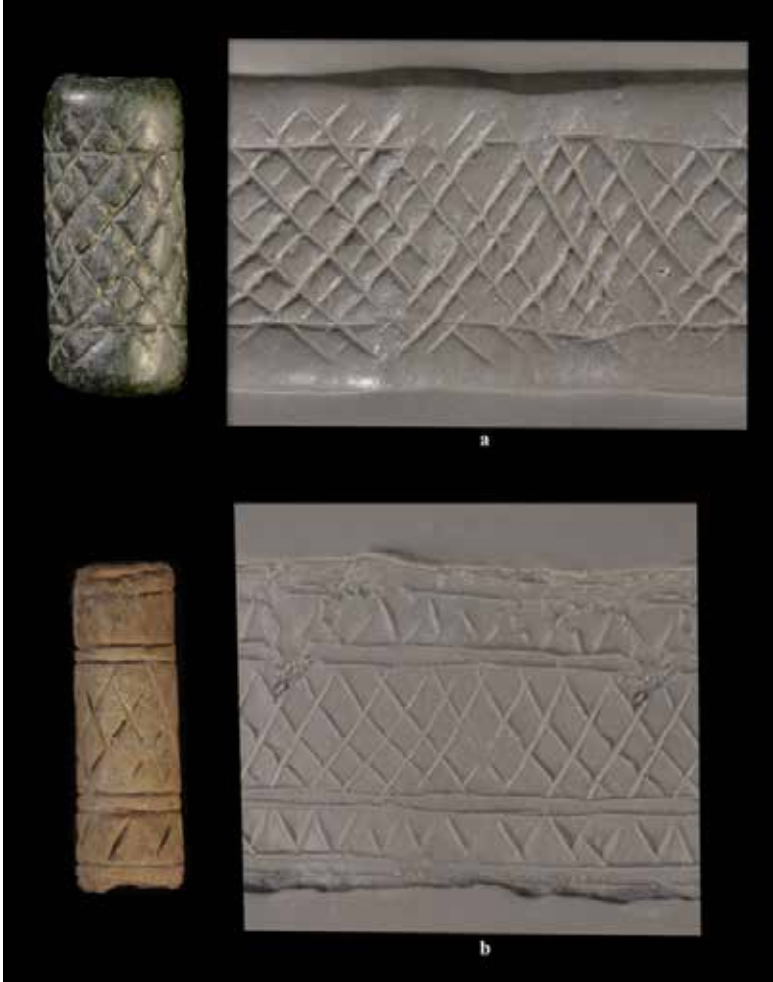


Figure 10: JN period cylinder seals. Geometric pattern (photos and modern impressions by author).

a. Cylinder seal. Haematite. A diagonal grid between the line borders.

Height 2.6. Diameter 3.5 cm. Yale Babylonian Collection, D-033.

b. Cylinder seal. Yellow stone. Three registers are divided by a horizontal line. The bottom and lower registers have zigzag lines and the centre register has a diagonal grid motif.

Height 2.8 cm. Diameter 3.4 cm. Yale Babylonian Collection, D-034.

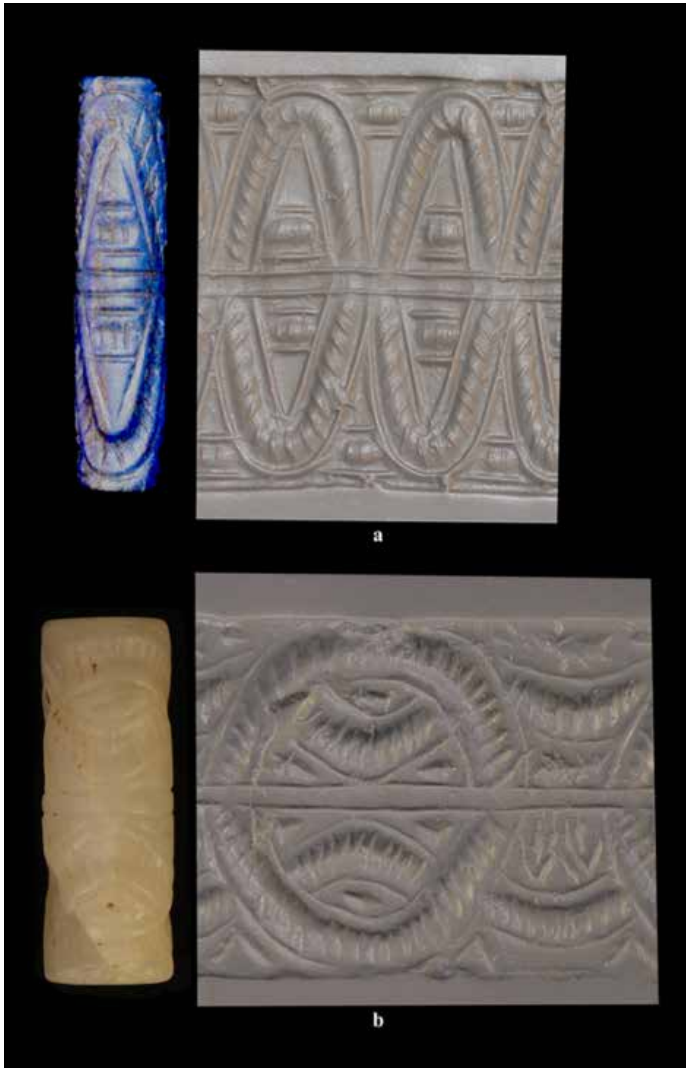


Figure 11. ED III period cylinder seals. Geometric pattern (photos and modern impressions by author).

a. Cylinder seal. Lapis lazuli. Two registers divided by two parallel lines, with outlined ladder pattern arches in one register and a similar pattern in the other. Ladder patterns across the bases of the arches.

Between the arches are thick horizontal lines intersecting thin lines.
Height 3.7 cm. Diameter 2.6 cm. Yale Babylonian Collection, D-036.

b. Cylinder seal. Alabaster. Two registers divided by two horizontal lines. Mirror images with two ladder-pattern arches in each register, double-outlined at the top of the arch; each arch encloses a hatched eye shape. Horizontal lines between the arches.

Height 4.3 cm. Diameter 4.8 cm. Yale Babylonian Collection, D-038.

These abundant cylinder seals of the ED III period, with their rich geometric designs, are clear evidence that seal cutters had reached an extraordinary creative level in art and technique. Although it is difficult to define the designs on the cylinder seals of this group, most of them with geometric designs, it would be misleading to think that seals with such designs were of lesser importance than others or that they were simply intended to fill the surface of the seal. Based on the quality of the craftsmanship and the preference rates of abstract and concrete seals, Nissen pointed out that these two seal groups were favoured by different social segments, sharing the same purpose but serving distinct functions. Geometric patterned seals, characterised by quick preparation and near-repetitive designs, symbolise “legal person or institutions” in Nissen’s theory. These were preferred in situations where representing a specific individual was unnecessary, signifying instances when administration or a specific administrative faction assumed complete responsibility. In contrast, concrete seals would be employed in scenarios where trade and security responsibilities rest with a specific individual seal owner (Nissen, 1977, 20; Nissen, 2004, 90-91). Nissen’s hypothesis gains support when considering depictions of sealed clay lumps (*bullae*) in the Mesopotamian glyptic corpus, where concrete depictions predominate, whereas geometric depictions are typically associated with “legal person” seals.

Conclusions

Cylinder seals, among the earliest tools employed for economic control, provide assurance of the “inviolability” of transported raw materials. Additionally, these depictions aid in discerning the identity of the users, highlighting not only chronological or social disparities but also a socially and economically stratified society with varying levels of responsibility or decision-making. Initially used in southern Mesopotamian cities and the Susa region, the earliest cylinder seals predominantly featured compositions depicting diverse activities involving human and animal figures.

In this study, from the Yale Babylonian Collection, a total of 25 cylinder seals were analysed in the light of their stylistic, iconographic and technical characteristics. It was concluded that the earliest one dates to the JN period and the latest one to the ED III period. Examination of the subject repertoire of the seals clearly shows that those dating to the JN period are much more limited than the Uruk seals. Furthermore, the Late Uruk seals present complex and vital designs, whereas the seals of the JN period show a preference for more abstract designs in composition and technique. The most common scenes seen on seals of this period consist of various animal rows, women working in textiles or pottery, and miscellaneous abstract designs created with a combination of different geometric motifs. An additional change in the JN seals, which have fewer details and a lower quality of craftsmanship compared to the Uruk period, is the connexion between the design and the shape of the seal. Namely, thick and blunt shaped seals were preferred for figurative scenes; thin and long cylinders were

preferred for geometric designs. Moreover, the tradition of cylinder seals with geometric designs, widely used in JN period seals, was revived in the ED III period, displaying advanced techniques and a wide repertoire of motifs, and has an important place in terms of demonstrating continuity in the sealing tradition of the 3rd millennium BC Sumerian society. Excavations in the Near Eastern sites have revealed that abstract cylinder seals of the JN and ED periods were preferred in a wide geographical area from the Diyala region on the main trade routes of southern Mesopotamia to Syria-Palestine and Anatolia in the north³. Although cylinder seals with these designs do not serve the purpose of identifying their owners, they shed light on the extent and direction of interregional trade relations between Near Eastern sites in the 3rd millennium BC.

In ED I period glyptic art, human depictions are rarely used, but geometric designs continue to be used as an element transferred from the art of the previous period. Although the two cylinder seals analysed in this study continue the glyptic principles of the JN period in terms of shape and the scenes engraved on them, the style of the subject matter is fundamentally different; therefore, these seals should be dated to the “transitional phase”. The changes seen on the seals can be explained by the predominance of straight lines created by the engraving technique on the animal figures rather than the intensive use of the drill, and by the transformation of the figures from a static to a mobile design. The distinctive artistic style of this period is the carving of human and animal heads in an unnaturalistic “bird-head” shape. This style continues on seals and other depicted artefacts through the beginning of the ED IIIb period.

Although the main themes of the glyptic art of the ED II and III periods were dominated by contest and banquet scenes, the glyptic art of the ED III period changed. In addition to these themes, chariot scenes, libation scenes, and mythological scenes appeared more frequently than before. The composition of the rows of animals, the characteristic seal theme of the previous period, is abandoned in ED II and III seals. Instead, the animal contest, or the contest between the animal and the naked hero or bull-man, becomes a characteristic theme in glyptic art. The most significant result of the seals with contest scenes analysed in this study reveals that the craftsmanship of the ED III period began to render the figures in a more erect posture and in a more compact composition area compared to the ED II period. Furthermore, designs with no organic connexion to the scene in the field of seal composition, and therefore often interpreted as filling motifs by scholars, were rarely used in this period. With regard to the changes in the technique of seal engraving, the use of drills gradually decreased considerably in the ED III period compared to the previous periods. The scene on

3 Cylinder seals in this group are found not only in the periphery of Mesopotamia and Syria, such as Samsat, Zincirli, Tel el Cüdeyde, Norşuntepe, and Hassek, but also in Central and Western Anatolian settlements, such as Alisar (von der Osten, 1937, fig. 186), Gordion (Dusinberre, 2005, 33, fig.11a-b) and Troya (Schlieman, 1881, nos. 500-503).

the two cylinder seals analysed in this study sheds light on a continuity in glyptic art and the re-emergence of abstract designs, first seen on the thin, elongated cylinder seals of the JN period during the ED III period. On the other hand, the distinction observed in the forms of JN seals with abstract and concrete designs virtually disappeared in the ED III period. This demonstrates that in the second half of the 3rd millennium BC, seal craftsmen reached a standardised level of seal type, regardless of the subject matter of the scene to be engraved on the seal.

The cylinder seals with banquet scenes from the ED III period evaluated in this study are iconographically and stylistically representative of southern Mesopotamian seal art; therefore, it is possible to say that these artefacts donated in the Yale Babylonian Collection are of southern Mesopotamian origin. In light of other contemporary visual artworks, we can say that these scenes carved on cylinder seals of this period represent celebrations organised for specific purposes (military victory, hunting, new year celebrations, etc.) led and attended by high-ranking individuals in the Mesopotamian and Sumerian social structure. Such banquet scenes begin to appear in ED II and continue in ED III. However, in the last phase of this period, namely ED IIIb, there is a change in glyptic art and the focus of the banquet scenes evolves to libation scenes in which liquid offerings are poured to the gods with the appearance of anthropomorphically depicted gods. In addition to the change in the seal scene and composition, the style of the figures shows another change in the glyptic art of this period. This change in the ED IIIb period is characterised by a more naturalistic detailing of the faces and bodies of animal and human figures and by showing figures in relief.

In conclusion, textual and archaeological evidence shows that the first urban social system in Mesopotamia, the foundations of in the Uruk period, evolved into city states with the ED period, and that the developments emerging as a result of this new order can be traced through the existence of glyptic principles that continue and change in visual artworks. The seals examined in this study reveal the gradual replacement of the seal style seen in Mesopotamia at the end of the 4th and the beginning of the 3rd millennium BC, characterised by circular designs created mostly using drills, with a linear style in the ED I period. This linear style gave way to a plastic style that emerged in the ED IIIb period and reached its zenith during the Akkadian period.

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References

- Al-Maqdissi, M. (2008). "Archaeological Excavations at Qatna". In J. Aruz, K. Benzel, & J.M. Evans (Eds.), *Beyond Babylon: Art, Trade and Diplomacy in the Second Millennium B.C.*, (pp. 214–219), New York: The Metropolitan Museum of Art Publication.
- Amiet, P. (1980). *La glyptique Mésopotamienne Archaïque*. (2nd ed). Paris.
- Asher-Greve J.M. (1985). *Frauen in altsumerischer Zeit*. Malibu: Undena Publications
- Beld S.G. (2002). *The Queen of Lagash: Ritual Economy in a Sumerian State*. Unpublished PhD dissertation, University of Michigan. Ann Arbor.
- Boschloos, V. Devillers, A. Gubel, E. Hameeuw, H. Jean, J. Van Goethem, L. Van Overmeire, S. & Overlaet, B. (2012). The Ancient Near Eastern Glyptic Collections of the Royal Museums of Art and History Reconsidered, *BULLETIN* 83, (pp. 23–44).
- Buchanan, B. (1966). *Catalogue of Ancient Near Eastern Seals in the Ashmolean Museum I: Cylinder Seals*. London: Oxford University Press.
- Buchanan, B. (1981). *Early Near Eastern Seals in the Yale Babylonian Collection*. New Haven and London: Yale University Press.
- Collon, D. (1986). *Catalogue of the Western Asiatic Seals in the British Museum, Cylinder Seals III, Isin Larsa and Old Babylonian Periods*. London: The British Museum Publications.
- Collon, D. (1987). *First Impressions: Cylinder Seals in the Ancient Near East*. London: The British Museum Publications.
- Collon, D. (1995). *Ancient Near Eastern Art*. London: University of California Press.
- Collon, D. (2003). Ancient Near Eastern Seals from the Kist Collection: Three Millennia of Miniature Reliefs. In J. Kist, D. Collon, F. Winggermann & G. E. Turner (Eds.), *Culture and History of the Ancient Near East 18*, (pp. 3–14), Leiden: Brill.
- de Genoillac, H. (1934). *Fouilles de Telloh*. Paris
- Delougaz, P. & Lloyd, S. (1942). *Pre-Sargonic Temples in the Diyala Region*. Chicago.
- Dumbrell, R. (2015). *Musical Scenes and Instruments on Cylinder Seals, Sealings and Impressions from the Ancient Near East in the Collections of the British Museum*. London: Icone Publications.
- Dusinberre, E. R. M.(2005). *Gordion Seals and Sealings: Individuals and Society*, University Museum Monography 124. Philadelphia.

- Frankfort, H. (1939). *Cylinder Seals. A Documentary Essay on the Art and Religion of the Ancient Near East*. London.
- Frankfort, H. (1955). *Stratified Cylinder Seals from the Diyala Region*. Chicago: University of Chicago Press.
- Gorelick, L., & Gwinnett, A. J. (1992). Minoan versus Mesopotamian seals: comparative methods of manufacture, *Iraq*, 54, pp. 51–64.
- Hansen, D.P. (2003). Art of the Early City-States. In J. Aruz & R. Wallenfels (Eds.), *Art of the First Cities: The Third Millennium B.B. from the Mediterranean to the Indus* (pp. 21–92). New Haven and London: Yale University Press.
- Lassen, A. W. (2019). The Yale Babylonian Collection. In A.W. Lassen, E. Frahm & K. Wagensonner (Eds.), *Ancient Mesopotamia Speaks: Highlights of the Yale Babylonian Collection*, (pp. 3–11). New Haven: Yale University Press.
- Lebeau, M. (Ed.). (2011). *Associated Regional Chronologies for the Ancient Near East and the Eastern Mediterranean, Arcane I*. Turnhout.
- Legrain, L. (1951). *Ur Excavations Volume X: Seal Cylinders*. Oxford: Great Britain at the University Press.
- Michalowski P. (1994). The Drinking Gods: Alcohol in Mesopotamian Ritual and Mythology. In L. Milano (ed.), *Drinking in Ancient Societies: History and Culture of Drinks in the Ancient Near East*, (pp. 27–44), Padova.
- Møller, E. (1992). *Ancient Near Eastern Seals in a Danish Collection*. Copenhagen.
- Moortgat, A. (1967). *Die Kunst des alten Mesopotamien*. Köln.
- Moortgat, A. (1969). *The Art of Ancient Mesopotamia: The Classical Art of the Near East*. London and New York.
- Nissen, H. J. (1977). Aspects of The Development of Early Cylinder Seals. In M. Gibson & R.D. Biggs (Eds.), *Seals and Sealing in the Ancient Near East*. (pp. 15–24). Malibu.
- Nissen, H. J. (2004). *Ana Hatlarıyla Mezopotamya: Yakın Doğu Arkeolojisi'nin İlk Dönemleri (İÖ. 9000-2000)*. Çev. Z. Z. İlkelen. İstanbul: Arkeoloji ve Sanat Yayınları.
- Orthmann, W. (1975). *Der Alte Orient 14*. Berlin: Propyläen Verlag.
- Pittman, H. & Aruz, J. (1987). *Ancient Art In Miniature: Near Eastern Seals From The Collection Of Martin And Sarah Cherkasky*. Metropolitan Museum of Art, New York.
- Porada, E. (1948). *The Collection of The Pierpont Morgan Library: Corpus of Ancient Near Eastern Seals in North American Collections I*. Washington, D.C.
- Porada, E. (1993). Why Cylinder Seals? Engraved Cylindrical Seal Stones of The Ancient Near East, Fourth to First Millennium BC. *The Art Bulletin*, 75 (4), pp. 563–582.
- Sallaberger, W. & Schrakamp, I. (2015). Philological Data for A Historical Chronology of Mesopotamia in the 3rd Millennium. In W. Sallaberger & I. Schrakamp (Eds.), *History and Philology, Arcane III*. (pp. 1–136). Turnhout.
- Sax, M. & Meeks, N. D. (1994). The Introduction of Wheel Cutting as a Technique for Engraving Cylinder Seals: Its Distinction from Filing. *Iraq* 56, pp. 153–166.
- Sax, M. & Meeks, N. D. (1995). Methods of engraving Mesopotamian Quartz Cylinder Seals. *Archaeometry*, 37, pp.25–36.

- Sax, M., McNabb, J. & Meeks, N.D. (1998). Methods of Engraving Mesopotamian Cylinder Seals: Experimental Confirmation. *Archaeometry* 40, pp. 1–21.
- Schliemann, H. (1881). *Ilios. Stadt und Land der Trojaner. Forschungen und Entdeckungen in der Troas und besonders auf der Baustelle von Troja*. Leipzig.
- Selz, G.J. (2020). The Uruk Phenomenon. In K. Radner, N. Moeller & D. T. Potts (Eds.). *The Oxford History of the Ancient Near East: From the Beginnings to Old Kingdom Egypt and the Dynasty of Akkad, Volume I*. (pp. 163–245). New York: Oxford University Press.
- Speleers L., (1917). *Catalogue des intailles et empreintes orientales des Musées royaux du Cinquantenaire*. Bruxelles.
- Strommenger, E. (1964). *The Art of Mesopotamia*. London: Thames and Hudson.
- Suter, C. E. (2018). Feasting and Elite Women in Early Mesopotamia: A Contribution from the Visual Record. *KASKAL* 15, pp. 139–154.
- von der Osten, H. H. (1934). *Ancient Oriental Seals in the Collection of Mr. Edward T. Newell*. Chicago, Illinois: University of Chicago Press.
- von der Osten, H. H. (1937). *The Alishar Hüyük. Seasons of 1930-32, Part I*. Chicago, Illinois: The University of Chicago Press.
- Wiseman, D.J. (1962). *Catalogue of the Western Asiatic Seals in the British Museum I: Cylinder Seals Uruk-Early Dynastic Periods*. London.



Bronze Age Settlement and Cemetery in the Ulubey Canyon in Inland Western Anatolia: Mehmet Bey Dere, Uřak, Turkey

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ABSTRACT

Mehmet Bey Dere is an Early Bronze Age (EBA) settlement and cemetery located in the Ulubey Canyon in inland western Anatolia. This place is unique in western Anatolia with its settlement in the middle terraces of Ulubey Canyon and the cemetery at the bottom of the canyon. The settlement and cemetery are dated to the EBA 2-3 (2700-2000 BC) and the Middle Bronze Age (MBA) (2000-1600 BC). Various sherds, an idol, and other finds were evaluated with an emphasis on the reasons why the settlement and cemetery were preferred over the canyon. Mehmet Bey Dere is a settlement that provides information about the western Anatolian settlement model, cemetery relationships, topography, and how EBA people used the geography in this region, and sheds light on understanding these things.

Keywords: Early Bronze Age, Middle Bronze Age, western Anatolia, Ulubey Canyon, settlement and cemetery, idol



Introduction

The Early Bronze Age (EBA) surveys that we have conducted in Uşak province and its districts have been ongoing since 2013 with the permission of the Turkish Ministry of Culture and Tourism (Early Bronze Age surveys in Uşak Province). During the research we conducted in Ulubey district in 2018, Mehmet Bey Dere (Mehmet Bey's Creek) settlement and cemetery were identified in the region where Ulubey canyon is located. This settlement and cemetery area, which we visited again in 2019 and 2020, differs from other EBA settlements in the region because of its location.

Geographically, Uşak is on the threshold of inland western Anatolia. The region acts as a threshold between central Anatolia and the western Anatolian coasts. The city of Uşak is on the edge of the plain known by its name at an altitude of 900 m. The altitude gradually decreases from east to west of Uşak. While the east of Uşak's geography is at an altitude of 1300m, the west falls to an altitude of 450 m (Oy, 2018a). Numerous EBA settlements have been identified in our previous research in Uşak (Oy, 2017a; 2018a; 2022; Oy et al., 2019). There are also EBA settlements on the banks of the Gediz River (Hermos) (Oy, 2017a). In some of these settlements, cemeteries were also identified (Oy, 2018a).

Some surveys covering prehistoric periods have been conducted in Uşak (Oy, 2014, 2022; Yılmaz, 2019; Yılmaz et al., 2019). The earliest finds in the Uşak region date back to the Middle Palaeolithic Age and were discovered in Banaz-Sürmecik (Taşkiran et al., 2021). Because of the excavations, it was determined that it was an open-air settlement. In addition, settlements dating back to the Neolithic and Chalcolithic ages were identified through surveys carried out throughout the province (Oy, 2019a, 2019b, 2021; Yılmaz, 2020, 2022). There are many prehistoric and protohistoric settlements throughout Uşak. The studies carried out reveal the archaeological richness of the region.

Considering the geographical location of Uşak, it has a connexion with the two important rivers of western Anatolia: The Gediz River and the Büyük Menderes River (Maiandros). The Gediz River passes through the west of Uşak (Oy, 2018b). The largest river in western Anatolia is the Büyük Menderes River. The Banaz Stream passes through the Ulubey region in the southwest of Uşak and connects to the Adıgüzel Dam and from there to the Büyük Menderes River.

The Ulubey Canyon, located in the Ulubey district and one of the longest and most important canyons in Turkey, has also been inhabited since prehistoric times. The Mehmet Bey Dere settlement and cemetery are separated from their contemporary Early Bronze Age settlements in western Anatolia because they are located very deep in the Ulubey canyon. The main difference is that the inner part of the canyon was preferred for the settlement and cemetery, not the plateau.

Western Anatolia can be evaluated in two regions: coastal and inland western Anatolia (Fig.1) (Fidan et al., 2015). Detailed studies have been conducted at sites such as Demircihöyük (Korfmann, 1983), Seyitömer (Bilgen, 2015; Ünan, 2022), Kusura (Lamb, 1937, 1938), and Beycesultan (Lloyd and Mellaart, 1962; Dedeoğlu and Abay, 2014) in inland western Anatolia. The cemetery areas of some of these settlements were identified and archaeological excavations were conducted. On the western Anatolian coasts, Troy is a very important centre for EBA research (Easton, 1976; Blegen et al., 1950; Korfmann, 2000; Easton et al., 2002; Pernicka et al., 2016; Horejs and Weninger, 2016; Numrich et al., 2023). Again, settlements on the Limantepe (Şahoğlu et al., 2022) and Baklatepe (Day et al., 2009; Gündoğan et al., 2019) coasts shed light on the relations with the Aegean islands and Greece (Şahoğlu, 2008). Western Anatolian settlements have strong relations and connexions with the Aegean islands and Greece (Wright, 2008; Şahoğlu, 2008). Analyses of obsidian unearthed in the Limantepe and Baklatepe excavations revealed that it mostly originated from the island of Melos (Yegingil et al., 2020). The existence of a small amount of obsidian originating from central Anatolia indicates an interregional relationship. In addition, strong commercial relations between the western Anatolian coasts and the Cyclades in EBA I-II (Yegingil et al., 2020). During the EBA, there was a process in which trade developed in western Anatolia. Especially on the Aegean coasts, port cities were formed and maritime trade was very developed in the EBA. Mining and obsidian trade have also intensified. The coasts of western Anatolia are in a position where land trade is combined with sea trade. Limantepe is an important port city in the region. These commercial activities spread over a wide area from central Anatolia to the western Anatolian coasts and from there to the Cyclades and Greece (Şahoğlu, 2004; Rahmstorf, 2016; Kouka, 2016).

The Büyük Menderes, Küçük Menderes (Kaystros), Bakırçay (Kaikos), and Gediz rivers in western Anatolia flow into the Aegean Sea. The Büyük Menderes and Gediz rivers originated from the inner regions of western Anatolia and formed fertile plains in the valleys they passed through. These rivers form natural transportation routes and lead to the establishment of important settlements. While settlements such as Troy, Ephesos, Miletos, and Panaztepe used to be coastal settlements and port cities, they have now lost this feature (Kayan, 1997, 2019). Many settlements that were located on the coast in the past are no longer connected to the sea (Kayan, 1999; Öner et al., 2019).

East-west extension valleys were formed in western Anatolia. These valleys contain rivers. In terms of transportation, natural roads follow these valleys (Semiz et al., 2015). The inner parts of western Anatolia have higher land than the coast. Therefore, the region in which Uşak is located is geographically expressed as the inland western Anatolian threshold (Darkot and Tuncel, 1978).

The Beycesultan mound, which is one of the most important settlements of inland western Anatolia, is essential for Uşak region research. The south of the Uşak region is geographically connected with the upper Meander valley. In addition, Uşak has cultural connexions with Beycesultan (Oy, 2018a). Beycesultan culturally affected a large region in inland western Anatolia during the EBA (Lloyd and Mellaart, 1962; Abay and Dedeoğlu, 2009; Türkteki, 2020).

The Early Bronze Age was an era in which great economic, commercial, and cultural developments occurred. During this period, with the increase in population, there was an increase in production, and trade was highly developed (Guzowska et al., 2015; Schwall and Horejs, 2020; Blum, 2022; Schwall et al., 2023). The number of settlements throughout western Anatolia in EBA (3000 BC) is quite high. The increase in population and the formation of new settlements explains this situation. With the increase in the production and use of mines, the increase in the demand for metals is important in this age (Oy, 2017b). Over time, the settlements that controlled the trade became a power and authority controlling the region, and in the later stages of the Bronze Age, local kingdoms were formed (Klaunzer, 2013; Dardeniz and Yıldırım, 2022). Trade has increased in a more systematic and organised manner in the interior of western Anatolia, and on the coasts and the Aegean Sea. Thanks to natural harbours, the existence of coastal settlements connected to the sea has become more evident. Not only did commercial activities develop, but there were also great developments in agriculture, animal husbandry, and professions in other fields (Kouka, 2009; Yılmaz, 2009; Gündem, 2012; De Vincenzi, 2015). The settlements are surrounded by walls, and megaron-type structures have become widespread in western Anatolia (Warner, 1979; Steadman, 2000; Düring, 2011; Fidan, 2018; Massa, 2021). Thanks to developments in weaving, pottery, architecture, and social and cultural fields, great development was experienced in the Bronze Age.

Local cultures developed because of the rapid increase in production and trade during this period. Agriculture and animal husbandry continued to develop (Shin et al., 2021). In the growing settlements, in addition to the ruling class, occupational groups specialised in various jobs such as weaving, trade, and mining were formed and social stratification developed. This situation further developed settlements. Settlements that developed politically and economically became active in wider areas. The village settlements in EBA I have an economic structure based on agriculture and animal husbandry, including livestock as a key economic activity in the EBA Anatolian societies (Özdoğan, 2006; Çevik, 2007; Arbuckle, 2014). Animals play a very significant role in transportation, trade, and nutrition. During EBA II, trade and mining as well as agriculture and animal husbandry were significant economic activities that served as both occupational activities and a source of lively hood for all settlements in the villages and small towns. As trade developed, more caravan routes sprouted and gained more importance. Inter-regional relationships also improved. The most

significant commercial and cultural communication was noticed in the Mesopotamia and Anatolia regions (De Ryck, 2005; Skourtanioti et al., 2020).

In the EBA, there is a trade network stretching from Mesopotamia to the interior of Anatolia and western Anatolia (Şahoğlu, 2005). This trade network was used intensively with large caravan routes (Efe, 2007). A trade network has developed from western Anatolia to the Cyclades and Greece. Although these commercial relations began in earlier periods, they continued increasingly after EBA II. It is seen that at the end of the EBA (1900 BC), many settlements were abandoned for cities. During this period, the number of abandoned settlements increased due to fire incidents (Mellaart, 1958).

This article aims to reveal the relationship between settlements and cemeteries in the region, specifically Mehmet Bey Dere, a Bronze Age settlement and cemetery located in the Ulubey canyon in Uşak. This settlement, which is different from other Bronze Age settlements on the plains and hilltops in the region because of its location in a very deep canyon, will contribute to archaeological research and literature in the region.

Ulubey Canyon

Canyons formed due to the characteristics of the geological structure in the south and southwestern parts of Uşak Province. These canyons were formed as a result of erosion of the calcareous land in the region by the rivers (Yalçınlar, 1955). The Ulubey Canyon is an example of a canyon valley formed in karstic areas because of the collapse of the Büyük Menderes graben and the chemical and mechanical erosion of the limestone structure. The total length of the canyon formed by the Kazancı Stream (Ulubey Stream) and Banaz Stream, located to the east of the Uşak-Karahallı highway in the Ulubey District, is 75 km. The bottom of the canyon and valleys is 200 m lower than the plain. Its width reaches 100-500 m (Fig. 1).

The region through which the Ulubey canyon passes consists of Neogene limestones (Ulubey Formation) (Ercan et al., 1978). Therefore, the canyon was formed in this calcareous region. Neogene limestones led to the formation of very long, steep, and deep valleys. It consists of a main canyon that continues along Kazancı Stream (Ulubey Stream) and Banaz Stream and dozens of large side canyons connected to it (Oy, 2021). The Ulubey Canyon is an interesting area in the inland western Anatolia region in terms of showing the relationships between vertical ground movements and river erosion (Polat and Güney, 2013).

The Ulubey Canyon and its surroundings have rare geological, geomorphological, scientific, and cultural characteristics (Çilek et al., 2019). The formation of the canyon is related to the karstic formation process because of the collapse of the Büyük Menderes Graben. With the collapse of the Büyük Menderes Graben at least three times, ground erosion

movements started, and thus deep meandering valleys, hills surrounding the old valley, and terrace shapes were formed in these regions where the Kazancı Stream (Ulubey Stream) and Banaz Stream pass. In the vertical direction of the canyon, there are at least three terraces at the levels of 10-30 and 50-55 metres above the canyon floor. In addition, funnel-shaped karst hills along the steep slopes of the valley emerge as a result of karst formations. The depth of the canyon system is related to vertical tectonic movements and the collapse of the Büyük Menderes Graben (Çukur et al., 2019).

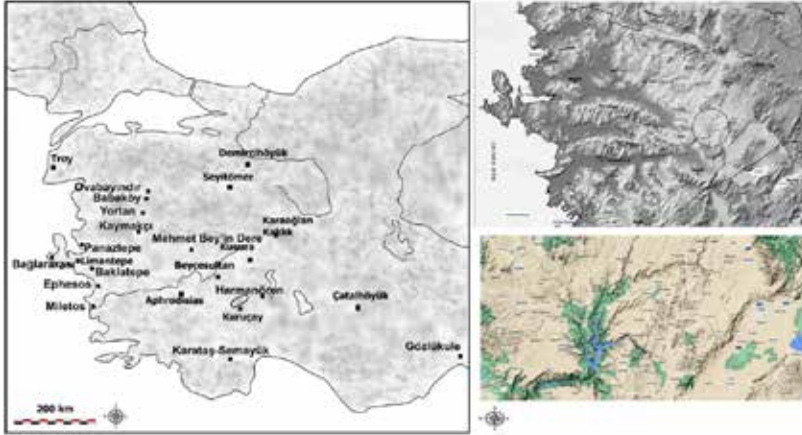


Figure 1: Western Anatolian EBA settlements, cemeteries and Ulubey Canyon.



Figure 2: Mehmet Bey Dere settlement and cemetery.

Mehmet Bey Dere Settlement

The Mehmet Bey Dere settlement is within the Ulubey Canyon, 5 km east of the Avgan village of the Ulubey district. The Mehmet Bey Dere location refers to a large area on the banks of Banaz Stream that belongs to a person named Mehmet Bey. There is a two-storey adobe house here. This house is called Mehmet Bey's roof. The settlement is located on the upper part of the Mehmet Bey Dere area and Mehmet Bey's roof. The Mehmet Bey Dere settlement is located on the inclined terraces in the middle of the canyon as it descends from the plain level to the terraces inside the canyon. The Mehmet Bey Dere settlement is at an altitude of 706 metres. There is a cemetery at the bottom of the canyon. The cemetery is on the banks of the Banaz Stream (Fig. 2). The settlement, which spread over a very large area, was completely destroyed, and the ceramics were scattered over a very wide area from the slopes to the Banaz Stream. The settlement remains within the canyon, and Early Bronze Age (EBA) and Middle Bronze Age (MBA) ceramics have been found in the settlement (Oy et al., 2019).

The Mehmet Bey Dere settlement measures 60x60 metres. These borders may be wider due to the sloping nature of the land and the fact that the ceramics found in the settlement are distributed over a wider area (Fig. 3-4). The settlement is not very large and mainly contains EBA II sherds. The few MBA sherds found in the Mehmet Bey Dere settlement show that it was not inhabited intensively during this period. MBA sherds are few but of good quality. This place does not have much importance or effect as an MBA settlement. However, because of the presence of dense soil and stone, we can assume that the houses were built with stone foundations and mud brick walls (Fig. 5).



Figure 3: Mehmet Bey Dere settlement, the cemetery and Banaz Stream in the canyon.

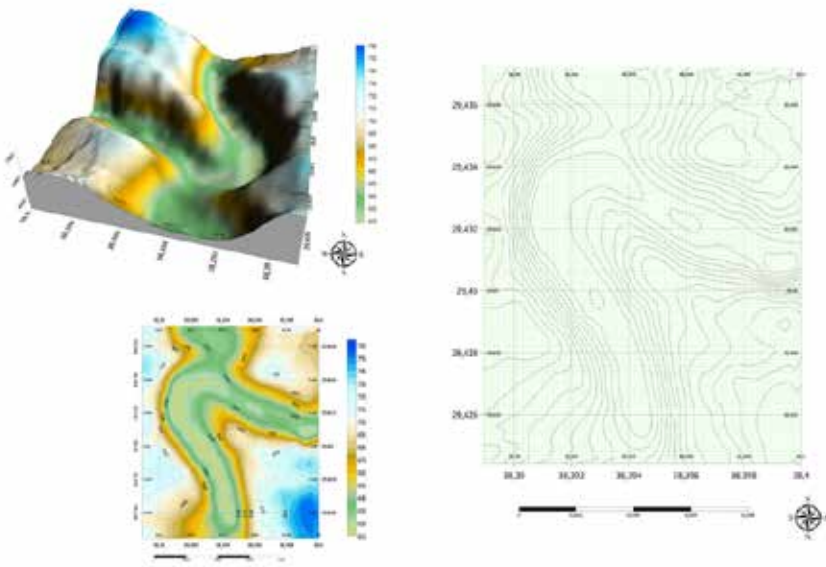


Figure 4: Mehmet Bey Dere settlement plan.



Figure 5: Mehmet Bey Dere settlement.

In EBA II, a process of urbanisation developed in western Anatolia. While the settlements that were on important road routes and organised production and trade became urbanised, some of them existed in the form of small villages as more rural and small settlements. With urbanisation comes centralisation (Vandam et al., 2013, 2019). Later, these settlements emerged as local central kingdoms (MBA and LBA) (Yakubovich, 2022; Vignolini, 2022). Surely, western Anatolian EBA settlements are rather small in area compared with their contemporary Mesopotamian or eastern Anatolian settlements (Çevik, 2007). The areas of EBA settlements expanded further in the MBA and Late Bronze Age (LBA). Fortified systems are found in EBA settlements (Blum, 2022). However, it is difficult to say such a thing for Mehmet Bey Dere. The settlement has been destroyed by illegal diggers, and its situation is

not clear due to the vegetation. However, the remains of some building foundations made of stone can be selected.

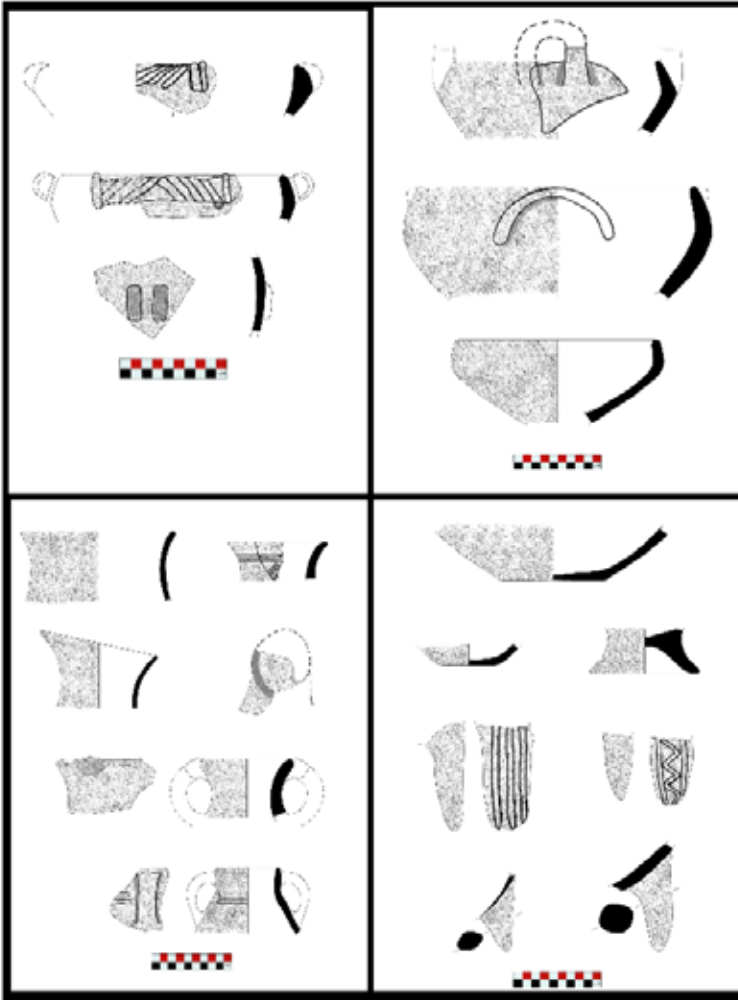


Figure 6: EBA sherds at the settlement.

Intensive surveys were conducted at the settlement. Sherds, which are densely located in the destroyed parts, were systematically collected and studied. Forty-two samples, such as sherds, stone axes, and grinding stones, were collected from the settlement (Fig. 6-7). An idol and five pithoi sherds were examined from the cemetery area (Fig. 9-10). EBA sherds are handmade, brown and red slippers. Plant, lime, grit, and mica additives are found in various proportions in the paste. MBA sherds are wheel-made. These wares have red and brown slips and contain lime, grit, and mica inclusions in their paste.

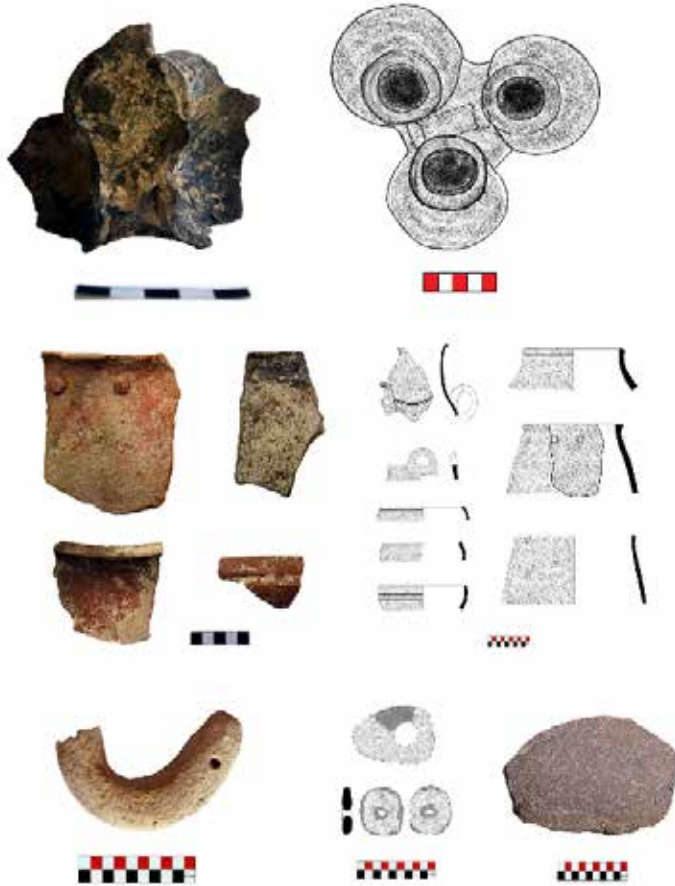


Figure 7: Triple combined vessel (EBA), MBA sherds, loom weight, grinding stone, stone axe and spindle whorl.

The EBA sherds collected during the research we conducted in the settlement are generally compatible with other contemporary centres in the region. Handled bowls, necked jars, spouted jugs, double-cuped jugs, and jars were found in the settlement (Fig. 6). A similar pitcher with a double handle and a short neck is found in Yortan (Kamil, 1982, pl. 227, Fig. 70). Similarly, pedestals and feet are intensely observed in the EBA layers of Troy (Blegen et al., 1950, pl. 235-39). A similar example with groove decoration was found in Aphrodisias Pekmez 2 (Joukowsky, 1986). The pedestals and foot forms are intensely seen in Beycesultan EBA II (5th layer in the new stratigraphy), and similar examples are found in the Mehmet Bey Dere settlement (Lloyd and Mellaart, 1962, 152-56; Dedeoğlu and Abay, 2014, 37).

One of the important vessel forms found in the settlement is the triple composite vessel (Fig. 7). Although it was broken, this vessel was formed as a result of the combination of three separate vessels. This black-lined, thin-walled, finely crafted vessel is combined with a ring handle at the top. It is handmade, well burnished, and well fired. Despite the shape of the triple-combined vessel, it is clearly evident that it has not been determined whether it was decorated or not. Triple composite vessels are known in some centres in western Anatolia. However, they are not very common (Kuru, 2016). In the Yortan cemetery, the shape XV forms belong to triple composite vessels. There are zigzag band and chevron decorations on the Yortan samples (Kamil, 1982, 46-47, pl. XV, Fig. 74). In the EBA II graves of Laodikeia, a triple composite vessel was found as a whole (Oğuzhanoğlu, 2014). There is also a similar decorated triple compound vessel in EBA Baklatepe (Efe, 2003). In addition, although they are not exactly similar, their close counterpart is seen in Gözlükule. There are double, triple, and quadruple combined vessels in Gözlükule, and they are dated to the EBA III period (Goldman, 1956, pl. 278, 366).

Although MBA sherds could not be detected to a large extent in the Mehmet Bey Dere settlement, some samples are clearly dated to MBA (Fig. 7). These wheel-made vessels are similar to the Beycesultan MBA vessels. Beycesultan, which is close to the area where Mehmet Bey Dere is located, was an important centres for the Middle Bronze Age.

Mehmet Bey Dere MBA sherds are similar to Beycesultan V (MBA) bowls (Lloyd and Mellaart, 1965, 86, Fig. P. 2-3). The sherds are also similar to the second millennium BC bowls in the Afyonkarahisar region (Koçak et al., 2019). The Mehmet Bey Dere MBA sherds have many similarities with the bowls in the Panaztepe, Limantepe (Aykurt, 2020, 113-22, pl. 152), Kocabaş Tepe and Çeşme Bağarasi and Troy (Aykurt, 2013).

A loom weight, stone axe, and grinding stone were also found in the settlement (Fig. 7). These findings are important in terms of showing the production activities of the settlement. The loom weight found is large in size, although it is broken. Its large size is related to the dimensions of the loom and the quality of the fabric to be woven (Oy, 2019c). This example, which is related to textile production, is dated to MBA. There are similar studies in Afyonkarahisar (Koçak et al., 2019, 104-6). It is possible to see Beycesultan Level II (5th layer in the new stratigraphy) (Mellaart and Murray, 1995, 169-73; Dedeoğlu and Abay, 2014, 38, Fig. 32) and Demircihöyük V (Kull, 1988, Fig. 43-48) (MBA) equivalents in Kusura Level C (Lamb, 1937, 34, Fig. 15) and Aphrodisias Acropolis MBA layers (Joukowsky, 1986).

Mehmet Bey Dere Cemetery

The cemetery area is at the bottom of the canyon by the Banaz Stream (Fig. 8). A cemetery area that spreads over a very wide area has been identified in the area where Mehmet Bey's roof is located on the bank of the Banaz Stream at the bottom of the canyon. A marble idol was found on the land surface above Mehmet Bey's roof. The graves were destroyed due to the ploughing of the land here by a tractor, and this find must have come from one of these pithoi. There is a 400 m inclined land towards the bottom of the canyon between the settlement and the cemetery. Mehmet Bey Dere cemetery covers an area of approximately 170 m in the east-west direction and 130 m in the North-South direction. The cemetery area exclusively comprises pithos graves. The mouth of the pithoi faces east.



Figure 8: Mehmet Bey Dere Cemetery.

Five selected sherds were collected from the cemetery and they belong to EBA pithoi. There is also one EBA idol and one MBA goblet from the cemetery. Some pithos fragments found in the cemetery are plain, but some are decorated with grooves on their rims (Fig. 9). These data provide an important insight into the dating of the cemetery area. This type of pithos dates to the EBA II period. It is widely available in Beycesultan and centres in southwest Anatolia (Lloyd and Mellaart, 1962, 149-50, p. 26). In the cemetery, large pithoi were used as burial containers. Because of the ploughing of the cemetery with a tractor by the field owner, many pithoi were broken. The pithoi here are the same as those in period B in Kusura (Lamb, 1938, 218-73). In addition, similar pithoi are seen in Beycesultan (Lloyd and

Mellaart, 1962, 168, Fig. p. 35). Similar pithoi with handles are found in the Demircihöyük EBA levels (Efe, 1988, pl. 37).

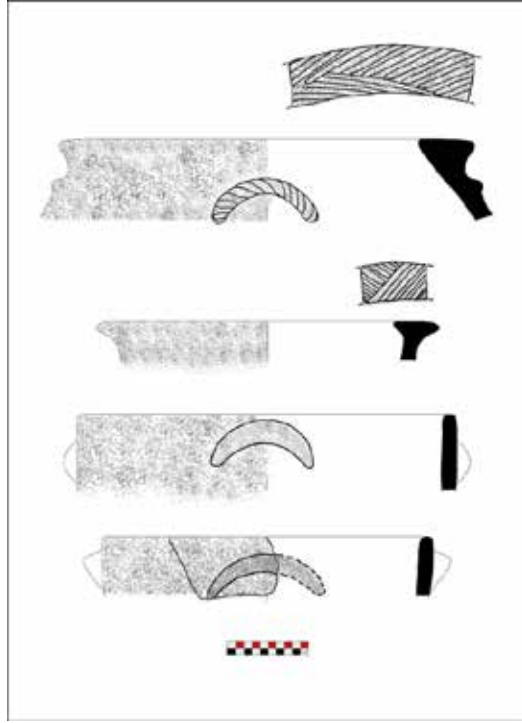


Figure 9: Cemetery pithos sherds.

It is seen that cemeteries were created in an area that was not far from the settlement area during the Early Bronze Age. Grave types such as simple graves, pithos graves, and stone/cist graves are used in EBA. In addition to single burials, there are graves where multiple burials are made. The dead are placed in the grave in the hocker position. As gifts are placed inside the grave for the dead, various grave gifts are placed outside the grave. Items such as pottery, tools and weapons, stone and metal objects, and idols, which were placed in graves as a dead gift, are associated with the afterlife. Some graves contain many gifts, whereas others contain fewer or no gifts. This should be related to the wealth of the individual.

It was determined that the EBA cemeteries in Uşak were established in places close to the settlement. The cemeteries identified in the province of Uşak consist of pithos graves. In some places, it was determined that graves were made from local slate stones (Oy, 2018a). Therefore, the EBA cemeteries in the region consist of pithos graves and stone/cist graves (Oy, 2018a). A Yortan-type cemetery in the Gavurkuyusu locality of Uşak was illegally excavated and destroyed in 1969 (Fıratlı, 1970).

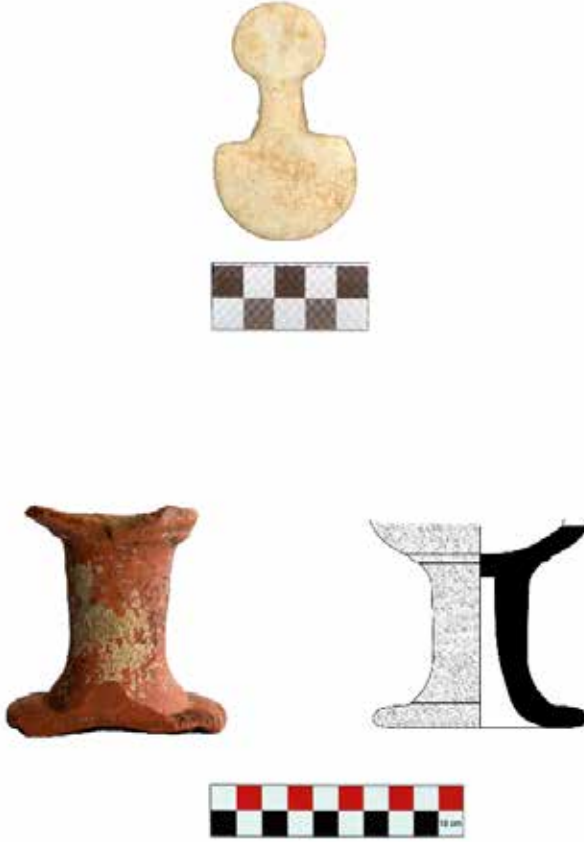


Figure 10: Marble idol and goblet (MBA).

Although there are many EBA cemeteries in western Anatolia, Sarıket, Yortan, Babaköy, Ovabayındır, Harmanören, Karataş-Semayük, Kaklık and Baklatepe cemeteries are the main ones (Uhri, 2006). In western Anatolia, the dead are buried in cemeteries near settlements. Intramural burials decreased significantly in the mid-EBA (Wheeler, 1974; Selover and Durgun, 2019).

From EBA I to EBA II, cemetery areas are growing in western Anatolia. The tradition of burial in pithos graves outside settlements is very common in western Anatolia. The mouths of the pithoi generally face east. The mouths of the pithoi were closed with a flat stone or another pithos. The dead were buried in the hocker position (Derin, 2009; Vandam et al., 2013).

In the Yortan pithos cemetery, the dead are placed in a pithos, and the mouth of the pithos is covered with a large flat stone. The mouth of the grave generally faces east. Various pottery, spindle whorls and metalware, and some graves were found on idols (Kamil, 1982). Sarıket Cemetery, which is the cemetery of the Demircihöyük settlement, is located 250 m from the settlement. Sarıket cemetery is dated to EBA II and MBA. Although there are simple graves and stone cist graves, most of them consist of pithos graves (Seeher, 2000; Selover and Durgun, 2019). Pottery, metalware, weapons, and some stone and terracotta statues were found in the graves as burial gifts. No metal finds were found in the Mehmet Bey Dere cemetery, perhaps because it was a survey investigation (Seeher, 2000). The same cemetery area in Sarıket is also used in MBA. The same area is preferred as a cemetery. Some pithoi in Mehmet Bey Dere Cemetery are believed to be MBA graves. Baklatepe EBA I cemetery reveals the existence of different types of burial practises and different cultural practises (Şahoğlu and Tuncel, 2012). Local people said that there is no different application in Mehmet Bey Dere cemetery. Of course, we do not know how accurate and valid this information is. Harmanören Cemetery is also a pithos cemetery belonging to the EBA II and III periods. After Demircihöyük and Semayük, the Harmanören cemetery is the largest Bronze Age cemetery known to have been settled in western Anatolia. It was concluded that there were pithos in various forms and different sizes in Harmanören and that no special pithos were built for burial, but that the deceased was buried by placing it in one of the pithoi used in daily life. There are also some MBA graves in the Harmanören Cemetery (Özsait, 2003).

During the 2018 survey, an idol was found in the Mehmet Bey Dere cemetery. This idol is made of white marble, has a round head, a long neck, a semicircular body, and is thin and flat. The idol found is dated to EBA and is of the Kusura type. Height: 7.7 cm, trunk diameter: 4.6 cm (Fig. 10).

Kusura-type idols have a disc-shaped head, long neck, and angular or round body. Kusura-type marble idols do not have arms and are made abstractly. Kusura-type idols are very common in western Anatolia. Those unearthed during the excavations are dated to EBA II and EBA III. The idol found in Mehmet Bey Dere cemetery should be evaluated in the same way. Although it is not exactly similar, it is similar to Denizli-Kara Hisar (Akdeniz, 2002). A Beycesultan-Kusura-type idol, although not exactly similar, was found in Uşak Kızıllıhisar Höyük (Yılmaz, 2019). Idols are rarely placed in graves as gifts compared with objects such as pottery, jugs, and metal. Similar idols are found in the Uşak Museum (Ekiz, 2006).

Marble idols were found in the Karataş-Semayük cemetery. These examples are made of marble and are described as shovel-shaped (Mellink, 1964). The Mehmet Bey Dere idol is not like the ones in Semayük. It is not identical to the Karataş-Semayük examples because it is not in the form of a shovel. A idol placed in the pithos as a burial gift in the Harmanören

EBA cemetery is similar, but not the same. The Harmanören idol is larger. They are similar to form and contemporary in terms of period (Özsait, 2003, 99, Fig. 7).

An example of a goblet dated to MBA was also found in the cemetery area (Fig. 10). Similar goblets were found in Afyonkarahisar second millennium BC settlements. It is mostly seen around the Upper Menderes (Koçak et al., 2019). A similar one exists in Kusura layer C (Lamb, 1937, pl. VIII-9).

Chalices were found in large quantities in Beycesultan. Chalices are considered to be associated with cult rather than daily use. It is also thought to have been used at feasts, banquets, ceremonies, and social events (Dedeoğlu, 2016a). Beycesultan chalices show quality production. It is wheel-made and red in colour. Mehmet Bey Dere also has the same characteristics. It is noteworthy that chalices were numerous in the Beycesultan, especially in the Late Bronze Age (LBA) (Dedeoğlu, 2016a). Mehmet Bey Dere is represented by an example and is dated to MBA. In particular, it must belong to the second millennium BC. It can be used for cult, ceremonial, or private use and for ceremonial or daily use. Examples of this type are common in Beycesultan II (5th layer in the new stratigraphy) and are compatible with its close counterparts (Mellaart and Murray, 1995; Mac Sweeney, 2010; Dedeoğlu and Abay, 2014).

Discussion and Conclusion

Mehmet Bey Dere is a unique Early Bronze Age settlement within the Ulubey Canyon, which has no other example in western Anatolia due to its location. Being located of the settlement on the middle terraces of the canyon, not at the top or bottom, shows that it was deliberately preferred as a settlement area. Due to the EBA II-III and MBA finds in the settlement, it was inhabited during these periods.

There are many EBA settlements, especially around Denizli, where the Büyük Menderes valley is located (Abay, 2011). These settlements are found in plain areas and in mountainous and rugged areas (Dedeoğlu, 2013; 2014; Dedeoğlu et al., 2016). There are EBA and MBA settlements in the mountainous and plain areas around Afyonkarahisar (Oy, 2011). Compared to these settlements, the Mehmet Bey Dere settlement stands out because of its location within the Ulubey canyon. By moving south from the location of the settlement, the Denizli-Adıgüzel dam can be reached via the Banaz stream. The canyon is connected to the Büyük Menderes Valley and contemporary settlements in the region (Dedeoğlu, 2013; 2015, 2016b).

The Mehmet Bey Dere settlement is not in the position and size of EBA settlements such as Küllüoba or Karataş. Compared to the second millennium BC settlements such as Beycesultan and Kaymakçı (Roosevelt and Luke, 2017), Mehmet Bey Dere should be seen as a settlement that is not very large and does not have a central location. It is in the canyon and is not a very large settlement.

Archaeological excavations and surveys conducted in western Anatolia revealed significant results in terms of settlement and architecture. Although many cemeteries have been excavated, knowledge of settlement and cemetery relationships is limited. Settlement and cemetery excavations mostly concentrate on the finds. However, the dimensions of the connexion, relationships and social differences, different practises, and factors in the creation of cemeteries were not emphasised. Most examples and reviews provide similar data. The cemeteries of most settlements in western Anatolia have been identified and excavated, but the cemeteries of many settlements have not been identified (Seeher, 2000; Özsait, 2003; Uhri, 2006; Derin, 2009; Vandam et al., 2013; Selover and Durgun, 2019). In this context, the Sarıket cemetery of the Demircihöyük settlement, the Semayük cemetery of the Karataş settlement, and the Harmanören cemetery of Göndürle Höyük are the main ones. These are usually the cemetery areas in the immediate vicinity of settlements located in the plains. The fact that the cemeteries are located in such a close area is based on the strong social and family ties.

Mehmet Bey Dere was preferred for settlement on the benches located in the middle part of the canyon. Instead of settling in the large and fertile plain area at the top, a dominant point in the canyon was preferred for settlement. Likewise, no area was chosen for the cemetery in the upper part of the settlement. In fact, the slopes on the suitable side of the settlement could have been used as a cemetery. However, the plain area on the bank of Banaz Stream on the valley floor in the canyon was preferred as a cemetery. Certain reasons must be effective in choosing this area. They could have been used as a cemetery on the other side of the Banaz Stream. Although the land on the opposite side was suitable, they did not prefer it. There is a wide and sloping area between the settlement and the cemetery, and they did not use it. As a conscious choice, the area at the bottom of the canyon, which is currently a cemetery, was preferred. They could have settled in the area used as a cemetery, but they did not do that either.

Considering the area of the Mehmet Bey Dere settlement, it is not a huge settlement. Therefore, it could be established on the banks of the Banaz Stream. It would be easier to reach the water needed in this way. There would also be an area for agricultural production and other needs, but they deliberately used this place as a cemetery. The area that was used as a cemetery is also a suitable place for settlement. This place is also in an advantageous position in terms of raw material supply. The facilities of Banaz Stream can be used, and it is also suitable for hunting. This area offers many options for agricultural production and transportation. However, despite all these, the settlement is on an elevation on a bench that is neither at the top nor at the bottom of the canyon. It would have been more advantageous to prefer the plain above for settlement. The plain is very rich in terms of agriculture and animal husbandry. It would have been more practical to benefit from the opportunities offered by the river if it had been settled on the bank of the Banaz Stream on the canyon floor.

There are also finds such as pottery, grinding stones, and stone axes in the settlement. In our research, it has been observed that the canyon is suitable for the life of many wild animals and birds, especially partridges, and offers richness in terms of nesting and shelter, as well as reproduction and life. Similarly, in terms of plant and tree diversity, the canyon and Banaz Stream offer great wealth. Although the upper plain area outside the canyon is flat, plant diversity is low. Wheat farming and animal husbandry are mostly done. There are vineyards and gardens inside the canyon that are very green. It is also rich in plant and animal life. Perhaps, considering all these, it may have been preferable to deliberate about the advantages of settling at a point that can be easily reached from both sides in order to be close to the wide plains and to benefit from the richness of the Banaz Stream in the canyon.

Approximately 200-300 metres above the settlement is a plateau that is more suitable for settlement. This location is likely to be preferred to benefit from the possibilities of both the plateau and the Banaz Stream. But why did they choose the riverbank for the cemetery? The above plateaus are an easier area for settlement and cemetery.

Mehmet Bey Dere is a settlement that was established in the Ulubey Canyon in inland western Anatolia during the EBA II-III (2700-2000 BC) and MBA periods (2000-1600 BC) and has no other examples for now. Other settlements are located in mountainous regions and plains. However, the situation of the settlement and the cemetery in the canyon is important in terms of showing the relationship between the settlement and the cemetery.

Mehmet Bey Dere is different from his contemporary places in his choice of cemetery and residential area. It is different both in its own region and in Uşak and western Anatolia, and there is no example in Turkey. The settlement is not large, but it provides information about the community's attitude when creating the cemetery. The relationship of the EBA society with settlement-cemetery and death affected the creation of cemeteries.

Just as the location of the settlement was chosen, the location of the cemetery was also consciously selected. Considering the opportunities offered by geography, they preferred the ideal area for settlement. Livestock, agriculture, hunting, pottery production, access to water, and the canyon's facilities are important and are preferred for settlement.

Loom weights, spindle whorls, grinding stones, and stone axes are important finds that show the existence of production in the settlement. Spindle whorls perform activities such as weaving and textiles, grinding stones using grain, and making bread. It can be concluded that they are engaged in agriculture and animal husbandry.

The idol found in the cemetery is one of the most common marble idols in western Anatolia. This is important for revealing interregional connexions. Although they are in the canyon, it is concluded that they do not lead an isolated life. The idol found in Mehmet Bey Dere is

a Kusura-type idol, of which there are many examples in western Anatolia. It is difficult to explain whether this is locally produced or outsourced. However, marble deposits are common in the region. This place is very close to the Afyonkarahisar region and Kusura settlement. These areas have rich marble deposits. The cemetery must have been used during the earliest EBA II and the latest MBA period and was extensively used during EBA II-III period.

Owing to the topographical features of the Uşak region, there are prehistoric settlements on the plains, mountainous areas, and on the tops of the hills. Mehmet Bey Dere settlement and cemetery, on the other hand, is a different locality in the Uşak region and the inland western Anatolia region, with its location within the Ulubey canyon. This settlement constitutes a small sample for future research and studies on settlements with different topographical features. Mehmet Bey Dere is a settlement that provides information about the Uşak region, as well as the settlement model in the Ulubey canyon, cemetery relations, topography, and how the EBA people used this geography and sheds light on understanding these. For this reason, at least a salvage excavation should be carried out in the settlement and cemetery.

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References

- Abay, E. (2011). Preliminary Report on the Survey Project of Çivril, Baklan and Çal Plains in the Upper Meander Basin, Southwest Anatolia. *Ancient Near Eastern Studies*, 48(1), 1-87.
- Abay, E., & F. Dedeoğlu. (2009). Beycesultan 2007-2008 Yılları Kazı Çalışmaları Ön Raporu. Preliminary Report of Beycesultan 2007-2008 Excavation Campaigns. *Arkeoloji Dergisi*, 13(1), 53-79.
- Akdeniz, E. (2002). Erken Tunç Çağına Ait Bir Grup Idol. *Anadolu Araştırmaları*, XVI, 9-18.
- Arbuckle, B. S. (2014). The Rise of Cattle Cultures in Bronze Age Anatolia. *Journal of Eastern Mediterranean Archaeology and Heritage Studies*, 2(4), 277-297.
- Aykurt, A. (2013). An Updated Assessment on Western Anatolian Middle Bronze Age Chronology in Light of Excavations of the Izmir Region. *Colloquium Anatolicum*, XII, 37-77.
- Aykurt, A. (2020). Liman Tepe I, Orta Tunç Çağı Seramiği ve Küçük Buluntuları: Middle Bronze Age Ceramics and Small Finds. Ankara: Bilgin Kültür Sanat Yayınları.
- Bilgen, A.N. (2015). Seyitömer Höyük I. İstanbul: Arkeoloji ve Sanat Yayınları.
- Blegen, C.W., J.L., Caskey, M. Rawson, & Sperling, J. (1950). Troy: Excavations Conducted by the University of Cincinnati, 1932-1938. Vol. 1, General Introduction. The First and Second Settlements. 2 parts. Princeton: Princeton University Press.

- Blum, S. W. E. (2022). Planieren statt Sanieren: Der frühbronzezeitliche Siedlungshügel Hisarlık/Troia, Schicht für Schicht. In E. Seidl, S.W.E. Blum, M. Magda Pieniżek & M. La Corte (Eds.), Troia, Schliemann und Tübingen. Schriften des Museums der Universität Tübingen MUT 25, (pp. 116-149). Tübingen: Museum der Universität Tübingen.
- Çevik, Ö. (2007). The Emergence of Different Social Systems in Early Bronze Age Anatolia: Urbanisation versus Centralisation. *Anatolian Studies*, 57, 131-140.
- Çilek, A., S. Berberođlu, Çilek, M. U., & Dönmez, C. (2019). Landform Analysis Using Topographic Characteristics: An Example of Usak Ulubey Canyon. *Bilge International Journal of Science and Technology Research*, 3, 77-78.
- Çukur, H., Oban, R. C., & Gunduzoglu, H. A. G. (2019). Land Use Suitability Analysis of the Ulubey Canyon (Usak-Turkey) and Its Surroundings. *Romanian Journal of Geography*, 63(1), 105-119.
- Dardeniz, G., & Yıldırım, T. (2022). Metal Consumption of a Middle-range Society in the Late 3rd millennium BC Anatolia: A New Socioeconomic Approach. *Plos One*, 17(6), 1-38.
- Darkot, B., & Tuncel, M. (1978). Ege Bölgesi Coğrafyası. İstanbul: İstanbul University Press.
- Day, P., C. Doumas, H. Erkanal, V. Kilikoglou, O. Kouka, Relaki, M., & Şahođlu, V. (2009). New Light on the Kastri Group a Petrographic and Chemical Investigation of Ceramics from Liman Tepe ve Bakla Tepe. *Arkeometri Sonuçları Toplantısı*, 24, 335-346.
- Dedeođlu, F. (2013). Yukarı Menderes Havzası Bölgesel Yerleşim Analizi: Erken Tunç Çađda Sosyoekonomik Örgütlenmedeki Deđişim ve Dönüşüm Süreçleri. In Ö. Çevik, & B. Erdođu (Eds.), Yerleşim Sistemleri ve Mekan Analizi. Tematik Arkeoloji Serisi 1, (pp. 19-42). İstanbul: Ege Yayınları.
- Dedeođlu, F. (2014). Yukarı Menderes Havzası (Çivril, Çal, Baklan) Dađlık Bölge Yüzey Araştırmaları, In S. Inan (Eds.), Geçmişten Günümüze Denizli, Denizli'nin Derin Geçmişi: Kazı ve Araştırmalar, 38, (pp. 4-11). Denizli, Dumat Ofset Ltd.
- Dedeođlu, F. (2015). Küfü Çayı Vadisi MÖ 2. Binyıl Yerleşimleri. In C. Şimşek, B. Duman, & E. Konakçı (Eds.), Mustafa Büyükkolancıya Armađan, (pp. 193-202). İstanbul: Ege Yayınları.
- Dedeođlu, F. (2016a). A Study on Chalices from Beycesultan: Their Function, Social Meaning and Cultural Interactions. *Mediterranean Archaeology and Archaeometry*, 16(2), 13-32.
- Dedeođlu, F. (2016b). Somak-Asarlık: A New 2nd Millennium BC Fortress Near the Beycesultan. *Pamukkale Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 25(1), 194-207.
- Dedeođlu, F., & Abay, E. (2014). Beycesultan Höyük Excavation Project: New Archaeological Evidence from Late Bronze Layers. *Arkeoloji Dergisi*, 17, 2014, 1-39.
- Dedeođlu, F., Ozan, A., & Konakçı, E. (2016). Yukarı Menderes Havzası Dađlık Kesim Yüzey Araştırması Projesi 2014 Yılı Çalışmaları. *Araştırma Sonuçları Toplantısı*, 33(2), 553-563.
- Derin, Z. (2009). The Interpretation of the Change and Variations Observed in the Burial Customs at the Early Bronze Age in Western Anatolia. In H. Sağlamtimur, E. Abay, Z. Derin, A.Ü. Erdem, A. Batmaz, F. Dedeođlu, M. Erdalkiran, M.B. Baştürk, & E. Konakçı (Eds.), *Studies in Honour of Altan Çilingirođlu. A Life Dedicated to Urartu on the Shores of the Upper Sea*, (pp. 257-268). İstanbul: Arkeoloji ve Sanat Yayınları.
- de Ryck, I., Adriaens, A., & Adams, F. (2005). An Overview of Mesopotamian Bronze Metallurgy during the 3rd Millennium BC. *Journal of Cultural Heritage*, 6, 261-268.

- de Vincenzi, T. (2015). A Comparative Analysis of the Cultural Interaction between the Western and Central Areas of Anatolia in the Third Millennium B.C. In G. Affanni, C. Baccarin, L. Cordera, di Michele, A., & Gavagnin, K. (Eds.), *Broadening Horizons 4: Conference of young researchers working in the Ancient near East, Egypt and Central Asia*, University of Torino, October 2011, (pp. 21-29). Oxford: BAR International Series 2698.
- Düring, B. S. (2011). Fortifications and Fabrications: Reassessing the Emergence of Fortifications in Prehistoric Asia Minor. In B.S. Düring, Wossink, A., & Akkermans, P. M. M. G (Eds.), *Correlates of Complexity: Essays in Archaeology and Assyriology dedicated to Diederik J.W. Meijer in Honour of his 65th Birthday*, (pp. 69-85). Leiden: Nederlands Instituut voor het Nabije Oosten.
- Easton, D. F. (1976). Towards a Chronology for the Anatolian Early Bronze Age. *Anatolian Studies*, 26, 145-173.
- Easton, D. F., Hawkins, J. D., Sherratt, A. G., & Sherratt, E. S. (2002). Troy in Recent Perspective. *Anatolian Studies*, 52, 75-109.
- Efe, T. (1988). Demircihüyük. Die Ergebnisse der Ausgrabungen 1975-1978. Band III, 2. Die Keramik 2. Mainz am Rhein: Philipp von Zabern.
- Efe, T. (2003). Batı Anadolu Son Kalkolitik ve İlk Tunç Çağı. *ArkeoAtlas*, 2, 94-129.
- Efe, T. (2007). The Theories of the 'Great Caravan Route' Between Cilicia and Troy: The Early Bronze Age III Period in Inland Western Anatolia. *Anatolian Studies*, 57, 47-64.
- Ekiz, H. H. (2006). Uşak Müzesi'nde Bulunan Eski Tunç Çağına Ait Bir Grup Idol. *Araştırma Sonuçları Toplantısı*, 23(1), 47-56.
- Ercan, T., Dinçel, A. Metin, S. Türkecan A., & Günay, E. (1978). Geology of the Neogene Basins in Uşak Region. *Türkiye Jeoloji Kurumu Bülteni*, 21, 97-106.
- Fıratlı, N. (1970). Uşak-Selçukler Kazısı ve Çevre Araştırmaları. *Türk Arkeoloji Dergisi*, 19(2), 109-160.
- Fidan, E. (2018). Early Buildings for the Elites in Western Anatolia: Reflections of Ruling Class on Architecture. In Ü. Yalçın (Eds.) *Anatolian Metal VIII, Eliten-Handwerk-Prestigegüter*, (pp. 69-76). Bochum.
- Fidan, E., Sarı, D., & Türkteki, M. (2015). An Overview of the Western Anatolian Early Bronze Age. *European Journal of Archaeology*, 18(1), 60-89.
- Goldman, H. (1956). *Excavations at Gözlü Kule, Tarsus II: From the Neolithic through the Bronze Age*, Princeton: Princeton University Press.
- Guzowska, M., Becks, R., Strand, E. A., Cutler, J., & Nosch, M. L. (2015). Textile Tools from Troia, western Anatolia. In E. A. Strand & M. L. Nosch (Eds.), *Tools, Textiles and Contexts. Investigating Textile Production in the Aegean and Eastern Mediterranean Bronze Age*, (pp. 309-328). Oxford: Oxbow Books.
- Gündem, C. Y. (2012). The Subsistence Economy in Inland Northwestern Anatolia during the Chalcolithic and Early Bronze Age. *MASROP E-Dergi*, 7, 250-300.
- Gündoğan, Ü., Şahoğlu, V., & Erkanal, H. (2019). Spatial Organization and Production Activities at Bakla Tepe during the First Half of the 3rd Millennium BC. *DTCF Dergisi*, 59(2), 1087-1110.
- Horejs, B., & Weninger, B. (2016). Early Troy and its Significance for the Early Bronze Age in Western Anatolia. In Pernicka, E., Ünlüsoy, S., & Blum, S. E. W (Eds.), *Early Bronze Age Troy: Chronology, Cultural Development, and Interregional Contacts*. (pp. 123-146). Proceedings of an International Conference held at the University of Tübingen May 8-10, 2009. *Studia Troica Monographien* 8, Bonn.

- Joukowsky, M. S. (1986). Prehistoric Aphrodisias: An Account of the Excavations and Artifact Studies. Vol. I-II, Excavations and Studies. *Archaeologia Transatlantica* 3. Publications d'histoire de l'art et d'archéologie de l'Université Catholique de Louvain 39. Providence, R.I. / Louvain-La Neuve: Brown University.
- Kamil, T. (1982). Yortan Cemetery in the Early Bronze Age of Western Anatolia. BAR-IS 145. Oxford: B.A.R.
- Kayan, I. (1997). Bronze Age Regression and Change of Sedimentation on the Aegean Coastal Plains of Anatolia (Turkey). In H. N., Dalfes, G. Kukla & H. Weiss (Eds.), *Third Millennium BC Climate Change and Old World Collapse*, (pp. 431-450). Berlin: Springer Verlag.
- Kayan, I. (1999). Holocene Stratigraphy and Geomorphological Evolution of the Aegean Coastal Plains of Anatolia. *Quaternary Science Reviews*, 18, 541-548.
- Kayan, I. (2019). Holocene Sea Level Changes and Their Geoarchaeological Impacts on the Aegean Coast of Anatolia. *TINA Maritime Archaeology Periodical*, 12, 11-35.
- Klaunzer, M. (2013). Early Bronze Age Elites and Long Distance Relations. *Metalla*, 20(2), 89-94.
- Koçak, Ö., Bilgin, M., & Küçükbezi, H. G. (2019). MÖ II. Binyılda Afyonkarahisar ve Çevresi Kültürleri, Ankara: Türk Tarih Kurumu Yayınları.
- Korfmann, M. (1983). Demircihüyük I. Die Ergebnisse der Ausgrabungen 1975-1978: Architektur, Stratigraphie und Befunde. Mainz am Rhein: Philipp von Zabern.
- Korfmann, M. (2000). Troia-Ausgrabungen 1999. *Studia Troica*, 10, 1-52.
- Kouka, O. (2009). Cross-Cultural Links and Elite Identities: the Eastern Aegean/Western Anatolia and Cyprus from the Early Third Millennium through the Early Second Millennium BC. In V. Karageorghis & O. Kouka (Eds.), *Cyprus and East Aegean: Intercultural Contacts from 3000 to 500 BC*, Proceedings of the International Archaeological Symposium-Pythagoreion Samos, 17th -18th October 2008, (pp. 31-47). Athens: A.G. Leventis Foundation-German Archaeological Institute at Athens.
- Kouka, O. (2016). The Built Environment and Cultural Connectivity in the Aegean Early Bronze Age. In B. P. C. Molloy (Eds.), *of Odysseys and Oddities. Scales and Modes of Interaction between Prehistoric Aegean Societies and their Neighbours*, (pp. 203-224). Oxford: Philadelphia, Oxbow Books.
- Kull, B. (1988). Demircihöyük. Ergebnisse der Ausgrabungen 1975-1978, Die Mittelbronzezeitliche Siedlung V. Mainz am Rhein: Philipp von Zabern.
- Kuru, A. (2016). İçbatı Anadolu'daki Seyitömer Höyüğü'nün Erken Tunç Çağ III Birleşik Kapları. *Uluslararası Amisos Dergisi*, 1(1), 135-146.
- Lamb, W. (1937). Excavations at Kusura near Afyon Karahisar. *Archaeologia*, 86, 1-64.
- Lamb, W. (1938). Excavations at Kusura near Afyon Karahisar II. *Archaeologia*, 87, 218-273.
- Lloyd, S., & Mellaart, J. (1962). Beycesultan. Vol. 1, The Chalcolithic and Early Bronze Age Levels. Occasional Publications of the British Institute of Archaeology at Ankara 6. London: The British Institute of Archaeology at Ankara.
- Lloyd, S., & Mellaart, J. (1965). Beycesultan. Vol. 2, Middle Bronze Age Architecture and Pottery. Occasional Publications of the British Institute of Archaeology at Ankara 8. London: The British Institute of Archaeology at Ankara.
- Mac Sweeney, N. (2010). Hittites and Arzawans: A view from western Anatolia. *Anatolian Studies*, 60, 7-24.

- Massa, M. (2021). A Multi-scalar and Multivariate Approach to the Analysis of Social and Cultural Boundaries in Early Bronze Age Western Anatolia. In L. D'Alfonso & K. S. Rubinson (Eds.), *Borders in Archaeology, Anatolia and the South Caucasus*. 3500–500 BCE, (pp. 93-121). Leuven: Ancient Near Eastern Studies, Supplement 58.
- Mellaart, J. (1958). The End of the Early Bronze Age in Anatolia and the Aegean. *American Journal of Archaeology*, 62(1), 9-33.
- Mellaart, J., & Murray, A. (1995). *Beycesultan III/II: Late Bronze Age and Phrygian Pottery and Middle and Late Bronze Age Small Objects*. Occasional Publications of the British Institute of Archaeology at Ankara 12. London: The British Institute of Archaeology at Ankara.
- Mellink, M. J. (1964). Excavations at Karataş-Semayük in Lycia, 1963. *American Journal of Archaeology*, 68(3), 269-278.
- Numrich, M., Schwall, C., Lockhoff, N., Nikolentzos, K., Konstantinidi-Syvridi, E., Cultraro, M., Horejs, B., & Pernicka, E. (2023). Portable Laser Ablation Sheds Light on Early Bronze Age Gold Treasures in the Old World: New Insights from Troy, Poliochni, and Related Finds. *Journal of Archaeological Science* 149.
- Oğuzhanoglu, U. (2014). New Contributions to the Western Anatolian Early Bronze Age from Laodikeia. In C. Şimşek (Eds.), *Laodikeia Çalışmaları 3*, (pp. 71-86). Istanbul: Ege Yayınları.
- Oy, H. (2011). Afyonkarahisar Orta Tunç Çağ Yerleşmeleri. *Belleten*, 75(273), 311-335.
- Oy, H. (2014). Uşak İli ve İlçelerinde İlk Tunç Çağı Coğrafya Araştırmaları 2013 Yılı Çalışmaları. *Araştırma Sonuçları Toplantısı*, 32(1), 215-230.
- Oy, H. (2017a). A Significant Settlement in the Side of Gediz River: Gerdekkayası. *Ordu University Journal of Social Science Research*, 7(1), 36-44.
- Oy, H. (2017b). West Anatolian Mining in Early Bronze Age (3000-2000 BC). *Journal of Ancient History and Archaeology*, 4(2), 12-24.
- Oy, H. (2018a). İlk Tunç Çağı'nda Uşak 1: Merkez, Banaz ve Sivaslı İlçeleri. Ankara: Gece Kitaplığı.
- Oy, H. (2018b). A Holy Mountain in the Inland Western Anatolia: Murat Mountain (Dindymos). *Selçuk University Journal of Faculty of Letters, SEFAD*, 40, 283-296.
- Oy, H. (2019a). Banaz'da İki Son Neolitik/İlk Kalkolitik Çağ Yerleşimi: Ada Höyük ve Mercimeklik. *Süleyman Demirel Üniversitesi Fen-Edebiyat Fakültesi Sosyal Bilimler Dergisi*, 47, 16-41.
- Oy, H. (2019b). İçbatı Anadolu'da Prehistorik Döneme Ait Bir Mermer Atölyesi: Karayakuplu Höyük. *OLBA*, 27, 1-40.
- Oy, H. (2019c). Textile Production in Central Western Anatolia in the Bronze Age. In O. Dumankaya (Eds.), *Production and Trade through the Ages: From Prehistory to the Byzantine Period*, (pp. 135-151). Ankara: Bilgin Kültür Sanat Yayınları.
- Oy, H. (2021). New Survey and Typological Study of Prehistoric Wares of Dutluca Region, Uşak, Turkey. *Mediterranean Archaeology and Archaeometry*, 21(2), 69-92.
- Oy, H. (2022). Uşak İli Tunç Çağı Araştırmaları 2019-2020 Çalışmaları. C. Keskin (Eds.), 2019-2020 Yılı Yüzyüz Araştırmaları, (pp. 51-68). Ankara: Kültür Varlıkları ve Müzeler Genel Müdürlüğü.
- Oy, H., Coşar, D., & Bektaş, G. (2019). Uşak-Ulubey İlk Tunç Çağı Araştırmaları. *Araştırma Sonuçları Toplantısı*, 37(2), 209-229.

- Öner, E., Vardar, S., Karadaş, A., & İlhan, R. (2019). Paleogeographical and Geoarchaeological Characteristics of Ancient Settlements on the Western and Southern Coasts of Turkey. *TINA Maritime Archaeology Periodical*, 11, 9-50.
- Özdoğan, M. (2006). Yakın Doğu Kentleri ve Batı Anadolu'da Kentleşme Süreci. In B. Avunç (Eds.), *Studies in Honor of Hayat Erkanal: Cultural Reflections*, (pp. 571-577). Istanbul: Homer Kitabevi.
- Özsait, M. (2003). Les Fouilles du Cimetiere de Göndürle Höyük a Harmanören. *Anatolica*, XXIX, 87-102.
- Pernicka, E., Ünlüsoy, S., & Blum, S. E. W. (2016). Early Bronze Age Troy: Chronology, Cultural Development, and Interregional Contacts. *Proceedings of an International Conference held at the University of Tübingen May 8-10, 2009. Studia Troica Monographien 8*, Bonn.
- Polat, S., & Güney, Y. (2013). Uşak İli Arazisinde Karstik Şekiller/Karstic Shapes in the Area of Uşak Province. *Marmara Coğrafya Dergisi*, 27, 440-475.
- Rahmstorf, L. (2016). Emerging Economic Complexity in the Aegean and Western Anatolia during Earlier Third Millennium BC. In B. P. C. Molloy (Eds.), *of Odysseys and Oddities. Scales and Modes of Interaction between Prehistoric Aegean Societies and their Neighbours*, (pp. 225-276). Oxford: Philadelphia, Oxbow Books.
- Roosevelt, C., & Luke, C. (2017). The Story of a Forgotten Kingdom? Survey Archaeology and the Historical Geography of Central Western Anatolia in the Second Millennium BC. *European Journal of Archaeology*, 20(1), 120-147.
- Schwall, C., & Horejs, B. (2020). Social dynamics in Western Anatolia between 3000 and 2500 BC. In S. W. E. Blum, T. Efe, T. L. Kienlin & E. Pernicka (Eds.), *From Past to Present. Studies in Memory of Manfred O. Korfmann*, (pp. 109-119). Bonn: Studia Troica Monographien 11.
- Schwall, C., Thanheiser, U., Börner, M., & Horejs, B. (2023). The Crop is on Fire: Evidence of Subsistence Strategies from Late Chalcolithic Çukuriçi Höyük. *Arkeoloji Bilimleri Dergisi/Turkish Journal of Archaeological Sciences*, 3, 107-135.
- Secher, J. (2000). *Die Bronzezeitliche Nekropole von Demircihüyük-Sarıket*. Tübingen: Ernst Wasmuth Verlag.
- Selover, S., & Durgun, P. (2019). Reexamining Burials and Cemeteries in Early Bronze Age Anatolia. In S. R. Steadman & G. MacMahon (Eds.), *The Archaeology of Anatolia Volume III: Recent Discoveries (2017-2018)*, (pp. 271-282). Cambridge: Cambridge Scholars Publishing.
- Semiz, B., Abay, E., Dedeoğlu, F., Konakçı, E., & Ozan, A. (2018). An Archaeometric Investigation of Early and Middle Bronze Age Pottery from the Upper Meander Basin in Southwestern Anatolia. *Mediterranean Archaeology and Archaeometry*, 18(3), 121-150.
- Shin, N., Marston, J. M., Luke, C., Roosevelt, C. H., & Riehl, S. (2021). Agricultural Practices at Bronze Age Kaymakçı, Western Anatolia. *Journal of Archaeological Science: Reports*, 36, 1-15.
- Skourtanioti, E., Erdal, Y., Frangipane, M., Balossi Restelli, F., Yener, K., Pinnock, F., Matthiae, P., Özbal, R., Dietrich Schoop, U., 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 Reports*, 181, 1158-1175.

- Steadman, S. R. (2000). Spatial Patterning and Social Complexity on Prehistoric Anatolian Tell Sites: Models for Mounds. *Journal of Anthropological Archaeology*, 19, 164-199.
- Şahoğlu, V. (2004). Interregional Contacts around the Aegean during the Early Bronze Age: New Evidence from the İzmir Region. *Anatolia*, 27, 97-120.
- Şahoğlu, V. (2005). The Anatolian Trade Network and the Izmir Region during the Early Bronze Age. *Oxford Journal of Archaeology*, 24(4), 339-361.
- Şahoğlu, V. (2008). Liman Tepe and Bakla Tepe: New Evidence for the Relations between the Izmir Region, the Cyclades and the Greek Mainland during the Late Fourth and Third Millennium BC. In H. Erkanal, H. Hauptmann, V. Şahoğlu & R. Tuncel (Eds.), *Proceedings of the International Symposium The Aegean in the Neolithic, Chalcolithic and the Early Bronze Age*, (pp. 483-491). Ankara Üniversitesi Sualtı Arkeolojik Araştırma ve Uygulama Merkezi (ANKÜSAM) Yayın No. 1. Ankara: Ankara Üniversitesi Basımevi.
- Şahoğlu, V., & Tuncel, R. (2012). New Insights into the Late Chalcolithic of Coastal Western Anatolia: A View from Bakla Tepe, Izmir. In B. Horejs & M. Mehofer (Eds.), *Western Anatolia before Troy. Proto-Urbanisation in the 4th Millennium BC?*, (pp. 65-82). Vienna: Austrian Academy of Sciences Press.
- Şahoğlu, V., Erkanal, H., Gündoğan, Ü., Tuğcu, İ., & İncirli, M. (2022). Liman Tepe: MÖ 3. Binyılda Anadolu'nun Ege'ye Açılan Kapısı. In M. Işıklı, E. Fidan, A. Türker & M. A. Yılmaz (Eds.), *MÖ III. Binyılda Anadolu*, (pp. 169-180). İstanbul: Ege Yayınları.
- Taşkıran, H., Aydın, Y., Özçelik, K., & Erbil, E. (2021). A New Discovery of Neanderthal Settlements in Turkey: Sürmecik Open-air Campsite in Western Anatolia. *L'anthropologie*, 125, 1-13.
- Türkteki, S. Ü. (2020). Beycesultan Early Bronze Age I Pottery Group in The Light of New Data. *Mediterranean Archaeology and Archaeometry*, 20(1), 59-75.
- Uhri, A. (2006). *Batı Anadolu Erken Tunç Çağı Ölü Gömme Gelenekleri*. Ph.D. diss., Ege University.
- Ünan, S. (2022). *Seyitömer Höyük Kurtarma Kazısı 1989-2021*. Ankara: Bilgin Kültür Sanat Yayınları.
- Vandam, R., Kaptijn, E., Poblome, J., & Waelkens, M. (2013). The Bronze Age Cemetery of Gavur Evi Tepesi, Southwestern Turkey. *Anatolica*, 39, 241-259.
- Vandam, R., Kaptijn, E., & Vanschoenwinkel, B. (2013). Disentangling the Spatio-Environmental Drivers of Human Settlement: An Eigenvector Based Variation Decomposition. *Plos One*, 8, 1-11.
- Vandam, R., Music, B., & Medaric, I. (2019). Contextualizing Kuruçay Höyük: Assessing the Unexplored Late Chalcolithic Landscape near the Beginning of Early Social Complexity in SW Turkey. *Journal of Field Archaeology*, 44(1), 1-18.
- Vignolini, C. (2022). Context and Shape: Geographical and Chronological Distribution of Handled Stamp Seals in Anatolia and Northern Levant. *Asia Anteriore Antica. Journal of Ancient Near Eastern Cultures*, 4, 135-160.
- Warner, J. (1979). The Megaron and Apsidal House in Early Bronze Age Western Anatolia: New Evidence from Karataş. *American Journal of Archaeology*, 83(2), 133-147.
- Wheeler, T. S. (1974). Early Bronze Age Burial Customs in Western Anatolia. *American Journal of Archaeology*, 78(4), 415-425.
- Wright, J. C. (1998). The Place of Troy among the Civilizations of the Bronze Age. *The Classical World*, 91(5), 356-368.

- Yakubovich, I. (2022). Languages and Peoples. In S. de Martino (Eds.), *Handbook of Hittite Empire: Power Structures*, (pp. 3-44). Berlin: De Gruyter.
- Yalçınlar, I. (1955). Banaz Çayı Havzası ve Uşak Civarında Bünye ve Morfoloji Araştırmaları. *Türk Coğrafya Dergisi*, 13(14), 57-85.
- Yeğingil, Z., Oddone, M., Bigazzi, G., Erkanal, H., Bostancı, N. K., & Şahoğlu, V. (2020). Chronological and Chemical Approaches to Obsidians from Bakla Tepe and Liman Tepe, Western Anatolia. *Journal of Archaeological Science: Reports*, 32, 1-11.
- Yılmaz, D. (2009). Commercial Activities between West and Central Anatolia Regions during the Early Bronze Age. In Ç. Ö. Aygün (Eds.), *SOMA 2007 Proceedings of the XI Symposium of Mediterranean Archaeology*, (pp. 441-448). Oxford: BAR International Series.
- Yılmaz, M. A. (2019). Uşak Protohistorik Dönem Yüzey Araştırmaları Projesi (UPDAP) 2017 Yılı Sonuçları (İlk Sezon). *Araştırma Sonuçları Toplantısı*, 37(2), 425-452.
- Yılmaz, M. A. (2020). İç Batı Anadolu Neolitik-Kalkolitikine Dair Yeni Bulgular: Düzkışla Höyük, Uşak. *Anadolu Araştırmaları*, 23, 1-40.
- Yılmaz, M. A. (2022). Archaeological Evidence for Late Neolithic/Early Chalcolithic Marble Vessel Making at Ada Höyük. *Arkeoloji Dergisi*, 2022, 1-21.
- Yılmaz, M. A., Czichon, R. M., Deniz, M., Dülger, H., Akın, S., Nacar, A., Söyler, A., Çelik, H., & Yiğit, F. (2019). Uşak Protohistorik Dönem Yüzey Araştırmaları Projesi (UPDAP) 2018 Yılı Sonuçları. *Araştırma Sonuçları Toplantısı*, 36(2), 435-468.



The Concept of Purity in Ancient Anatolian Religions: Water's Sanctity in Purification

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ABSTRACT

Purification, considered essential in ancient Anatolia, was the crown of religious rituals. Providing the most comprehensive archive of ancient Anatolia, The Hittite texts have many terms related to purity. These terms indicate that physical and spiritual purification was the most important condition of the rituals organized for Hittite, Hurrian, and Luwian deities within Hittite syncretism. In Hittite texts, the term “water” most frequently used for purification and mentions that the person must be clean by performing purification rituals. The main purpose of these rituals is spiritual purification. Existing findings in Anatolia indicate that purification continued in the religious rituals of the Phrygians, Lydians, Lycians, and Urartians. The aim of this study is to examine the sanctity of water in rituals in light of Hittite texts and modern sources through the cross-cultural development of the concept of physical and spiritual purity in ancient Anatolian religions and to identify the factors that led to this development. In this context, the sanctity of water in the religions of the Anatolian civilizations from the historical ages to the end of the Iron Age will be examined and the continuity of the issue will be discussed.

Keywords: Ancient Anatolian Religions, Purification, Purity, Sacred Water, Hittite Rituals



Introduction

Purification is one of the most important religious rituals of ancient societies. Although purification rituals are implemented in different ways in each society, their importance remains the same. "Purification", which is considered essential in ancient Anatolian religions, has been seen as the crown jewel of religious rituals. In prehistoric times, Anatolian people established settlements close to water resources in the Neolithic Age, when settled life began and agricultural activities began using water resources. When the Hittites, who began in the historical ages, came to Anatolia, they encountered a local people who were aware of the importance of water. Water, which was already considered important and sacred, maintained its importance in the Hittite religion. In fact, purification with water was the most important condition of the rituals organized for the Hittite deities.

The Hittite Empire mainly offers us sources that illuminate the religious rituals of ancient Anatolia. The Hittite Pantheon developed through cultural interaction with the surrounding cultures upon the Hittites' arrival in Anatolia and became an official pantheon consisting of many gods. In this pantheon, the Hatti gods of Anatolian origin and the gods of Mesopotamian origin through the Hurrians occupy the largest place. Hittite and Luwian gods of Indo-European origin also follow them (Dinçol 1982, 29, 80; Wilhelm 1989, 49-76; Popko 1995, 113-117; Melchert 2003, 219-220; Ünal 2003, 89-91; Taracha 2009, 3; Gilan, 2014, 195-205). In this respect, the Hittite pantheon is also known as Hittite syncretism¹. According to Hittite syncretism, the concept of pollution should be placed in a safe place somewhere beyond the limits of people's lives. All religious rituals serve this purpose (Hutter 2013, 167). The places chosen for this purpose are sometimes a river (KUB 29.7+ Rs. 48ff; Haas 2003: 574), sometimes a place where agriculture cannot be done, such as a mountain (KUB 7.53+ i 41-42; Hutter 2013, 167) and sometimes underground (KUB 17.10 iv 8-19; Hutter 2013, 167-168).

Hittite texts, which present the most comprehensive archive of ancient Anatolia, are rich in terms of purity and purification. These terms were used in two ways: physical purity and spiritual purity. As a root word, *parku-* is used for the terms clean and cleaning. For example, *parkuwa*, to clean; *parkuwalli* and *parkui-* clean; *parkuwantariya*, *parkuiyela*, *parkuešš* and *parkue*, to be clean; and *parkuyatar* are frequently encountered in texts with the meaning of purification and *parkun*, to be cleaned (Güterbock and Hoffner 1995, 161-167). Similar to these terms, Luwian *papparkuwa* and Hurrian *parn* correspond to the word "clean". However, these terms are generally used in the name of physical purity, and different terms are preferred for spiritual purity. The equivalent of the concept of being spiritually purified

1 It means a mixture of elements from different religious systems and traditions (De Marinis 2014, 1769; Akurgal 2014, 119). It is used to describe a state or process, and all or some components of a religion are described as syncretic (Colpe 2005, 8926-8934).

and sacredly clean was used as *šuppi*-² in Hittite religious texts, *kumma*- in Luwian texts, and generally *itk(alzi)* in Hurrian texts (Hutter 2013, 163-164).

Concept of Physical Purity

Physical purity, which means physical or concrete cleansing, is the main basis for the beginning of religious rituals. In Hittite texts, the adjective *parkui*- was used for a person who does not cross distances that would contaminate people concretely or for a person who has to be free to save himself from impurities (Gütenborck and Hoffner 2013, 98, 177, 346, 474, 630-632).

In Hittite texts, water, *parkui*- water (KBo 17.93, 6-7) was mostly used for purification, and it is frequently mentioned that the person should be clean by performing rituals specific to purification. For example, in a Hittite temple official's directive text, the people in the kitchen should be physically clean: "*People who prepare daily bread should be clean, washed, and the dirt inside them should be removed. Their nails, hair and beards must be cut and they must wear clean clothes...*" (KUB XIII 4; Süel 1985, 171-172; Ünal 1993, 123; Taggar & Cohen 2006 61, 80-81; De Martino 2004, 349). Similarly, in an AZU³ priest's purification ritual, the priest focuses on purity: "*Like the purity of this water, people wash and purify clothes with water. Just as they wash and purify tools with water, and just as this water purifies and ritually cleanses everything, it can also purify you, the gods, in the same way. And now, you gods, be free (pár-ku-wa-e-eš e-eš-tén) from evil, blasphemy, slaughter, tears, and everything else. And so that the person who comes for the ritual may be clean before you*" (KUB 43.58 i 40ff.; Haas 2003, 141; Wilhelm 1999, 197-217).

Both texts deal with the concrete concept of purity. In the first example, a person is cleansed by removing pollution materially by washing or cutting what is dirty, and thus he is also cleansed from impurities. In the second example, among those mentioned as purification from evil, massacre or murder and tears are concrete things that should be avoided, and it is emphasized that being concretely free from these elements, which are the opposite of cleanliness, is necessary. In this context, it is possible to say that the concept of cleanliness in the Hittites began with physical pollution. Purification involves removing substances that need to be washed, wiped, removed using incense or oil (Haas 2003, 70-79). From this perspective, cleanliness is not an abstract or spiritual feature (Wilhelm 1999, 198). A person who is unclean is considered unfit for certain situations within society and will eventually harm himself by overstepping the distance to the detriment of social order. Maintaining

2 For a discussion of whether the terms *šuppi*- and *parkui*- are the same or different, see: Wilhelm 1989, 203; 32; Hoffner 1998, 324; Taggar and Cohen 2006, 148-152; Strauß 2006, 247; Hutter 2013, 163-166, Güterbock and Hoffner 2019, 615-626.

3 The priest who conducts the *itkalzi* and *itkahhi* ceremonies is identified by a Sumerogram as "AZU". The AZU priest is mentioned in the Ḫattuša texts as "soothsayer priest" or "sorcerer priest" (Wilhelm 1989, 73).

cleanliness in the Hittite Empire is a fundamental element of co-existence and social order (Hutter 2013, 161).

In the great rituals held for kings and queens, the word *parkui-* was used for the city of Ḫattuša and the country of Hatti (KUB 17-21 i 13, 5-7): “*Gods, only Ḫattuša is a clean land for you, and only in Hatti we bring you wonderful, clean and delicious We can offer sacrifices.*” Hittite religious texts show that the adjective “pure” during offerings to God also belongs to heaven, sacrifice, and drinking ceremonies (KUB 25-20, 13-17; KUB 26.23, 17-23): “*Just as Heaven is clean, let’s also make our sacrifices and offerings. And let’s keep our drinks clean.*”.

The words *itkalzi*⁴ and *itkah(h)i* can be connected to the Hurrian verb spelling *itk-* whose meaning refers to the concept of purity and may represent these rituals in Ḫattuša texts (Wilhelm 1989, 71). In purification rituals, there is a priest responsible for clean water and a sacrifice owner who uses purification water for cleansing (De Martino and Süel, 2017: 9, 16)

The tenth *itkalzi* tablet indicates that silver and oil and other tablets indicate that water, lapis lazuli stone, cedar, and tamarisk trees are objects used in purification rituals (Wilhelm 1989: 72). Cleaning the mouth is critical in Hurrian-origin *itkalzi* texts used to purify the dirty person. This cleansing had the same features as repentance. In this context, cleaning the mouth with water is the first condition of the ritual (Haas et al. 1984, 79, 84; Wilhelm 1989, 72). Similarly, in the Ammihatna Ritual of Kizzuwata origin (KBo 5 2, Rs. III 50-52), the sacrificer passes through a gate that serves as a boundary between the unclean and the clean with arrows, while two priests sprinkle him with milk and clean water. In the continuation of the ritual (Rs. III 58-60), the victim takes off his clothes and washes them with holy water. In the continuation of the same ritual (KBo 5 2 Rs. IV 60-62), various metals seen as symbols of cleanliness are also used as cleaning materials. For example, silver metal is a purifying substance that makes the sacrificer clean in the presence of the gods (*KÜ.BABBAR issi an dai-*): “*And he puts the silver in the mouth of the sacrificer. And the priest says: ‘Be clean in the presence of silvery gods, male and female gods!’*” (Haas and Wilhelm 1974, 38-41; Murat 2003, 102-103; Reyhan 2004, 111-142).

Concept of Spiritual Purity

The main purpose of the rituals performed for a person who is physically purified is spiritual purification. Thus, one can understand that physical purification is not sufficient to initiate a ritual. For instance, it was believed that a person who committed a crime lost his purity and therefore became dirty. In this context, the person had to be purified to avoid incurring the wrath of the gods. The word *suppi-*, which means purification in the context

4 Near the villages of Ortaköy- *Şapinuwa*, a great deal of Hurrian *itkalzi* texts have been found, starting from 1990 (Wegner and Bomhard, 2020, 12).

of sacred and ritual also defines spiritual purification (Güterbock and Hoffner 2019, 618). In Hittite texts, the word *suppi-* was used for gods, kings and queens, people, household items, and all living and non-living things in nature. The state of being spiritually clean and purified corresponds to the word *suppi-*, which means holy (Güterbock and Hoffner 2019, 618- 626). Thus, priests used different methods of spiritual cleansing in rituals to improve people. A Hittite *itkalzi* text (CTH 777= KUB 29) containing Hurrian prayers clearly expresses the methods used in purification (Haas et al. 1984, 90-97; Murat 2012, 127-128). In this example, where the priest is responsible for purification, a relationship is established between the victim and the ritual materials, and the dirt on the contaminated victim is transferred to another object. It is conducted with the help of acts such as circling a bird over the victim, cleaning the victim with purification water, throwing his clothes into the water, praying for water, and finally turning the silver in the purification water around himself. Thus, holy water is used as a purifying agent along with bird and silver. Likewise, in the Ammihatna Ritual of Kizzuwata origin mentioned above (KBo 5.2), spiritual purification is achieved by cleansing the soul and body of the victim from disease and pollution using various methods (Haas et al. 1974, 38-49).

Another example indicating that other materials are used in purification rituals in addition to purifying the victim with holy water (*suppi-watar*) (KBo 23:23.62-63) (Güntenborch & Hoffner 2019, 630) appears in the text KBo 21 33+Vs. I. . It is stated that in the ritual led by an AZU priest, some oil and cedar wood are added to the water. There is a belief that these are ritual objects that increase the sanctity of water and contribute to purification itself. It is aimed to cleanse the sacrifice owner from impurities and cleanse him both physically and spiritually with fully purified water (Haas et al. 1986, 38-41). Apart from the purification of humans, ceremonies were held to purify clothes, cult objects, gods, and god statues with water. In the text, KUB 43 58+ Vs. I (CTH 491) especially, it is written why clothes, cult items, and gods should be washed and purified in the purification ritual directed by an AZU priest (40-51) (Strauss 2006, 342-343).

The concept of cleanliness and purification of places is also crucial. For example, water is requested from priests for the purification of a house. The purifying power of water appears in a ritual of invoking a god (Vs. II). *“Let goodness come into the house! Then let evil be sought with the eyes! And let him be thrown out! get clean! Let holy water cleanse evil language/ words, pollution, blood, sin, and curse! Let it (holy water) drive away the blood from this house, just as the wind drives away the filth and carries it to the sea! And carry it to the sea!”* (49-56) (Otten 1961, 122-126). In this home purification ritual, water is requested from the Goddess’ water source and the God of Water for the water supply process. In addition, in this ritual, a house is purified from bad words, pollution, murder, sin, and curses with clean water, which is considered sacred. Constantly sprinkling water into the house performs this

purification process. The most notable ritual performed to purify places from dirt and evil is the bird sacrifice ritual, which is of Hurrian origin. Bird sacrifices are offered in the name of the underworld gods, who remove pollution through spiritual purification (catharsis) and lock it safely in the underworld. In a ritual organized to purify a house contaminated by murder and perjury, the underworld gods are implored by name and asked to deliver the existing “evil (evil) blood” of the house to the “blood god” who will take it to the underground and keep it safe there (Wilhelm 1989, 74).

To purify the gods and goddesses, their temple centres must also be clean. In a ritual to purify the temple of Goddess Hapat again, that is, to clean and consecrate it, the statue of the god is cleaned with *šehelliiaš* (suppi-) water (KBo 9.119 A i 5), that is, “purification water”, and it is sprinkled on the temple to purify Hapat’s temple. (CTH472) Vs. II 4-6 (IV 23-25) (Lebrun 1979, 143-154). Containers carrying the sacred purification water used during the cleaning of temples are essential. They (Fig. 1) are referred to as *šehelliški* in the texts (Lebrun 1979, 143, 150-151; Tremouille 1996, 87-89; Mouton 2008, 1-17; Hutter 2013, 163).



Figure 1: Some samples of *šehelliški* vessels, Šapinuwa (Süel 2010, 842, fig.9)

In the text named CTH 472 Vs. I, it is stated that the holy purification water was given with *šehelliški* at night and this vessel was taken back during the day (Lebrun 1979, 143, 150-151; Tremouille 1996, 87-89; Mouton 2008, 5). The importance of this vessel stems from the fact that it carries water that allows spiritually contaminated people, gods, and temples to be cleansed in accordance with cultic purification. It is believed to be an intermediary that filters this water, adds clarity to it, and allows stars to pass through it during the night (Tremouille 1996, 73-75; Güterbock and Hoffner 2019, 550). Tremouille (1986: 86) used the “pointed bottom” feature for the sacred purification vessel and argued that it is a vessel that facilitates the disposal of plant and mineral residues placed in water, and with this feature, it is a container.

An Ardzinba ritual tablet found in Ortaköy-Şapinuwa clearly supports the belief that *šehelliški* vessels were special vessels used for purifying water. The tablet states that *šehelliški* vessels were given for Hepat, the chief goddess of the Hittites, and in Šinapši, a sacred place interpreted as the “house of purification from sins” and where purification rites were performed (Haas et al. 1974, 36-38; Mouton 2008, 5-6; Güterbock & Hoffner 2019, 623). These small jugs containing the holy water used by the Hittites in purification ceremonies and the sacred *itkalzi* tablet series were produced in Şapinuwa -Ağılönü and distributed throughout the country. In fact, Ağılönü is accepted as a sacred area where cleanliness is at the highest level (Süel 2010, 831). It is thought that the reason Hittite kings chose Şapinuwa as their capital for a long period because they wanted to live in these sacred areas. The existence of purification vessels was also found in the purification house of the city of Washukanni (Ussukani), which was used as *bit narmakti* in the Hurrian religion. This shows that the Hurrians preferred silver jugs as purification vessels. Silver, thought to have a special power, might have been indispensable for the Hurrians as well as the Hittites (Haas and Wilhelm 1974, 38ff; Wilhelm 1989, 67).

In ritual texts, the number seven draws attention to the bringing of purification water. One can see the concept of “seven waters” for the “cleaning water” in three Hurrian *itkalzi* ritual texts recorded as KUB 27 24 + Vs. I (Nr.15), KUB 27 23+ KBo 27 88 Vs. II (Nr. 16), and KBo 20 131 Rs. III (Nr. 17) (Haas et al. 1984, 132, 138-139, 148). Similarly, the number seven also represents the sacred *sakuniya* or the sources of water. For example, the text of the Ritual of the *Kummanni King Palliia* (CTH 475), recorded as KBo 9.115 (+) KBo 9.119 Vs., states that the city of Lawazantiia received its holy water from seven sources and that the statue of the storm god was washed by adding some sacrificial items to this water (Haas, et al., 1974, 43-44). Similarly, in a sacrificial ritual for Hannahanna (KUB 12. 50: 11-13; 58.74, 11-14), it is stated that mud was taken from springs in seven places and thus the water was purified (*namma sa-ku-ni-ia-as*), and with the same water, the mother goddess would also be purified (*sa-ku-ni-ia-as IM-it sapianza parkunuwanza*). Here, an analogy is made between the purification of water, and the purification of the sacrificer and goddess (Güterbock and Hoffner 2019, 77).

Rivers are important water sources for the purification of gods and goddesses as well as the person who sacrifices them. In the Samuha ritual (CTH 480) (KUB 29.7+ Rs. 48ff.), for example, all negativities that pollute a person and prevent him from showing his talents in society are placed in a boat as a representative figurine, and then the person responsible for the ritual pours oil on the boat and floats the boat onto the river. Just as the river carries and drags the boat and there is no sign of it, it also takes away evils. This symptom is the evil word, curse, and dirt that creates the world of evil. Just as the trace of the boat disappears, the world of evil will not move away from either the gods or the ritual owner, and ultimately,

God and man will be purified (*parkui-*) (Haas 2003, 574; Hutter 2013, 167; Güterbock and Hoffner 2019, 454). Here, it is thought that the river is symbolically considered the border and that purification occurs beyond the river (Hutter 2013, 167).

In the Hurrian-Hittite ritual of Bogazköy (KBo 23 27 Rs. III 5-14), springs in Šapinuwa are highlighted for holy water to be used in the offerings. These sources are nine rivers in the city of Šapinuwa, and the purification of the place is carried out through rituals by sprinkling the holy water from these rivers upwards. In this context, the streams, rivers, and springs of these sacred cities, such as Ortaköy- Šapinuwa and Lavazantiya, have been accepted as places that provide purification and contain holy water (Wilhelm 1999, 208-211).

It is inevitable that there will be sacred structures in or around these cities that stand out with their feature of containing holy water that purifies the sacred areas. Among these structures, rock monuments take the lead, and it is regarded that these monuments, which have relief depictions and are generally located in rocky areas, are directly related to the Anatolian water cult. A rectangular basin on the rock opposite Temple I in the middle of the Bogazköy C building in Hattuša (Fig. 2) is one of the best examples. It is thought that the water here was used not only for washing hands at the beginning of rituals but also in a sacred sense (Darga 1985, 158-160; Ünal, 1993, 136-137; Özkan 1996, 103; Seeher 2006, 119-120; Murat, 2012, 140).



Figure 2: Rectangular basin, Boğazköy C building, Hattuša (Murat, 2012, 152)

Although there is no water source in some similar places today, some of these places, considered essential for Ancient Anatolian syncretism, have come to the fore. Fraktini (Neve

1971, 35-36; Tübingen 1971, 35-36; Dinçol 1982, 115; Darga 1992, 175-179), Hanyeri/Gezbeli (Neve 1971, 35-36; Dinçol 1982, 115; Darga 1992, 182-183), Hemite (Neve 1971, 35-36; Darga 1992, 182-183), Taşçı I/II (Darga 1992, 175-177, 180-181), İmamkulu (Neve 1971, 35-36; Dinçol, 1982, 115; Darga 1992, 178-181), Hatıp (Dinçol 1996, 8-9; Karağuz 2001, 73-76); Akpınar/Sypilos (Neve 1971, 35-36; Dinçol 1982, 115; Darga 1992, 185), Kemalpaşa/Karabel (Neve 1971, 35-36; Dinçol 1982, 115; Darga 1992, 183-185), Fasıllar (Mellaart 1962, 111-117; Erkanal 1980, 287-301; Dinçol 1982, 116; Darga 1992, 190-194; Karağuz 2001, 60-66) and Sirkeli (Neve 1971, 35-36; Dinçol 1982, 115; Darga 1992, 174-175) are the most popular rock monuments indicating the existence of sacred water sources in Anatolia.

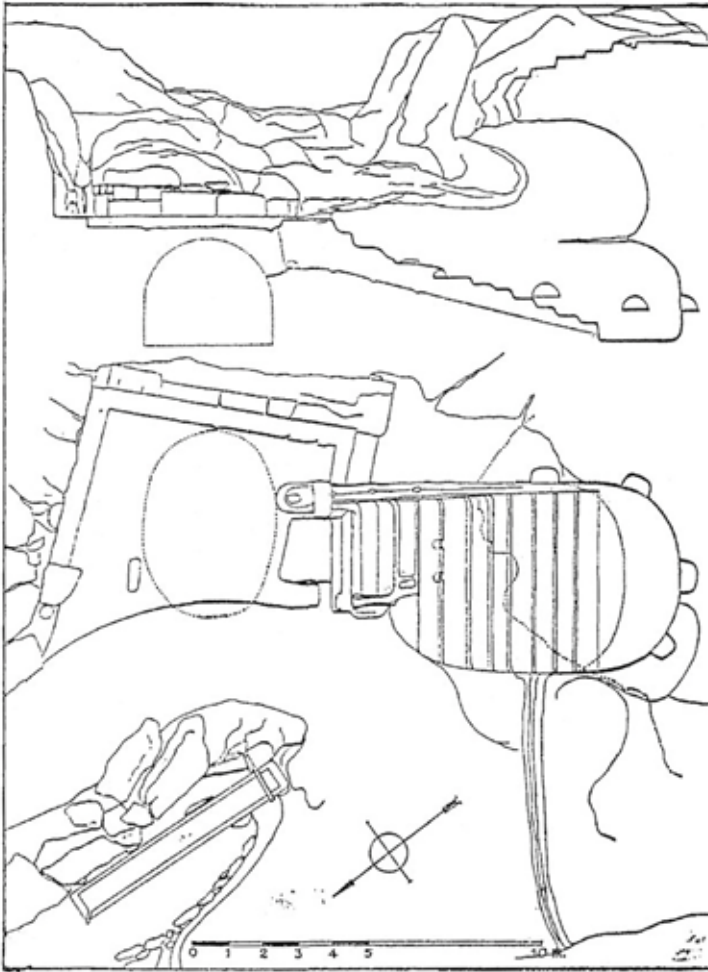


Figure 3: Fountain C, early Phrygian Midas (Özkaya, 1996, 98)

The Phrygians and Lydians, who inherited the Hittite empire, have also given importance to water resources (Rostad 2006, 23). The Phrygians in Anatolia after the Hittites continued the tradition of sacred water sources being important for purification rituals. In fact, the city of Midas, within the Phrygian sphere of influence, which is rich in water resources, clearly shows the continuity of this tradition. Among the sources, Fountain C (Fig. 3) is considered a sacred area in the Phrygian religion. There is a female statue representing Cybele on the mountain, and its location indicates that this is a sacred Cybele cult area. In addition, it is thought that the Romans washed and cleaned the Cybele statue and other cult objects, this practice is of Phrygian origin (Özkaya 1996, 100-101) and the beginning of this tradition is the legend of King Midas and Dionysus. According to legend, it used to be the holy water that saved the king, whose request from God turned everything he touched into gold, from the difficulty of this situation. Midas got rid of his troubles by bathing in the stream Sart, which is the source of the Paktalos in Sardes. While “gold” in the legend represents earthly desires, “washing with water” is used as a symbol of purification (Candan 2005, 240-242). In this context, a person who has desires and is therefore spiritually unclean must be cleansed with water.

Likewise, purification is important in the Hellenistic Lydian city, where Hittite and Greek influences are observed. This importance is quite clear in the two Lydian texts from the Hellenistic period. These texts state that one must be completely clean and purified before entering the temple. It has been stated that a *hetaira* who wants to enter the temple must be completely purified (Parker 2018, 4). In the research conducted between 1958 and 2017 in Sardis, which shows the importance of water in purification rituals, the inscription on the white marble stele (No.305), one of the finds found near the Paktolus Rock, states that the phrase *ἱερὸν Νυμφαῖον* refers that here is a hot water source here, and today it is called “Sart Mud Baths” (Petzl 2019, 8). The most striking of the marble stele finds (No. 456) is the inscription that directly points to the sanctity of water. In this inscription, it is stated that sacred water was used by Goddess Artemis (Petzl 2019, 124). In addition, the assemblage of egg finds on the floors of the temple walls of Sardis Artemis and under a building in Roman period Area 49 show that purification rituals continued here. Egg deposits are considered to be closely associated with purification rituals that protect from evil and troubles (Bruce and Deridder Raubolt 2014, 450; Payne 2018, 236-237).

The existence of the Nymph, or “water nymph” cult in the Lycian civilization is known in Letoon, Patara, Antiphellos, Idebessos, and Kyaneai (Hülden 2006). Steles and rock reliefs bearing Nymph reliefs, some written in Greek, are frequently encountered. In Xanthos Valley, Letoon, which is considered the most sacred area in Lycia, the temples of Apollo (Natri), Artemis (Ertemi), and their mother Leto (eni qlahi ebiyehi) were built near a spring water, in the cult of these three gods, Nymphs or Eliyana have always been found. The local Lycian gods were paired with the Greek Nymphs with the term “Eliyâna” mentioned in one

of the temple inscriptions. It has been documented in Letoon and Telandros that the Lycian water cult has a connection with spring water (Borchhardt-Bleibtreu 2013, 88 – 89; Akyürek Şahin 2016, 542-545).

Purification is important in the religious life of the Urartians, who also have Hurrian and Assyrian influences. When entering the courtyard of Ayanis Temple, one of the most important places reflecting this importance, from the east, there is a *pithos* with a length of around 2 m in front of the second pillar on the courtyard floor. The bathtub, which likely contained water, must have been used for religious purification before the ceremonies. The remains of this religious cleaning tub unearthed in the Ayanis temple area indicate the importance of purification in the Urartians' religious rituals (Çilingiroğlu 2020, 142). Çilingiroğlu (2007, 36-37) claims that in this Urartian temple, physical purity, which is the first phase of religious rituals, begins at the entrance of the temple and then libation, that is, sprinkling sacred water, takes place as a routine. From written sources showing the existence of sacred water containers used by the Urartians, Sargon II.'s report about the hostages taken from the temple in Musasir mentions the existence of 607 large and small copper water vessels. These were used for sacred water and wine in purification rituals (Loo 1966, 103).

The importance that the Urartians gave to purification was also reflected in the findings of Tuspa Castle. The stele, placed on the right of the entrance of the building called “Şirşini” (Salvini 2008, CTU A 5-68), is thought to have been used for a stable or similar purpose on the northern slopes of the castle, and the building stones around it indicate that this place was used for the “purification of sacred sacrificial animals” (Tarhan 2011, 318-320; Konyar et al. 2019, 177-190) (Fig. 4). However, it is not known whether water was used for this purification or not.



Figure 4: The entrance of Sirşini of Minua (Konyar et. Al. 2019, 178, Fig.22)

Conclusions

Religion, which is the cornerstone of Anatolian culture where civilizations unify, is the most determining element in Anatolian civilizations. In societies within Hittite syncretism, where written sources can be accessed, purity must have been an important step in the polytheistic religious system. Physical and spiritual purification was considered essential in societies that organized purification rituals in the name of purity. Hittite texts clearly indicate the importance of the concept of purity in the Hittites, Hurrian, and Luwian religions. In these pantheons, where spiritual purification was essential for the worship of the deities, the physical purity of people, cult objects, and places was first expected. The most important tool that removes impurities is water. In this context, water might be considered a sacred tool for prayers. Containers carrying water, which are the most important elements used in purification rituals, and the sources from which water is obtained began to be considered sacred over time. Anatolia is rich in these resources. The Phrygians, Lydians, Lycians, and Urartians, who inherited the legacy of the Hittites and where traces of other civilizations were also detected, continued the importance of water in purification in their religious lives. However, the available sources in these civilizations were not as comprehensive as the Hittite archives. Studies on these civilizations can be conducted by comparing them with neighboring cultures such as Greece and Mesopotamia. Thus, this study, which aims to contribute to the development and continuity of the “sanctity of water in ancient Anatolian purification rituals”, will fully achieve its purpose.

The definitive conclusion drawn from this study is that respect for the concept of God has been important from the beginning of human history to the present day, and the main rule of this respect is physical and then spiritual purity. Through spiritual purification, a person can be cleansed of the evils, ambitions, and past sins he harbors. Purity is the food of the human soul and the most important element of psychology. The intense use of this form of purification in Ancient Anatolia, which is still applied with different methods today, is also very valuable for our study.

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References

- Akurgal, E. (2014). *Anadolu Kültür Tarih*. Ankara: Phoenix Yayınevi.
- Akyürek-Şahin, E. (2016). Likya'da Tanrılar ve Kültürler. *Lukka'dan Likya'ya*. İstanbul: Yapı Kredi Yayınları, 536-549.

- Ardzinba, V. (2010). *Eskiçağda Anadolu Ayinleri Ve Mitleri* (Orhan Uravelli, Çev). Ankara: Kafkas Bilimsel Araştırma Merkezi ve Yayıncılık.
- Borchhardt, J. & Bleibtreu E. (2013). Stukturen iyklscher Residenzstädte. Im *Vergleich zu älte ren Städten des Vorderen Orients, Adalya*, 12, İstanbul.
- Bruce, W. & Raubolt E. D. (2014). Sardis, Ritual Egg Deposit (Turkey). In *Archaeology of Food: An Encyclopedia*. Karen Bescherer Metheny ve Mary Carolyn Beaudry. Lanham (Eds.) MD: Rowman & Littlefield, 449-450.
- Candan, E. (2005). *Türkler'in Kültür Kökenleri*. İstanbul: Sınır Ötesi Yayınları.
- Colpe, C. (2005). Syncretism. *Encyclopedia of Religion. Vol XIII*, (Ed.) Lindsay Jones. Macmillan Reference USA, 8926- 8934.
- Çilingiroğlu, A. (2007). *Urutu Kültürü ve Ayanis Kazuları*. Ankara: Türkiye Bilimler Akademisi.
- Çilingiroğlu, A. (2020). *Urutu Dini*. Yapı Kredi Yayınları, (Eds.) K. Köroğlu & E. Konyar İstanbul: İ.Ü. Yayınları.
- Darga, M. (1985). *Hitit Mimarılığı I. Yayı Sanati Arkeolojik ve Filolojik Veriler*.
- Darga, M. (1992). *Hitit Sanati*. İstanbul: Akbank Kültür Sanat Yayınları.
- De Marinis, V. (2014). Syncretism. *Encyclopedia of Psychology and Religion*, Springer, (Ed.) David A. Leeming, 1769-1772.
- De Martino, S. (2004). Purità dei sacerdoti e dei luoghi di culto nell' Anatolia itta. *Orientalia* 73, (4), 348-62.
- De Martino, S. & Süel, A. (2017). The "Great itkalzi Ritual" The Şapinuwa Tablet Or 90/1473 and its Duplicate ChS I/1 5. *Essays on the Hurrian Şapinuwa Tablets 2*. LoGisma editöre.
- Diñçol, A. (1982). Hititler. *Anadolu Uygarlıkları Ansiklopedisi I*. İstanbul: Görsel Yayınları.
- Gilan, A. (2014). The End Of God-Napping and the Religious Foundations Of Hittite Empire, *Zeitschrift für Assyriologie und Vorderasiatische Archäologie*. (Eds.) Walter Sallaberger, De Gruyter, 195-205.
- Erkanal, A. (1980). Eflatun Pınar Anıtı, *Bedrettin Cömert'e Armağan, Hacettepe Üniversitesi, Sosyal ve İdari Bilimler Fakültesi, Beşeri Bilimler Dergisi*, Özel sayı Ankara, 287-301.
- Güterbock, H. G. & Harry A. H. (2019). *The Hittite Dictionary of the Oriental Institute of the University of Chicago*. Volume P/S. Chicago: The Oriental Institute of the University of Chicago.
- Haas V. & Wilhelm, G. (1974). Hurritische und luvvische Riten aus Kizzuwatna. *AOAT* 3, Kevelaer/ Neukirchen-Vluyn, 38-41.
- Haas, V., Salvini, M., Wegner, I. & Wilhelm, G. (1984). *Die Serien itkahi und itkalzi des AZU-Priesters, Rituale für Taşmişarri und Tatuhepa sowie weitere Texte mit bezug auf Taşmişarri, Corpus der Hurritischen Sprachdenkmaäler, I/I*, Roma.
- Haas, V., Salvini, M., Wegner, I. & Wilhelm, G., (1986). *Die Rituale des AZU-Priesters, Corpus der Hurritischen Sprachdenkmaäler ½*, Roma.
- Haas, V. (2003). *Materia Magica et Medica Hethitica: Ein Beitrag zur heilkunde im Alten Orient*. Berlin: Walter de Gruyter.
- Hoffner, H. A. (1998). Agricultural Perspectives on Hittite Laws § 167-169. In *Acts of the IIIrd International Congress of Hittitology*. (Eds.) S. Alp ve A. Süel. Ankara: Hizmet Aralık, 319-330.

- Hutter, M. (2013). Concepts of Purity in Anatolian Religions. *Purity and the Forming of Religious Traditions in the Ancient Mediterranean World and Ancient Judaism*, (Eds.) Christian Frevel, Christophe Nihan. Leiden, Boston: Brill, 59-174.
- Karağuz, G. (2001). M. Ö. II. Binde Konya Bölgesi Hitit Kaya Anıtları ve Yazıtları Üzerine Bazı Gözlemler. *Yılı Anadolu Medeniyetleri Müzesi Konferansları*. Ankara, 54-103.
- Konyar, E., Genç, B. et al. (2019). Excavations at the Old City, Fortress, and Mound of Van: Work in 2018. *Anatolia Antiqua Revue internationale d'archéologie anatolienne*, XXVII. (Eds.) Deniz Genceoğlu & Martin Godon. İstanbul: Institut Français d'Etudes Anatoliennes Georges-Dumézil, 169-184.
- Lebrun, R. (1979). Les rituels d'Ammihatna. Tulbi et Mati contre une impureté =CTH 472. *Hethitica* III, Louvain, 143- 154.
- Loon, M. N. van. (1966). *Urartian Art Its Distinctive Traits In the Light of New Excavations*. Pihans XX, İstanbul: Nederlands Historisch-Archaeologisch Instituut.
- Melchert, H. (2003). *The Luwians*. Leiden, Boston, Brill.
- Mellaart, J. (1962). The Late Bronze Age Monuments of Eflatun Pınar And Fasillar Near Beyşehir. *Anatolian Studies* XII, 111-117.
- Mouton, A. (2008). 'Dead of Night' in Anatolia: *Hittite Night Rituals*. *Religion Compass* 2/1, 1–17.
- Murat, L. (2003). Ammihatna Ritüelinde Hastalıklar ve Tedavi Yöntemleri. *Archivum Anatolicum*, Cilt VI, (2), Ankara, 102-103.
- Murat, L. (2012). Hititlerde Su Kültü. *Ankara Üniversitesi Dil ve Tarih Coğrafya Fakültesi Tarih Bölümü Tarih Araştırmaları Dergisi*, (51), 127-128.
- Neve, P. (1971). *Istanbul Mitteilungen, Beiheft 5*. Tübingen.
- Payne, A. D. (2016). Native Religious Traditions From A Lydian Perspective. In *Blakely, S; Collins, B.J.; Tusa, S.; Urquhart, L. Editör Proceedings of 'Religious Convergence in the Ancient Mediterranean', Conference*. Atlanta: Lockwood Press, 231-248.
- Petzl, G. (2019). *Sardis: Greek and Latin Inscriptions*. (Eds.) Nicholas D. Cahill & Andrew Ramage. England: Harvard University Press.
- Popko, M. (1995). *Religions of Asia Minor*. Warsaw: Academic Publications Dialog.
- Otten H. (1995). Eine Beschwörung der Unterirdischen aus Boğazköy, *Zeitschrift für Assyriologie* 20/54, 22-126.
- Özkaya, V. (1996). Cybele and the Waterside Shrines Some Observations on the Phrygian Spring Cult and Its Origin. *Arkeoloji Dergisi IV*, 97-107.
- Reyhan, E. (2004). Hitit Büyü Ritüellerinin Uygulama Şekli Üzerine bir İnceleme. *Archivum Anatolicum, VII*, Ankara, 111-142.
- Rostad A. (2006). *Human Transgression - Divine Retribution: A study of religious transgressions and punishments in Greek cultic regulations and Lydian-Phrygian reconciliation inscriptions*. The University of Bergen.
- Seeher, J. (2006). *Hattuşa Rehberi*. (Handan Eğlence, Çev.). İstanbul: Ege yayınları.
- Süel, A. (1985). *Hitit Kaynaklarında Tapınak Görevlileri ile İlgili Bir Direktif Metni*. Ankara Üniversitesi, Dil ve Tarih-Coğrafya Fakültesi Yayınları, No. 350, Ankara.

- Süel, M. (2010). Şapinuwa Hitit Kenti, Ağılönü Kutsal Alanı, VII. Uluslararası Hititoloji Kongresi Bildirileri, Çorum (Ağustos 2008). (Ed.) Aygöl Süel, 2. Cilt, Ankara, 829-844.
- Süel, M. (2019). Şapinuwa’da ele geçirilen bir grup taş kalıp. IX. Uluslararası Hititoloji Kongresi Bildirileri, Çorum (Eylül 2014). (Ed.) Aygöl Süel, 2. Cilt, Çorum: İl Kültür ve Turizm Müdürlüğü Yayınları, 1005-1020.
- Strauß, R. (2006). *Reinigungsrituale aus Kizzuwatna: Ein Beitrag zur Erforschung hethitischer Ritualtradition und Kulturgeschichte*. Berlin, New York: de Gruyter.
- Taggar-Cohen, A. (2006). *Hittite Priesthood, Texte der Hethiter* 26. Heidelberg: Universitätsverlag C. Winter.
- Taracha, P. (2009). *Religions of Second Millenium Anatolia*. Göttingen, Harrasowitz GmbH&Co.
- Tremouille, M.-C. (1996). Un objet kulturel: Le šehelliški. *Studi Micenei ed Ege Anatolici XXXVIII*, Roma, 87-89.
- Ünal, A. (1993). Ritual Purity Versus Physical Impurity In Hittite Anatolia. Essays On Anatolian Archaeology (Ed.) H.I.H. Prince Takahito Mikasa, Harrasowitz Verlag, Wiesbaden, 119-137.
- Ünal, A. (2003). *Hititler Devrinde Anadolu II*. İstanbul: Arkeoloji ve Sanat Yayınları.
- Van G. (2001). *B.H.L. Onomasticon Of the Hittite Pantheon III*. Brill, Leiden, Boston, Köln.
- Wegner, I. & Bomhard, A. R. (2020). *An Introduction To Hurrian Language*. Florence, SC.
- Wilhelm, G. (1989). *The Hurrians*. Warminster, Aris&Philips.
- Wilhelm, G. (1999). Reinheit und Heiligkeit. *Levitikus als Buch, Band 119*, 197-217.
- Yiğit, T. (2005). Hurrilere ilişkin Hititçe Çivi Yazılı Belgelerdeki İlk Kayıtlar. *Tarih Araştırmaları Dergisi*, (38), 55-69.



Glyptic Findings with Anatolian Hieroglyphs from Kilis – Oylum Höyük

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ABSTRACT

The archaeological excavations at Oylum Höyük were started in 1987 by Prof. Dr. Engin Özgen. Since 2012, they have been carried out by Prof. Dr. Atilla Engin. During these excavations, a total of eight seals or seal impressions with Anatolian hieroglyphs were unearthed. This article will discuss a total of five seal or seal impressions that were found during excavations at Oylum Höyük near Kilis between 2011 and 2022. All examples are seals or seal impressions with Anatolian hieroglyphs, which give us information about the names or titles of the respective owners. So far, only a few written artefacts from the second half of the second millennium BC have been found in Oylum Höyük. However, these new finds should prove that considerably more finds are to be expected and that Oylum Höyük played an important role for the Hittites in northern Syria.

Keywords: Anatolian Hieroglyphs, Hittite, Northern Syria, Seals, Oylum Höyük



Introduction

Oylum Höyük is located about 7 km northeast of Kilis, not far from the Syrian border. With dimensions of 460 x 320 meters and a height of up to 37 meters it is a relatively large Höyük in this region. Oylum Höyük has been excavated by Prof. Dr. Atilla Engin¹ since 2012. Only a relatively small area has been uncovered to date, which is of course due to the considerable height of this settlement mound. So far, a total of six settlement layers have been identified. The settlement layers V and VI are the layers which contain completely or partly the Hittite periods.

To date, three seals or seal impressions have been found and published during the excavations in Oylum Höyük. One of these, the seal impression OY 09 025 in particular testifies to a political commitment to the Hittite secundogeniture of Kargamish and thus also to the Hittite royal house itself (Dinçol, 2011). The seals we would like to discuss in this article all come from these layers (at least see Engin, 2022a, 2022b).

OY 11.019 (Plan square: L21, Area: ÖZA 94 # 12; Layer: Va, Period: LBA II)²

The seal impression OY 11.019 was found in the layer Va which can be dated archaeologically to the Late Bronze Age II. Unfortunately, the lower part of the seal is broken off, so that neither the title nor the person name can be defined with certainty. The title of the seal owner, which we see left and right of the impression, is probably “Prince”. Since the lower part of the title is not preserved, “Princess” would also be possible, but the number of seals of princes is considerably higher than that of princesses, so that “Prince” might be more probable.

The first two signs of the person’s name are legible. The sign at the top in the middle appears to be the character *450, which would phonetically represent the sound “a”.³ With the following sign *35 (*na*) the personal name would begin with *A-na-*. Since below these two characters there is enough space as well as a small remainder of a sign, so it must have been at least one more sign here. Names beginning with *Ana-* are attested both as male and female names, e.g. ^m*Anna*, ^f*Annā*, ^f*Annayati*, ^f*Annanna*, ^m*Ananipiya*, ^f*Annanza*, ^m*Anat-Šar* in cuneiform sources or *Anamuwa*, *Ana*, *Anani*, *Ananimuwa*, *Ananiwalwi*, *Ananizi*, *Anari*, *Anaruntiya Anasa*, *Anatali*, *Anazi/a*, *Anaziti*, *Asuheni* in Anatolian hieroglyphic.

1 My special thanks to my colleague and dearest friend Prof. Dr. Atilla Engin, for his permission and all help to publish these glyptic findings.

2 A photograph of this seal impression published before in Atilla 2020, Fig. 6.

3 The sign *450 is attested in several seals as the beginning of a personal name, see Herbordt, cat. 11, 75, 80, 89, Mora 1987, Gruppo V 2.4.



Figure 1a: Seal impression Oy11.019



Figure 1b: Drawing of the seal impression Oy11.019

OY 14.206 (Plan square: J20 Area: ÖZA 24#2, Layer: Oylum Va, Period: LBA II)⁴

Like the seal impression before, this impression is also on a conical clay bulla. The rim around it is unfortunately partially destroyed. On the left the half of a figure in adrant position can be seen. The figure wears a long robe, which falls from her right arm down to its feet. To the right of this figure are hieroglyphic signs. The characters *439 (*wa/i*) and *55 (*ni*) can be read with certainty. The vessel in front of the figure below is probably the sign *336 (PITHOS), which according to Hawkins is to be distinguished from the similar sign *338 (CULTER) by the fact that the sign PITHOS never has more than one horizontal stroke, while CULTER always has several (Hawkins in Herbordt, 2005: 302f.). Above the outstretched hand there seems to have been the rest of another sign, an animal or an object, but it is not identifiable. Seals in which a similar person carries a ram, a healing symbol, a bull, a rosette or a TONITRUS sign in the outstretched hand are known⁵. In our opinion, the name of the seal owner should be read as *x-wa/i-ni*. Names ending in *-wanni* are not uncommon and are documented in cuneiform Texts as both male⁶ and female names⁷ (*fAnnawanni*). The sign PITHOS, on the other hand, is probably the title of the owner of the seal.

4 A photograph of this seal impression published before in Atilla 2020, Fig. 6..

5 See also Herbordt, 2005: Cat. 3, 4, 9, 219, 302, 389, 391, 408, 494, 518, 563, 580, 760.

6 *mAllawanni* (Noms Cat. 28), *mAmmaškuwanni* (HKM 99 Obv. 14), *mLuggawanni* (KBo 40.17 4), *mWanni* KUB 18.9 II 22

7 *fAnnawanni* (KBo 55.204, 8').



Figure 2a: Seal impression Oy 14.206



Figure 2b: Drawing of the seal impression Oy 14.206

**OY 20.003 (Plan square: L24, Area: ÖZA 148 #
2, Layer: Oylum Va, Period: LBA II)**

This seal impression consists of two rings framing the central field, which should decorate the seal surface. The inner ring is better preserved and consists of triangles and circles. The arrangement of the signs in the central field is already known from several other seals. In the center of the impression is the character *186 (*lu*). Starting from this, the next characters are arranged in all four directions, so that the name of the seal owner is on the seal a total of four times. In our case it would be *186 (*lu*), *439 (*wa/i*) and *209 (*i(a)*) = *Luwia/Luwaia*. Several comparable seal impressions are already known from Boğazköy⁸. Especially the seal SBo 2 204 is similar to our seal, because also here the inner ring consists of triangles and circles⁹. However, in all examples from Boğazköy, the last sign *209 (*i(a)*) of our seal impression is missing, which is the reason why the name on the Boğazköy seals is to be read as *Luwa*. Incidentally, this name is also known from cuneiform texts. A personal name *Luwia* or *Luwaia*, on the other hand, has not yet been attested either in cuneiform sources or

8 See Dinçol & Dinçol, 2008: Cat. 78; Herbordt, 2005: Cat. 211, 212, 213; SBo 2, Cat 204. An other seal with the same order of signs is the seal impression of *Lupakki* see Dinçol & Dinçol, 2008: Cat. 77; Herbordt, 2005: Cat. 207.

9 The name *Luwa*, or a name beginning with *Luwa*, is also found on seals of the common type: see Herbordt 2005, cat. 209, 214, 215; Dinçol & Dinçol, 2008, cat. 148, 126 and also from Şarhöyük in Western Anatolia see Baştürk & Doğan-Alparslan, 2018, fig 5-6.

on other seals or seal impressions. The title of the seal-holder is defined four times with the sign *326 (SCRIBA), just as on his related impressions from Boğazköy¹⁰.



Figure 3a: Seal impression Oy 20.003



Figure 3b: Drawing of the seal impression Oy 20.003

OY 21.025 (Plan square: K23, Area: ÖZA158 #1, Layer: Oylum Va, Period: LBA II)

OY 21.025 is a double-sided button seal, whose sealing surface is framed by a circle. The center of the seal face, which we have named side A, is unfortunately damaged, so that only the signs at the edge are readable. An astral symbol can be seen on the left side while on the right the hieroglyphs *370 (BONUS₂) - *79 (FEMINA) designate the owner of the seal as a woman. However, the name of this woman is partially destroyed. It should begin with the sign above, namely *209 (*i(a)*). One or two signs below are not preserved. The end of the name should be the two hieroglyphs *215 (*ha*) - *334 (*pa*), with which we have the woman's name *i(a) - x - ha - pa*. A similar name is known from KUB 60.121 (rev. 18) (Zehnder, 2010: 171): Yaruhepa

The side B of our seal is unfortunately even worse preserved. More than half of it is destroyed. Only the signs *370 (BONUS₂) and *41 (CAPERE, *tà*) are preserved. Since there was certainly a woman's name on page A and the BONUS₂ sign is also present on page B,

10 It is interesting to note that the persons on this type of seals are all scribes, so it can perhaps be assumed that it was a favoured type by scribes for a time.

it can be assumed that there was a VIR₂ under the Bonus₂, a small rest of this sign is still present. This would then result (BONUS₂VIR₂) in a male name beginning with *ta-* for side B.



Figure 4a: Side A of the seal OY 21.025 and its impression

Figure 4b: Drawing of side A of the seal impression OY 21.025



Figure 4c: Side B of the seal OY 21.025 and its impression

Figure 4d: Drawing of side B of the impression of seal OY 21.025

OY 22.022 (Plan square: K24, Area: ÖZA 140#1, Layer: Oylum Va, Period: LBA II)

This seal impression is framed by a band of triangles and circles. The centre field contains the signs *370 (BONUS₂) and *79 (FEMINA), the name of the owner, a healing symbol and a circle. The name should be read from top to bottom. Sure to read are the signs *107 (*mu(wa)*) and *439 (*wal/i*). Female names beginning with *Muwa-* are well known from both the cuneiform texts and the hieroglyphic corpus. The most common are *Muwa* and *Muwatti* (besides *Muwazi*). In general, the element *muwa* is represented on seals, only with the sign *107. However, there are also examples which show with *107 (*mu(wa)*) also the sign *439, as it is the case with our seal impression (Herbordt, 2005 cat. 255 and Dinçol & Dinçol, 2008 cat. 24). Below the latter sign, traces of a third sign are visible, which we would like

to interpret as *90 (*ti*). The name of the seal owner is thus to be read as *Mu-wa-ti*¹¹. Whether the mentioned circle is only a filling motif or whether it should indicate the title of the seal owner cannot be said for sure. If it is a title it would be the sign *402 which would be SCUTELLA according to Dinçol (Dinçol, 2007: 228230; Dinçol & Dinçol, 2008: 68-70), but SIGNACULUM according to Payne (2017).



Figure 5a: Seal impression Oy 22.022



Figure 5b: Drawing of the seal impression Oy 22.022

Conclusion

With these five seals, the number of seals from Oylum Höyük now rises to eight. There is also a clay tablet fragment published by A. Ünal. Oylum Höyük in the Hittite period was undoubtedly an important centre within the administration of the Kargamish secundogeniture, as the seal impression of *Ini-Tesup* proves. As a prince's seal has now also been found, it can be assumed that many more written finds will be unearthed in the next few years, so that we will learn a lot more about the history of the Hittite period Oylum Höyük.

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References

- Baştürk, M.B. & Doğan-Alparslan, M. (2018). A New Hieroglyphic Seal from Şarhöyük, *Olba* XXVI, 31-40.
- Dinçol, A. (2007). Fünf neue Siegel und Siegelabdrücke aus Boğazköy und Überlegungen über die Bedeutung des Hieroglyphenzeichens L. 402, *Studi Micenei ed Egeo-Anatolici* 49, 227-233.

¹¹ The Name *Muwati* is attested in several seals of Boğazköy see Herbordt, 2005, cat. 260-270 (with the titles REX.FEMINA and REX.FILIA) and Dinçol & Dinçol, 2011 cat. 24 (without any title).

- Dinçol, A. (2011). Zwei hethitische Hieroglyphensiegel und ein Siegelabdruck aus Oylum Höyük / Oylum Höyükte Bulunan İki Hiyeroglifli Hitit Mührü ve bir Mühür Baskısı. *CollAn X*, 87-94.
- Dinçol, A. & Dinçol, B. (2008). *Die Prinzen und Beamtensiegel aus der Oberstadt von Boğazköy-Hattuša vom 16. Jahrhundert bis zum Ende der Grossreichszeit* (BoHa 22), Mainz am Rhein, Phillip von Zabern.
- Engin, A. (2020). Oylum Höyük and Alalakh: Cultural Relations in the Second Millenium BC., In K. A. Yener & T. Ingman (Eds.) *Alalakh and its Neighbours. Proceedings if the 15th Anniversary Symposium at the New Hatay Archaeology Museum*, (pp. 275-304), 10-12 June 2015, Leuven-Paris-Bristol: Peeters.
- Engin, A. (2022a). Oylum Höyük. In A. Engin & K. Görkay (Eds.), *Prehistorik Dönemlerden Geç Antik Döneme Gaziantep Arkeolojisi* (pp. 47-82) Gaziantep: Türk Arkeolojisi ve Kültürel Miras Enstitüsü.
- Engin, A. (2022b). Oylum Höyük. In A. Engin & K. Görkay (Eds.), *Archaeology of Gaziantep from Prehistoric Times to the Late Antiquity* (pp. 47-82). Gaziantep: Türk Arkeolojisi ve Kültürel Miras Enstitüsü.
- Herbordt, S. (2005). *Die Prinzen und Beamtensiegel der hethitischen Grossreichszeit auf Tonbulln aus dem Nişantepe-Archiv in Hattusa*, Mainz am Rhein: Phillip von Zabern.
- Mora, C. (1987). *La Glittica Anatolica del II Millennio A.C. Classificazione Tipologica*. Gianni Iuculano Editore: Pavia.
- Payne A. (2017). Bread Matters: Of Loaves and Stamps. *HS* 130, 73-89.
- SBo 2: Güterbock, H. G. (1967). *Siegel aus Boğazköy. Zweiter Teil: Die Königssiegel von 1939 und die übrigen Hieroglyphensiegel*, Biblio-Verlag, Osnabrück.
- Zehnder, Th. (2010). *Die hethitischen Frauennamen. Katalog und Interpretation*, Harrasowitz Verlag, Wiesbaden.



Preliminary Results on Flood Disasters in the Elbistan Plain during the Second Millennium BC: Findings from the Elbistan Karahöyük Excavations

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ABSTRACT

Elbistan Karahöyük is located in the centre of the Karahöyük neighbourhood, 10 km northwest of the Elbistan district of Kahramanmaraş province. On the western edge of the mound flows the Hurman Stream, and on the other side is Hamzatepe, another centre connected to the mound. These two centres, situated in the southwestern part of the Elbistan Plain and north of the Şar Mountain, are located side by side on either side of the Hurman Stream flowing into the Ceyhan River.

Excavations carried out at Elbistan Karahöyük since 2015 mostly focused on the Iron Age and Late Bronze Age levels. The excavations conducted on the Northeast Slope of the mound aimed to reach the Middle Bronze Age layers and revealed two separate flood layers related to the flood disasters experienced at different times in the region. The 8th level, the oldest settlement level identified so far, was built on the flood layer left after a Middle Bronze Age flood disaster. Level 7, dated to the Late Bronze Age, was the site of the last flood disaster. These floods, caused by the Hurman Stream, must have affected all the mounds in the Elbistan Plain downstream from Tanır Yassıhöyük to Elbistan as much as Elbistan Karahöyük.

Keywords: Kahramanmaraş, Elbistan Karahöyük, Middle Bronze Age, Late Bronze Age, Flood Disasters



Introduction

The Elbistan Plain, situated north of the Kahramanmaraş provincial centre and Northeast Taurus Mountains, is in an important position between Central Anatolia and the Upper Euphrates regions, Syria and Mesopotamia. Surrounded by the Binboğa Mountains in the west, the Nurhak Mountains in the east, the Hizanlı Mountains in the north and the Berit Mountains in the south, most of the plains lie within the boundaries of the Afşin and Elbistan districts. The most important river in the Elbistan Plain is the Ceyhan River, which originates from the Pınarbaşı area east of Elbistan city centre. The Hurman, Sarsap, Söğütlü and Göksu streams also join the Ceyhan River at the west end of the plain (Çifçi, 2009: 10; 2013: 143-144; Çifçi and Greaves, 2010: 90-91).

Located 10 km northwest of the Elbistan district of Kahramanmaraş province, Elbistan Karahöyük is in the centre of the Karahöyük neighbourhood. The site is one of the largest settlements in the region, covering an area of 450x300 m and 21 m in height. On the western edge of Elbistan flows the Hurman Stream, and on the other side is Hamzatepe, another centre connected to the mound. Hamzatepe, a natural hill covered with rocks in some parts, measures 380x380 m in dimensions and 48 m in height. Located in the southwestern part of the Elbistan Plain and north of the Şar Mountain, these two centres are situated side by side on either side of the Hurman Stream flowing into the Ceyhan River (Fig. 1-2).¹



Figure 1: Map showing the location of Elbistan Karahöyük

¹ The Elbistan Karahöyük and Hamzatepe excavations have been supported by the Turkish Historical Society since 2021.



Figure 2: Aerial view of Elbistan Karahöyük and Hamzatepe from the east

The first settlement at Elbistan Karahöyük dates back to the Early Bronze Age. Research has shown that the site was one of the major settlements in the region throughout the Assyrian Trade Colonies and Hittite periods. This is also the case for the Iron Age. However, its importance seems to have waned although the settlement process continued in the Hellenistic and Roman periods.

The first archaeological research at Elbistan Karahöyük dates back to the early 20th century. Hugo Grothe, who is known to have conducted research in the regions between Kayseri and Kahramanmaraş, carried out a sounding excavation at Elbistan Karahöyük in 1906 (Grothe, 1911: CCLXXXX-CCLXXXII). Later, in 1929, Hans Henning von der Osten also visited Elbistan Karahöyük (von der Osten, 1930: 115-116, fig. 124-125). The first proper archaeological excavation at Elbistan Karahöyük was carried out in 1947 by Tahsin Özgüç and Nimet Özgüç (Özgüç, 1948: 226-232; Özgüç and Özgüç 1949). After a long hiatus, excavations at Elbistan Karahöyük resumed in 2015 (Uysal, 2017; Uysal and Çifçi, 2017). The excavations were extended to Hamzatepe in 2017 (Uysal and Çifçi, 2019: 399-401) and are still being conducted by Bora Uysal at both centres.

The new excavations at Elbistan Karahöyük began in two areas close to one another, namely the Northwest Slope and the North Terrace. Iron Age levels were studied on the Northwest Slope excavated in 2015-2016, and Iron Age and Late Bronze Age levels were encountered on the North Terrace excavated in 2015-2020. In addition to these, mostly Late Bronze Age levels are being studied in the ongoing excavations started in 2019 on the Northeast Slope. The North Terrace and Northeast Slope, which are adjacent to each other, are generally referred to as the North excavation area (Uysal and Çifçi, 2023: 471-472) (Fig. 3).

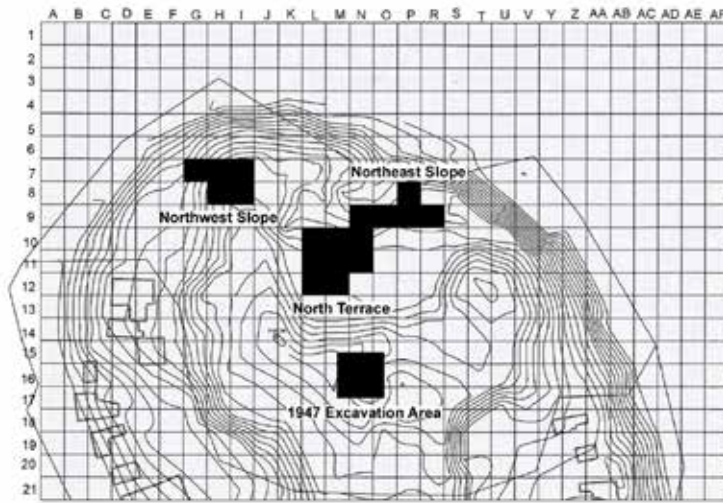


Figure 3: Topographical plan of Elbistan Karahöyük in 2023

The excavations conducted so far in the North Terrace excavation area revealed 8 occupation layers. The 1st level belongs to the Hellenistic-Roman periods, the 2nd-4th levels to the Iron Age and the 5th-7th levels to the Late Bronze Age. The dating of the 8th level has not yet been established. When this settlement layer was first excavated, it was thought that either it would increase the number of Late Bronze Age layers by one or that it would be the last layer of the Middle Bronze Age (Uysal and Çifçi, 2021: 102; 2022: 357). However, the radiocarbon analysis result of a sample taken from occupational level 8 was sent in an uncalibrated form without any information, which led to the evaluation of the layer as belonging to the Late Bronze Age. However, the calibrated result of this sample indicates that it belongs to the late Middle Bronze Age. For the dating of level 8, it is expected that this layer will be excavated in new trenches and new radiocarbon analyses will be obtained to date it more securely.

Flood Layers Identified in the Elbistan Karahöyük Excavations

In 2015, when the excavations at Elbistan Karahöyük resumed, investigations carried out to determine the destruction of the settlement after the 1947 excavations revealed that the mound was surrounded by an asphalt road and that large parts of archaeological deposition, particularly on the northern side, had been cut away (Uysal, 2017: 255; Uysal and Çifçi, 2017: 37; 2021: 102). In these areas that have become steeper due to soil removal, especially in the northeast direction, there are flood layers on the upper parts and a layer that has probably been subjected to fire (Uysal and Çifçi, 2021: 102; 2022: 357, fig. 9) (Fig. 4).

The aforementioned flood layers are related to the floods experienced in the Elbistan Plain in the 2nd millennium BC. The excavations started in 2019 on the Northeast Slope,

which is the continuation of the North Terrace area, aiming to reach the Middle Bronze Age occupational levels in this section, which is much easier for determining the stratigraphy of the mound. Excavations in this area were carried out in trenches N9 in 2019, N9 and O9 in 2020, O9 and P9 in 2021, O9 and R9 in 2022, and P8 in 2023.



Figure 4: Flood and fire layers in the northeastern part of Elbistan Karahöyük



Figure 5: Northeast Slope N9 and O9 trenches, second flood layer, and architectural remains of the eighth level

Two flood layers were identified on the Northeast Slope because of the aforementioned studies, revealing floods that occurred at different times. The second layer was exposed before the first layer. Level 8, the oldest settlement found so far at Elbistan Karahöyük, was built on top of the second flood layer. The foundation stones of this level, excavated in trenches N9 and O9, are located on a ground covered with small pebbles, which are loose in some places and tight in others (Uysal and Çifçi, 2021: 102, fig. 8-9; 2022: 357, fig. 8) (Fig. 5). The first layer, which is more recent, appears in level 7. The flood layer in this occupational level is

located in a small section to the north of the level 7 architecture excavated in trenches O9 and P9, but not in the areas further back (Uysal and Çifçi, 2023: 472, fig. 3) (Fig. 6). Later excavations in Trench P8 showed that the first flood layer also covered the area north of Level 7 (Fig. 7). In the southwest corner of the trench, the foundation stones belonging to a wall on level 7 were found to be just below the flood layer (Fig. 8). There is no evidence that this wall was destroyed by the flood. In this case, either it must have been a wall that was no longer in use during the 7th level or the 7th level must have consisted of two building levels in this section. The elevation difference between settlement levels 7 and 8 on the Northeast Slope is approximately 1 m. The people of the 8th level must have settled on the flood layer after such a disaster in the Middle Bronze Age. The settlement at level 7 must have encountered the last flood disaster during the Late Bronze Age.



Figure 6: Northeast Slope P9 trench, first flood layer, and architectural remains of seventh level



Figure 7: Northeast Slope P8 trench, first flood layer, and architectural remains of the seventh level



Figure 8: Northeast Slope P8 trench, wall remains under the first flood layer, and architectural remains of the seventh level



Figure 9: Northeast Slope P8 trench flood layers



Figure 10: Northeast slope trench P8 flood layers and small-sounding trench

Subsequent excavations in Trench P8 revealed that level 8 identified in the adjacent trenches in previous years was not found in this area. A flood layer consisting mostly of gravel, sand, and silt was excavated (Fig. 9). In a small 1.5x1.5 m sounding trench in the southwest corner of trench P8, no architectural elements were found despite a 3 m deepening from the elevation layer of level 7 (Fig. 10). However, it should be noted that due to some discolouration observed in the profile sections of this sounding trench, there is a possibility of finding an unseen level in the narrow excavated area. At this stage, the end of the flood layers has not yet been reached. It is expected that a layer belonging to the early Middle Bronze Age will be exposed at the end of these levels.

Thick flood layers caused by flood disasters were also found in some centres located along the Euphrates and Tigris rivers during excavations carried out in the past. These rivers, originating in Eastern Anatolia and flowing into the sea at the Persian Gulf after travelling a long distance, have a strong flow that swells especially in spring. In the Eastern Anatolia region, İmikuşağı (Sevin and Köroğlu, 1986: 169-170; Sevin and Derin, 1987: 190; Sevin, 1988: 308, 310-311; 1995: 1, 3, footnote 4; 1998: 384, fig. 2), Değirmentepe (Esin, 1987: 91-92; 2000: 81-83; Esin and Harmankaya, 1987: 1988: 89; 116; Esin et al. 1987: 78), Köşkerbaba, Kösehöyük, Kaleköy (Köroğlu, 2001: 28-29), Zeytinli Bahçe (Balossi et al. 2007: 359, 366, fig. 2) and Kavuşan Höyük on the Tigris River (Kozbe, 2009: 209; 2010: 185, 188; Kozbe & Köroğlu 2011, 629-630) are among the centres where flood layers dating from the late Chalcolithic to the Roman Period have been identified (Köroğlu, 2001: 26-30; 2006: 76; Özdoğan, 2006: 70-73). In southern Mesopotamia, Ur (Woolley, 1954: 27-29, fig. 3; 1955: 15-19, pl. 73, 83), Kish, and Fara (Shuruppak, Martin, 1997: 302), which may have

been affected by both the Euphrates and Tigris rivers, were identified in the late Ubaid Period to the late Early Dynastic Period, and Tell ed-Der (Paeppe et al. 1978: 1-35) during the Old Babylonian period are among the settlements where flood layers were identified (Lenzen, 1964: 52-64; Mallowan, 1964: 62-82; Raikes, 1966: 52-63; Köroğlu, 2001: 29-31; 2006: 74, 76; Özdoğan, 2006: 69-70).

Conclusion

Although these flood disasters caused by the Euphrates and Tigris rivers yielded important archaeological data, these events occurred far away from the Elbistan Plain. Therefore, it should be noted that the Elbistan Plain, one of the wetland regions of Turkey, lost this feature a short time ago. The most important reason for this is the Afşin-Elbistan Thermal Power Plants, which were established in the Çoğulhan neighbourhood of the Afşin district, approximately in the central part of the regions where the Hurman Stream flows. Starting operations in 1984, the Afşin-Elbistan A Thermal Power Plant and Afşin-Elbistan B Thermal Power Plant, commissioned in 2004, use large amounts of water and lignite from the region in which they are located. Therefore, the water that was extracted from wells drilled in the Elbistan Plain close to the surface before the establishment of power plants can hardly be extracted from very deep levels today. Although this situation is not favourable for agriculture and animal husbandry, it is beneficial for power plants. The high water level in the plain causes cave-ins during coal mining.

The Hurman Stream, which is one of the important sources of water for the Elbistan Plain, flows calmly today, partly because of the construction of power plants, and irrigation of agricultural lands can dry up in the summer months. In previous years, floods have caused significant damage in the Afşin and Elbistan districts. In 1980, some settlements were displaced due to the flood disaster in the region (Afad, 2020: 33-34, 107-108; Dinç et al. 2022: 253-258). Karahüyük's residents, who experienced this disaster, recalled that the houses were destroyed and the neighbourhood was largely covered with water. Some houses in the Beştepe hamlet of the Karahüyük neighbourhood, situated to the south of Hamzatepe, were built as "disaster houses" after this flooding. Older residents of the neighbourhood also recounted swampy areas in the fields to the east of Elbistan Karahüyük during their childhood.

The issue of flood disasters that we have encountered since 2020 in the excavations carried out in Elbistan Karahüyük will continue to appear in the coming years. It is clear that at least one of these floods occurred in the Late Bronze Age, and it will be possible to determine the number of times these floods occurred in the Middle Bronze Age and to date them with the progress of our studies. The issue should also be evaluated in terms of other mounds in the Elbistan Plain along the route of the Hurman Stream. Tanır Yassihöyük (Baştürk et al. 2023,

163-164), located in the Tanır neighbourhood of the Afşin district, seems to be the least affected by floods due to its location. This settlement, which was established on rocky ground about 30 km north of Elbistan Karahöyük, and on the east bank of the Hurman Stream, is higher than the plain level and Karahöyük. This region, where Tanır Yassihöyük is situated, has a small valley formation and is also favourable for the acceleration of the river when the rainfall is continuous and intense. Therefore, all the mounds along the Hurman Stream from Tanır Yassihöyük to Elbistan must have been affected as much as Elbistan Karahöyük (Fig. 11).

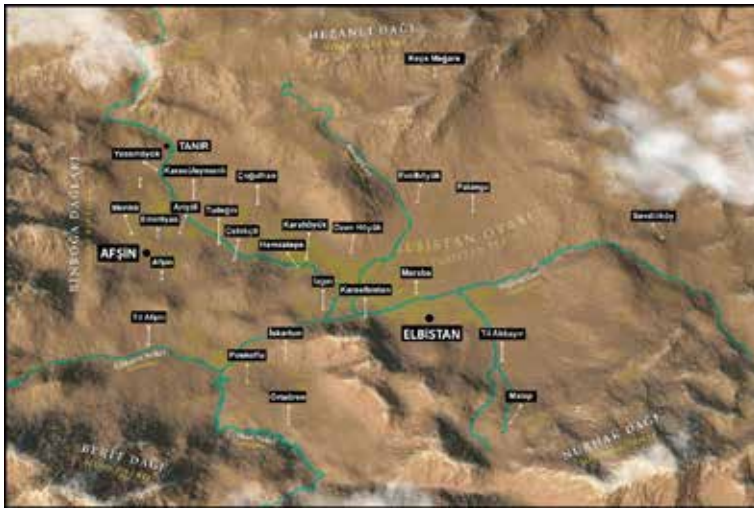


Figure 11: Map showing settlements located in Elbistan Plain

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References

- Afad. (2020). *Kahramanmaraş İl Afet Risk Azaltma Planı*. Kahramanmaraş: T.C. Kahramanmaraş Valiliği, İl Afet ve Acil Durum Müdürlüğü.
- Balossi, F., di Nocera, G.-M. & Frangipane, M. (2007). The Contribution of a Small Site to the Study of Settlement Changes on the Turkish Middle Euphrates between the Third and Second Millennium B.C: Preliminary Stratigraphic Data from Zeytinli Bahçe Höyük (Urfa), In C. Kuzucuoğlu & C. Marro (eds.), *Sociétés humaines et changement climatique à la fin du troisième millénaire: une crise a-t-elle eu lieu en Haute Mésopotamie?* (355-381). Istanbul: Institut Français d'Études Anatoliennes-Georges Dumézil.
- Baştürk, E., Acıpayam, S., Alkan, Y., Eşsiz, A. & Akyürek, N. (2023). Tanır Yassihöyük 2021 Yılı Kazı Çalışmaları, *42. Kazı Sonuçları Toplantısı 2*: 163-174.

- Çiftçi, A. (2009). Elbistan Ovası'nın Geç Hitit Şehir Devletleri Dönemindeki Önemi Üzerine Genel Bir Değerlendirme, *Türk Arkeoloji ve Etnografya Dergisi* 9: 9-18.
- Çiftçi, A. (2013). MÖ İkinci Binyılda Elbistan Ovası ve Çevresi, In O. Tekin, M. H. Sayar & E. Konyar (eds.), *Tarhan Armağanı. M. Taner Tarhan'a Sunulan Makaleler. Essays in Honour of M. Taner Tarhan* (143-156). İstanbul: Ege Yayınları.
- Çiftçi, A. & Greaves, A. M. (2010). Settlement Patterns in the Second and First Millennia BC Elbistan Plain, *Anatolica* 36: 89-110.
- Diñç, Y., Adıgüzel, F. & Avcı, T. (2022). Kahramanmaraş İlinde Yer Değiştiren Yerleşmeler, In M. A. Ceylan & Y. Diñç (eds.), *Seçilmiş Örneklerle Türkiye'de Yer Değiştiren Yerleşmeler* (245-274). İstanbul: Kriter Yayınevi.
- Esin, U. (1987). Değirmen-tepe Kazısı, 1979, In S. Pekman & D. Günay (eds.), 1987. *Aşağı Fırat Projesi 1978-1979 Çalışmaları. Lower Euphrates Project 1978-1979 Activities* (89-101). Ankara: Orta Doğu Teknik Üniversitesi.
- Esin, U. (2000). Değirmen-tepe (Malatya) Kurtarma Kazıları, In O. Belli (ed.), *Türkiye Arkeolojisi ve İstanbul Üniversitesi (1932-1999)* (80-86). Ankara: İstanbul Üniversitesi.
- Esin, U. & Harmankaya, S. (1987). 1985 Değirmen-tepe (Malatya - İmamlı Köyü) Kurtarma Kazısı, 8. *Kazı Sonuçları Toplantısı* 1: 95-137.
- Esin, U. & Harmankaya, S. (1988). Değirmen-tepe (Malatya) Kurtarma Kazısı 1986, 9. *Kazı Sonuçları Toplantısı* 1: 79-125.
- Esin, U., Arsebük, G. & Özdoğan, M. (1987). Değirmen-tepe Kazısı, 1978, In S. Pekman & D. Günay (eds.), 1987. *Aşağı Fırat Projesi 1978-1979 Çalışmaları. Lower Euphrates Project 1978-1979 Activities* (77-81). Ankara: Orta Doğu Teknik Üniversitesi.
- Grothe, H. (1911). *Meine Vorderasien Expedition 1906 & 1907, 1: Die fachwissenschaftlichen Ergebnisse*. Leipzig: K. W. Hiersemann.
- Kozbe, G. (2009). Kavuşan Höyük Kazısı, 2007, 30. *Kazı Sonuçları Toplantısı* 2: 199-216.
- Kozbe, G. (2010). Kavuşan Höyük Kazısı, 2008, 31. *Kazı Sonuçları Toplantısı* 4: 173-196.
- Kozbe, G. & Köroğlu, K. (2011). Kavuşan Höyük 2002 Yılı Kazısı, In N. Tuna & O. Doonan (eds.), *Ilisu ve Karkamış Baraj Gölleri Altında Kalacak Arkeolojik Kültür Varlıklarını Kurtarma Projesi 2002 Yılı Çalışmaları, 2. Salvage Project of the Archaeological Heritage of the Ilisu and Carchemish Dam Reservoirs Activities in 2002, 2* (623-652). Ankara: Orta Doğu Teknik Üniversitesi.
- Köroğlu, K. (2001). M. Ö. II. Binyılın İlk Yarısında Doğu Anadolu'da Büyük Fırat Taşkınları, Tufanı Anımsatan Sel Baskınları, *Toplumsal Tarih* 91: 26-31.
- Köroğlu, K. (2006). Tufanın Bilimsel Kanıtları, *Atlas* 157: 74-76.
- Lenzen (1964). Zur Flutschicht in Ur, *Baghdader Mitteilungen* 3: 52-64.
- Mallowan, M. E. L. (1964). Noah's Flood Reconsidered, *Iraq* 26/2: 62-82.
- Martin, H. P. (1997). Fara, E. M. Meyers (ed.), *The Oxford Encyclopaedia of Archaeology in the Near East* 2, (301-303). New York, Oxford: Oxford University Press.
- Osten, H. H. von der (1930). *Explorations in Hittite Asia Minor 1929*. Chicago: The University of Chicago Press.
- Özdoğan, M. (2006). Büyük Sırrın Arkeolojik Keşfi, Nuh Tufanı, *Atlas* 157: 58-73.

- Özgüç, T. (1948). Elbistan Ovası'ndaki Tetkik Gezileri ve Karahöyük Kazısı, *Belleten* 12/45: 226-232.
- Özgüç, T. & Özgüç, N. 1949. *Türk Tarih Kurumu Tarafından Yapılan Karahöyük Hafriyatı Raporu 1947. Ausgrabungen in Karahöyük, Bericht über die im Auftrage der Türkischen Geschichts-Kommission im 1947 durchgeführten Ausgrabungen*. Ankara: Türk Tarih Kurumu Yayınları.
- Paeppe, R., Gashe, H. & de Meyer, L. (1978). Sounding B: The Surrounding Wall of Tell ed-Der in Relation to the Regional Fluvial System, In L. de Meyer (ed.), *Tell ed-Der 2* (1-35). Leuven: Peeters.
- Raikes, R. L. (1966). "The Physical Evidence for Noah's Flood, *Iraq* 28/1: 52-63.
- Sevin, V. (1988). İmikuşağı Kazıları, 1986, 9. *Kazı Sonuçları Toplantısı* 1: 299-334.
- Sevin, V. (1995). *İmikuşağı I. (6.-I. Yapı Katları)*. Ankara: Türk Tarih Kurumu Basımevi.
- Sevin, V. (1998). İmikuşağı Kazılarının Işığında Habur Seramiğinin Kuzey Yayılımı, In H. Erkanal, V. Donbaz, & A. Uğuroğlu (eds.), *XXXIV. Uluslararası Assiriyoloji Kongresi. XXXIV. International Assyriology Congress* (383-391). Ankara: Türk Tarih Kurumu Basımevi.
- Sevin, V. & Derin, Z. (1987). İmikuşağı Kazıları, 1985, 8. *Kazı Sonuçları Toplantısı* 1: 181-204.
- Sevin, V. & Köroğlu, K. (1986). İmikuşağı Kazıları, 1984, 7. *Kazı Sonuçları Toplantısı*: 163-178.
- Uysal, B. (2017). Elbistan Karahöyük'te Yapılan Yeni Kazılar Hakkında Genel Bir Değerlendirme, In S. Özkan, H. Hüryılmaz & A. Türker (eds.), *Samsat'tan Acemhöyük'e Uygarlıkların İzinde, Aliye Öztan'a Armağan. From Samosata to Acemhöyük Trailing the Ancient Civilizations, Studies Presented to Honour of Aliye Öztan* (255-263). İzmir: Ege Üniversitesi.
- Uysal, B. & Çifçi, A. (2017). Elbistan Karahöyük Kazısı 2015, 38. *Kazı Sonuçları Toplantısı* 2: 35-46.
- Uysal, B. & Çifçi, A. (2019). Elbistan Karahöyük Kazısı 2017, 40. *Kazı Sonuçları Toplantısı* 1: 397-410.
- Uysal, B. & Çifçi, A. (2021). Elbistan Karahöyük and Hamzatepe Excavations 2015-2020: A Hittite Settlement and Cemetery in the Elbistan Plain, In S. R. Steadman & G. McMahon (eds.), *The Archaeology of Anatolia 4, Recent Discoveries (2018-2020)* (96-107). Newcastle: Cambridge Scholars Publishing.
- Uysal, B. & Çifçi, A. (2022). Elbistan Karahöyük Kazısı 2019-2020, In A. Özme (ed.), *2019-2020 Kazı Çalışmaları I* (355-366). Ankara: Kültür Varlıkları ve Müzeler Genel Müdürlüğü.
- Uysal, B. & Çifçi, A. (2023). Elbistan Karahöyük ve Hamzatepe Kazıları 2021, 42. *Kazı Sonuçları Toplantısı* 1: 471-480.
- Woolley, C. L. (1954). *Excavations at Ur. A Record of Twelve Years' Work*. London: Ernest Benn.
- Woolley, C. L. (1955). *Ur Excavations 4. The Early Periods. A Report on the Sites and Objects Prior in Date to the Third Dynasty of Ur Discovered in the Course of the Excavations*. London: Published for the Trustees of the Two Museums.



A Provincial Centre on the western border of Urartu: Palu Fortress

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ABSTRACT

Palu Kalesi is a fortress site situated in modern Elaziğ province. In the Middle Iron Age, this region was the western borderland of the Urartian Kingdom and the primary contact zone where political and cultural relations transpired between the Urartu and the neighbouring Neo-Hittite kingdoms. The site was also a strategically crucial military post that provided logistic support for the Urartian armies during their western expeditions. The fortress was built as a provincial centre shortly after the foundation of the Urartian Kingdom, and the settlement lasted for a long time until the fall of the kingdom.

This study presents previously unrecognised archaeological remains, which were identified during our recent investigations at Palu Fortress. Our survey of the site revealed that the Middle Iron Age citadel consisted of two sectors, and the Lower Citadel was enclosed by sturdy fortifications and terrace walls reinforced with bastions. Moreover, while Urartian rock signs were already recorded at Palu, our investigations documented previously unknown rock signs at the site. In addition, other previously unrecognised features dating to the post-Urartian periods were identified by our recent investigations, including five single-roomed rock-cut tombs and two stepped rock-cut tunnels.

To better understand the relationship of the archaeological features at the site, a topographic map of Palu Fortress was drawn and visible archaeological remains dated to the Urartian and post-Urartian periods were marked on this map. In addition, the multi-roomed tombs of the Urartian period were scanned using Lidar sensors, and Lidar data were used to generate 3D models and rectified plans of the tombs. Finally, a preliminary virtual 3D reconstruction of the Urartian period fortifications was generated on the basis of recently discovered remains.

Keywords: Urartian Kingdom, Palu Kalesi, Provincial Centre, Rock-cut tomb, Elaziğ



Introduction

Palu Fortress lies on a calcareous ridge that forms the southwestern extension of Mount Gökdere in the eastern part of modern Elazığ province (Fig. 1). The rocky ridge upon which the fortress is built extends approximately 1,300 m northeast-southwest and approximately 700 m northwest-southeast. The northern, northeastern, and northwestern aspects of the ridge are characterised by rocky outcrops, steep cliffs, and precipices, while its eastern and southern slopes descend to the Murat River valley with a sharp incline. Within the settlement area of the fortress, there are rocky outcrops reaching approximately 10 m in height, and these areas are not suitable for construction (Fig.2).



Figure 1: Map of Eastern Anatolia showing the distribution of Middle Iron Age sites.

Palu Fortress is surrounded by wide tracts of agricultural land. This cultivable basin stretches from north of the fortress to the banks of the Peri stream, covering about 23,500 hectares, encompassing part of modern Kovancılar and Karakoçan districts that lie north and northeast of Palu. This fertile land is presently used for cultivating crops (Fig. 3).

Early accounts of the Palu Fortress are attested to in travellers' and explorers' memoirs. Travellers' accounts of the Palu Fortress are typically limited to a brief description of the

general view of the site. These narratives highlight the glamour and impressive height of the standing architectural remains of the fortress.¹

Unfortunately, however, Palu Fortress was severely damaged by the devastating earthquake of 1789, and its impressive remains mentioned by travellers were mostly razed to the ground and have been laid in ruins ever since.² The fault line that caused this earthquake of severe regional impact passes directly by the southern skirts of the ridge where the fortress lies. Northeast-southwest-oriented fissures that are deep and wider than 3 m are visible in the bedrock on the top of the ridge. Because the fortress was founded on a calcareous outcrop that is highly susceptible to earthquakes, this catastrophe severely impacted the site.



Figure 2. General view of Palu Fortress from the northwest with the Murat River in the background.

- 1 Venetian traveller Barbora visited Palu during his travels in Anatolia and Iran between 1474 and 1478. Barbora relates that Palu Fortress lay on a rocky ridge and was surrounded by fortifications (Barbaro and Contarini 1873). According to the accounts of Polish traveller Simeon, who visited Palu in 1613, the fortress lay on a ridge with steep cliffs, and there was an inscription and a temple dedicated to Mesrop, where Simeon entered and prayed (Simeon 2007). The renown traveller of the 17th century, Evliya Çelebi, on the other hand, highlights the impressive and defensible character of the fortress in his description of Palu. He mentions that the fortress had an iron gate, a mosque, an armory, cisterns, cellars, and a stepped tunnel that reached down to the Murat River. Additionally, Evliya Çelebi states that only administrative officials lived in the fortress and there were no soldiers because the site's topography was not suitable for troops (Kahraman & Dağlı 2006).
- 2 The British consul of the time in Erzurum, James Brant, visited Palu fortress in 1838 and was astonished by the ruined state of the site (Brent & Glascott 1840). Most probably, the fortress was already severely damaged by the 1789 earthquake, and the impressive fortress described by earlier travellers was laid to ruins. In fact, Kinneir describes Palu as a settlement with massive rubble on its peak that is repeatedly shaken by earthquakes. Kinneir suggests that the Palu Fortress may have belonged to "Balisbiga", an administrative region of the Sophene Kingdom, and he regards the sizeable collection of coins and medallions found at the site as evidence in support of this claim (Kinneir 1813).

The earliest investigations at Palu Fortress date to the mid-19th century when travellers' interest in Eastern Anatolia began to increase. Observations by these early explorers focussed almost only on the visually striking examples of rock-cutting like the multi-roomed rock tombs, inscriptions, and stepped tunnels at Palu. No comprehensive and systematic investigation had been conducted to date at the site before our investigations, and many of the archaeological remains presented in this study were not recognised previously by researchers. For example, in his report on the Palu Fortress in his explorations in the region, Burney (1957: 53) states that there is no evidence of Urartian period fortifications at the site.



Figure 3: View of the plain from the Upper Citadel of Palu Fortress, looking northeast.

Our investigations and surveys at Palu Fortress showed that the citadel of the fortress consisted of two sectors. Remains of the terrace wall that delineated these two sectors are still visible inside the citadel. In addition, our surveys documented the remains of a robust fortification wall reinforced by bastions that enclosed the entire citadel. Although Urartian rock signs have already been reported from the fortress in earlier publications, previously unrecognised rock signs and a basalt column base datable to the Urartian period were discovered at the site by our investigations. Additionally, our recent discoveries introduced to scholarship for the first time in this study include two stepped tunnels, five single-roomed rock-cut tombs, and other archaeological remains that empirically document the post-Urartian settlement periods at Palu Fortress.

A topographic map of the site was prepared to better understand and comprehensively present the relative locations of the previously known and recently discovered archaeological remains and features at Palu Fortress (Fig. 4). Rock-cut tombs were scanned using Lidar sensors, and Lidar data were used to generate 3D models and rectified plans of the tombs. This work enabled us to obtain high-resolution measurements of the positions and elevations of the various rock tombs investigated at the site.

The Citadel

As mentioned above, the Middle Iron Age citadel of Palu Fortress consists of two sectors separated by wide terrace walls. The Upper Citadel is a small area that stretches 100-130 m North-South and 80-70 m east-west at the peak of the ridge, covering approximately 0.80 hectares. The northern side of the Upper Citadel is limited by a 60-m-high precipice. Its southern end is marked by a rocky outcrop about 10-15 m high. This rock massif creates a natural boundary between the Upper Citadel and the Lower Citadel. The eastern and western sides of the Upper Citadel are characterised by steep slopes that extend down to the Lower Citadel.

The main access to the citadel at Palu is made possible by a natural ramp on the western skirts of the ridge, which starts on the northern slope of the ridge, ascends turning west following the topographic contour, and reaches the Lower Citadel. This ramp is about 150 m long, and its uneven width varies between 8 and 10 m. In the Middle Ages, mortared revetment walls were built along the exterior edges of the ramp, which still serves as the main access path for the citadel today.

In the Middle Ages, the Upper Citadel witnessed a period of intensive construction activity. Most structures dated to this period have collapsed; however, the partially standing remains of the fortification walls with mortared masonry, portions of other structures, and cisterns are still preserved. Urartian period structures are covered by the architectural remains of the Middle Ages.

The preserved architectural remains of the Urartian period in the citadel area are restricted to a small portion of terrace walls and foundation beds cut into the bedrock for terrace walls and fortifications. Additionally, an Urartian inscription carved on bedrock is found west of the citadel, and three multi-roomed rock-cut tombs are carved into the cliffs north of the citadel (Fig. 4).

The Upper Citadel covers a small area with an uneven and sloped terrain, which presents a challenge to the construction of large building complexes in this area. To overcome this challenge, the Urartian builders created a level ground in a wide area by laying out terrace walls to create platforms for large buildings in the citadel. At Palu, traces of stepped foundation

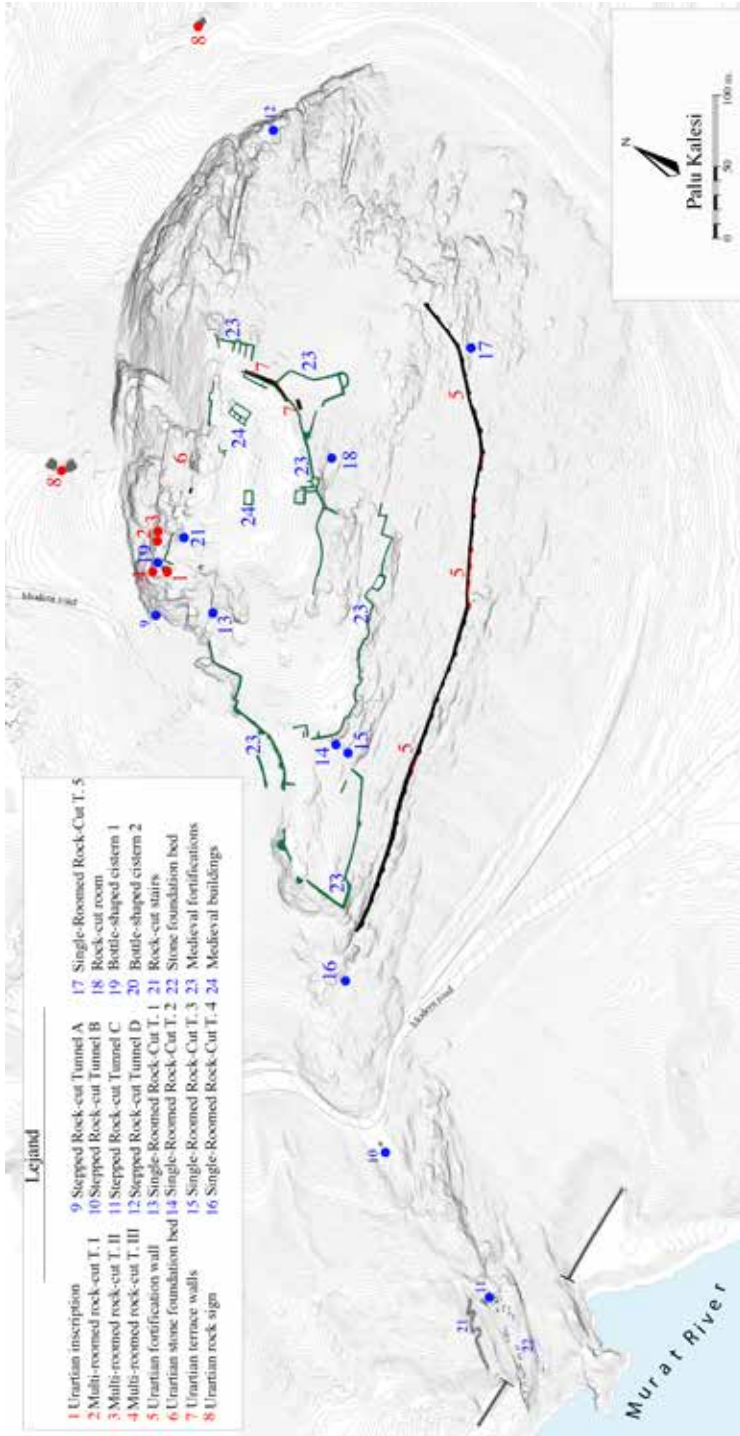


Figure 4. Topographic map of the Palu Fortress.

beds that are about 8-10 m wide and have 10–15 steps are found on the steep northern slope of the Upper Citadel. These remain indicate that the terrace wall continued northeast of the citadel. The basalt blocks on the interior façade of the terrace wall are preserved up to a single course above the foundation bed in a very restricted sector.

A wide platform measuring 40 m x 20 m was created on the northern slope of the Upper Citadel with the help of terrace walls. This area is in a prominent spot that oversees the rest of the citadel. Traces of ca. 1-m-wide foundation beds and rock-cut drainage canals in this area indicate a monumental building here (Fig. 5, 6).

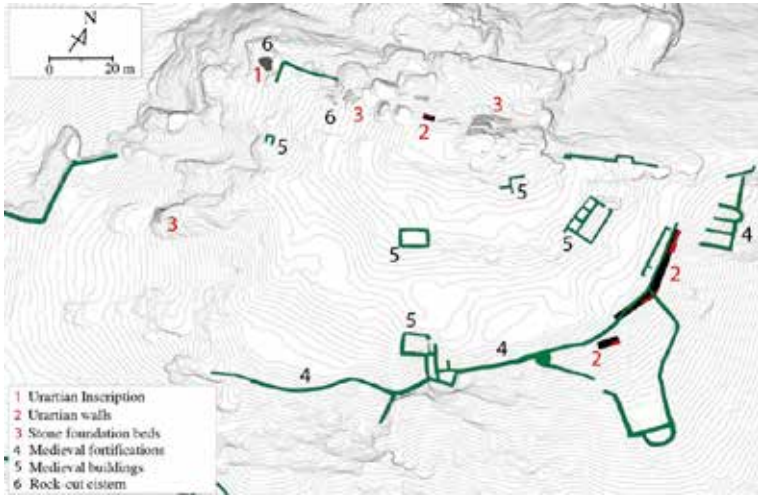


Figure 5: Topographic map of the Upper Citadel.



Figure 6: Aerial photograph of the Upper Citadel.

The prominent location of the wide terraced platform at the peak of the citadel, the size of the platform that is wide enough to support a temple structure, the traces of wide foundations, and drainage canals carved into the bedrock strongly suggest that a temple complex was built here at Palu like the ones known from provincial centres at Altintepe and Kayalıdere.



Figure 7: Remains of the terrace wall that separates the Upper Citadel from the Lower Citadel.

In the Urartian Kingdom, temples were built in royal cities and provincial centres. Temples were at a prominent spot, usually at the peak of the citadels (Köroğlu 2020; Konyar 2022). The Urartian temples have similar dimensions and a square floor plan adorned with risalites abiding by a standard template. The largest excavated examples of Urartian temples are the Haldi temples at Altintepe, Armavir, and Toprakkale measuring 13.80x13.80 m and the smallest known Urartian temple is the Irmushini temple at Çavuştepe measuring 10x10 m (Çifçi 2017: table 22; Danişmaz 2020: 52). Urartian temples are not isolated buildings. Usually, temple complexes include a frontal courtyard and auxiliary service rooms built along one side of the courtyard. Typically, drainage canals are found at the foundation level of Urartian temples.

Traces of foundation beds for terrace walls are also visible on the eastern side of the Upper Citadel like the remains north of the citadel. The terrace walls in the east can be traced all the way to the northeastern tip of the Upper Citadel (Fig. 8). A 7-m-long portion of the terrace wall is preserved in a section that is about 15 m from the northeastern corner. The wall is preserved to a height of 2 m and consists of nine courses of dry wall. Similar to the fortification wall, the terrace wall is also built from roughly dressed cyclopean blocks.

The terrace wall continues southward for 13 m and turns southwest at a 45° angle. The cornerstones of the wall are visible at the point where the wall changes direction. No remains are visible after this point for about 5 m, after which the remains of the wall continue to the east. This 5-m-wide portion, where no foundation remains are visible, may have been the location of a gate that allowed passage from the Upper Citadel to the Lower Citadel.



Figure 8: Foundations of the terrace walls in the northern sector of the Upper Citadel.

The western edge of the Upper Citadel is characterised by steep cliffs similar to its eastern edge. In a small area where the surface of the bedrock is exposed along the western edge of the outcrop, there are traces of foundation beds, which may have belonged to the terrace wall. In this sector, the boundary between the Upper Citadel and the Lower Citadel is marked by a terrace wall similar to that in the eastern part of the Upper Citadel.

The boundaries of the Lower Citadel of Palu Fortress can be traced along the eastern, southern, and western limits of the Upper Citadel, and the Lower Citadel spreads down to the skirts of the rocky ridge. The southern and southeastern slopes of the Lower Citadel facing the Murat River valley are defended by a 5-m-wide fortification wall. The northern edge of the Lower Citadel is marked by the rock massif between the Upper and Lower Citadels. It is not possible to determine whether the western and northwestern sides of the Lower Citadel were enclosed by fortifications in the Urartian period, because mediaeval fortifications and buildings are superimposed on the Urartian structures in this area. A 50-m-high precipice defines the western limit of the Lower Citadel.

The Lower Citadel covers an area of approximately 4.90 hectares, but not all areas of this terrain are suitable for construction. There are outcropping rock massifs that reach a height of 5–10 m, especially in the eastern and northern portions of the Lower Citadel.

Early travellers' accounts about Palu Fortress and the remains of fortification walls and other structures with mortared masonry demonstrate that there was intensive building activity and inhabitation at the site in the Middle Ages. It can be inferred that, at certain areas of the site, architectural remains of the Urartian period are superimposed by mediaeval structures. In fact, cyclopic blocks from Urartian buildings are used as spolia in some mediaeval structures. Furthermore, a basalt column base found on the southern slope of the Upper Citadel clearly indicates Urartian period architecture at the fortress.

At Urartian royal settlements and provincial centres, basalt column bases are usually found in the courtyards of temple and palace complexes and in audience halls. Column bases known from Kayalıdere measure 77 cm in diameter (Burney 1966: 67), while at Altıntepe column bases have a diameter of 70 cm (Özgüç 1966: 3). The column base at Palu is 70 cm in diameter like Altıntepe (Fig. 9).



Figure 9: Basalt column base belonging to a monumental building in the Upper Citadel.

The most tangible evidence of Urartian presence at Palu Fortress is a cuneiform inscription carved into bedrock at the site.³ The inscription is located at the northwestern tip of the Upper Citadel. The remains described above as possibly belonging to a temple are situated just next to the Urartian inscription. The inscription is carved on the façade of a rocky outcrop that measures about 3.7x4.0x20.0 m. The western façade of the rock is shaved off and a 30-cm-deep niche (3.40x1.50 m), is cut into the façade for the inscription. The inscription is carved in two parts inside the niche. The upper portion consists of 28 lines, while the lower portion has only 7 lines of cuneiform text. The text reads as follows:

“The god ̄aldi set off with his weapon, he conquered the territory of the city ̄ebeteria, he conquered the territory of the city ̄uzana, he conquered the land ̄upa. Behind(?) the god ̄aldi, behind(?) the weapon of the god ̄aldi, through the protection of the god ̄aldi Minua, son of Īpuini, set off, he conquered the territory of the city ̄ebeteria, he conquered the territory of the city ̄uzana, he conquered the land ̄upa. He came to the land Hati (Hatti).

He set up a stele for the god ̄aldi. In the city ̄ebeteria, he built a chapel(?) of the god ̄aldi. Near by the city ̄ebeteria he conquered (some) lands. He put the king of Milīia (Malatya) under tribute. Through the greatness of the god ̄aldi I am Minua, son of Īpuini, strong king, great king, king of the Bia lands, lord of ̄ūpa-City.

Minua says: (as for the one) who destroys this inscription, (as for the one) who damages it, (as for the one) who makes anyone else do such things, may the god ̄aldi, the Weather-God, the Sun-God and (all) the gods annihilate him under the sun! . . . (rest untranslatable)” (CTU I, A 5-5).

The inscription is concerned with the political pursuits of the Urartian Kingdom in the region. According to the inscribed text, the Urartian king conquers the country of ̄ebeteria city, the country of Huzana city, and the city of Supa. The king subdues the King of Melid but spares him his life with the condition of paying tribute to the Urartu. The king also commissions a temple to be built in the city of ̄ebeteria. The city of ̄ebeteria mentioned in the text should be equated with the Palu Fortress where the inscription is located. Although not certain, the city of Huzana in Urartian texts is localised at Hozat Fortress in the mountainous region of modern Tunceli province (Köroğlu 2022: 220-221). In the highlands of Tunceli, there are tribal centres of the Urartian Period like Kaleköy/Mazgirt and Anbar, and the purpose

3 Records indicate that Fathers Natanyan and Sirvantsdyants were present at Palu together in 1878. In his memoirs, Sirvantsdyants describes the Urartian cuneiform inscription at the site, and he relates that he entered the Urartian rock-cut chamber-tombs, where Saint Mesrop had once retreated into a hermitage, as Simeon has previously reported. Sirvantsdyants also mentions that many coins were found in these ruins by local people and were sold to interested collectors (Bardizaktsi, Natanyan, & Sirvantsdyants 2010). Natanyan states that he wanted to copy the inscription but could not because of its height. It appears that the Armenian priests were not aware that the Palu inscription was already copied by Sir Layard 31 years ago. Layard, who was conducting excavations at significant sites of the Assyrian Empire around Mosul at the time, visited Palu in 1847 on the way back from Mosul. He copied the cuneiform inscription of Palu and sent the copy to the British Museum (Layard 1849: 172, 189).

of Menua's military campaigns may have been the subjugation of the tribes inhabiting the highlands north of Palu Fortress. Menua's campaigns and construction activities in the region suggest that the kingdom strategized to establish its authority in this settlement basin during his reign. Regarding the inscription at Palu Fortress, it should be noted that the text does not mention any siege of the settlements of Melid or a battle between Urartu and the King of Melid. The inscription does not name the king of Melid, nor does it give an account of the war booty.

Urartian Fortifications

The citadel of the Palu Fortress was defended by a robust fortification system during the Urartian period. The southern aspect of the ridge is characterised by steep cliffs along the Murat River canyon. Rocky outcrops at the eastern and western ends of the southern slope reach as high as 30-40 m, and a wide and 420-m-long fortification wall reinforced by bastions was built between these two rock massifs (Fig. 10, 11).



Figure 10: Lower Citadel fortifications, view from the northeast.

The fortifications are built of roughly dressed cyclopean blocks. These blocks range from 2.5x0.50 m to 0.40x0.20 m in size. While most blocks are cut from limestone, occasionally blocks cut from volcanic rocks like basalt and andesite are also used.

The foundation trench of the fortifications was cut into the bedrock along the slope as terraced foundation beds featuring five to ten steps. The walls were erected in dry-wall

masonry without mortar on top of this sturdy foundation bed. At present, a 35-m-long section of the fortification wall along the southern slope of the Lower Citadel is preserved to a height of five courses, reaching approximately 3 m. The fortifications stretch east for about 30 m and begin ascending towards the higher part of the citadel with a 20% incline and join the cliffs at the peak. In this sector, portions of the fortification wall are preserved to a height of one or two courses intermittently with about 10-15 m gaps in between. This appearance of the wall is a result of the collapse from the upper parts of the citadel, the rubble of which has covered long portions of the fortification wall.

A 110-m-long stretch of the southern fortifications in the west passes through rocky and sloping terrain. Some of the building blocks from this sector of the wall have collapsed and tumbled down to the banks of the Murat River in the post-Urartian period, and these blocks have been used as spolia in the construction of the houses, the church, and the mosque near the bank of the river. Therefore, the traces of the fortification wall in this sector are limited to foundation beds.



Figure 11: Lower Citadel fortifications, view from the east.



Figure 12: Foundation beds of the Lower Citadel fortifications cut into the bedrock.

Here, the imprint of the stepped foundations for the fortification wall appears as seven to eight parallel rows that are variably 35 to 50 cm wide (Fig. 12). The first course of the stone blocks on the exterior face of the wall is preserved in certain portions of this foundation trench along the slope. Additionally, traces of foundations in this area indicate that auxiliary structures were built abutting the interior face of the fortification wall.



Figure 13: Virtual 3D reconstruction of the Urartian fortifications of Palu Fortress.

It is not possible to document whether the Urartian fortifications continued north after reaching the western tip of the Lower Citadel. At this point, foundation beds are not visible on the bedrock. Probably, the portion of the Urartian fortifications that we would expect to see in this sector are superimposed by mediaeval fortifications. In fact, traces of the fortification wall foundations on the bedrock and remains of terrace walls are partially visible in the northern portion of this area, where the Urartian rock tombs are located. In the northeastern sector of the citadel, the rocky outcrops rise to a height of 100 m, and there are no traces of foundations or remains of walls in this area (Fig. 13).

Although it is not feasible to take accurate measurements of the fortification wall because of the ruined and unstable state of the remains, in some sectors the wall body measures about 3 m in width. In other sectors, foundation trenches reach a width of 5 m. The body of the fortification wall is reinforced by bastions that are evenly spaced 7 m apart. Each bastion is 3 m wide, and the bastions protrude about 50-60 cm forward from the exterior face of the wall. This construction technique has allowed this sturdy fortification wall and its bastions to also serve as a revetment wall for the buildings inside the citadel.

Multi-Roomed Rock-Cut Tombs and Rock-Cut Niche

Multi-roomed rock-cut tombs at Palu fortress are dated to the Urartian period based on the characteristics of their construction and interior plans. The presence of these tombs at the site has been known since the early expeditions by travellers.⁴ The first substantial study of these tombs was conducted by Charlesworth, who visited the site in 1975. Charlesworth attempted to draft a plan of the tombs; however, he was only able to draw a sketch of a single tomb (labelled Multi-roomed Rock-cut Tomb I in our investigations). Because the paths leading to the entrance of the other two tombs were blocked with earth and rubble, Charlesworth was not able to access them (Charlesworth 1980). Later, the tombs were investigated systematically by Çevik as part of a thesis research, and the first comprehensive plan of the multi-roomed tombs at Palu was prepared and published as part of this study. In Çevik's plans, the relative positions of the burial chambers of the tombs appear parallel to each other (Çevik 2000: lev. 20a, 28a, 29a).⁵ Soon after Çevik's investigation, the tombs were investigated in detail once more by Sevin and his team, who conducted regional surveys in the area. Later, plans of the tombs were redrawn by K roĝlu based on these new investigations, effectively showing that the tomb chambers were not situated parallel to each other (K roĝlu 1996: res. 5, 6, 7).

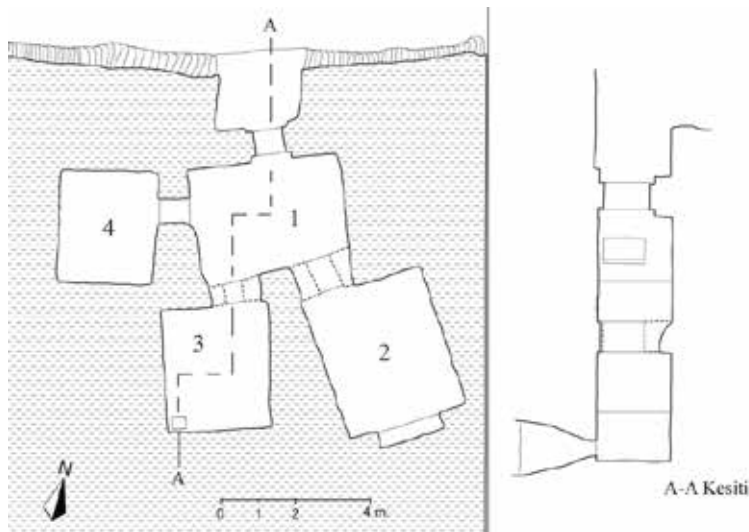
4 British geographer and traveller Tozer, who visited Palu in 1874, describes the Urartian inscription at the site in his travel accounts. Additionally, he states that Palu Rock Tombs I and II have rooms with similar plans, and Palu Rock Tomb III can be accessed by a rock-cut staircase. Tozer proposes that these rock-carved tombs must have been built for kings and points out the similarity of these tombs to the rock-cut tombs known from Van Fortress (Tozer 1881: 250-253).

5 Çevik investigated the Palu Fortress as a research project for his M.A. thesis. In this study, investigations focussed on previously recorded rock-cut features at the fortress, and the plans of the multi-roomed rock-cut tombs at the site were evaluated in comparison with other known rock-cut tombs in the region (Çevik 1987).

Table 1. Dimensions (in metres) of rooms in the multi-roomed rock-cut tombs of Palu Fortress.

	Main Doorway	Room 1: Main chamber	Room 2	Room 3	Room 4
Multiroomed Rock-cut Tomb I	0.95x1.50	3.55x4.70	4.80x3.80	3.85x3.20	3.10x3.60
Multiroomed Rock-cut Tomb II	1.10x1.65	3.85x4.25	2.20x3.15	2.60x2.20	3.10x2.20
Multiroomed Rock-cut Tomb II	1.85x1.10	3.10x3.40	2.20x1.73		

Multi-roomed rock-cut tombs at Palu fortress (Table 1) are carved into the bedrock on the steep cliffs of the rocky outcrop northwest of the Upper Citadel. These tombs can be accessed only through the Upper Citadel. A platform measuring about 9.30x3.00 m is cut into the bedrock adjacent to the Urartian inscription on its northeastern side. A path of rock-cut steps that is 12.5 m long and 40–50 cm wide begins at the southeastern corner of this platform and leads to the entrance of Multi-roomed Rock-cut Tomb I. Another path of steps that is 9 m long connects the end of this rock-cut staircase to the entrance of the Multi-roomed Rock-cut Tomb II. In the latter 8 m of this path, the face of the bedrock is shaved off for about 30-40 cm to create a sufficient horizontal surface for the steps to be carved.

**Figure 14:** Architectural plan of Multi-roomed Rock-cut Tomb I.

The multi-roomed Rock-cut Tomb I consists of a main chamber (Room 1) and three subsidiary rooms (Rooms 2-4) that can be accessed by doorways located on the southern and western walls of the main chamber (Fig. 14). The front façade with the entrance to the main chamber is cut into the bedrock slightly recessed from the stepped path that passes in front of the tomb, which has allowed for a space measuring 2.60x2.10 m with a barrel-vault ceiling that can serve as an antechamber. The frame of the doorway for the main entrance is adorned by a single ridge moulding all along the edge. The original linto of the main entrance is not preserved because the top section of the doorway was recut to expand the doorway in the Middle Ages.

The floor plan of the main chamber in Tomb I approximate a rectangle with parallel sides of slightly uneven lengths. The eastern wall of the chamber is shorter than the western wall, resulting in the southeastern corner of the room having an acute angle. The ceiling of this main chamber is 2.45 m high. A rectangular doorway on the southern wall of the main chamber provides access to the first subsidiary room (Room 2). In the Middle Ages, this doorway was widened on both sides. A wide, rectangular niche (2.00x1.75 m) is cut into the southern wall of the main chamber. The closest examples of such niches of this size are known from rock tombs at Anbar and Kaleköy in the Tunceli region (Danişmaz 2019: 127).

The second subsidiary room (Room 3) of Tomb I is also accessed through a rectangular doorway cut into the southern wall of the main chamber. A 3-m-deep, bottle-shaped pit with a rectangular mouth is carved into the floor in the southwestern corner of the room. This feature may be interpreted as a refuse pit, and similar rock-cut pits are known from rock tombs in the Van province at Büyük Horhor and Kayalidere (Konyar 2022: 233; 2011: 214, 215). The last room (Room 4) of the tomb can be accessed by another rectangular doorway on the western wall of the main chamber. This fourth room has a flat ceiling that is 2.20 m high.

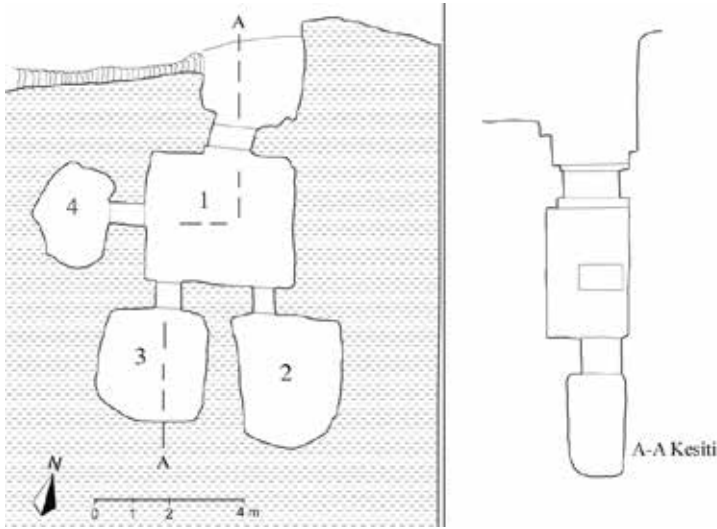


Figure 15: Architectural plan of Multi-roomed Rock-cut Tomb II.

The second multi-roomed tomb, Multi-roomed Rock-cut Tomb II, is accessed by a stepped path that begins along the front façade of the Multi-roomed Rock Tomb I. The steps on this path are partially carved into the vertical face of the bedrock (Fig. 15). As in the first tomb, the main entrance to Tomb II is accessed through rock-cut platform (3.00x2.90 m) with a barrel-vault ceiling. The platform is open on the side that overlooks the precipice. A narrow parapet wall consisting of a few courses of mortared masonry was built on this edge of the platform in the Middle Ages. Tomb II consists of a main chamber (Room 1)

and three subsidiary chambers (Rooms 2-4) that can be accessed from the main chamber. The arrangement of the rooms is the same as in Multi-roomed Rock-cut Tomb I: Rooms 2-3 are accessed by doorways on the southern wall of the main chamber, and a doorway on the western wall leads to the last room (Room 4).

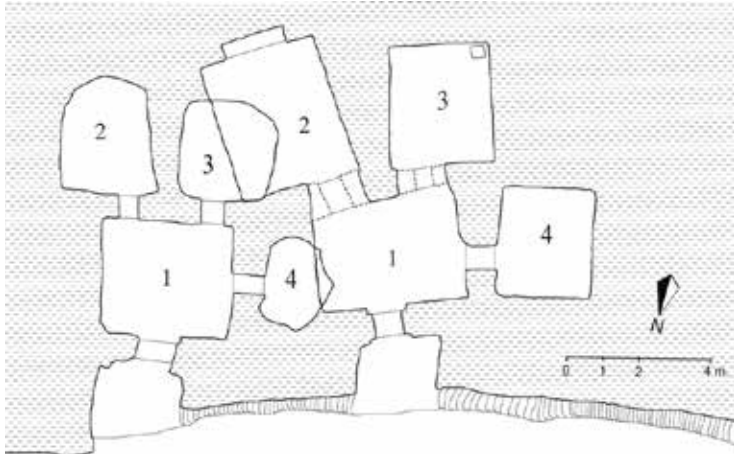


Figure 16: Composite plan of Multi-roomed Rock-cut Tombs I and II.

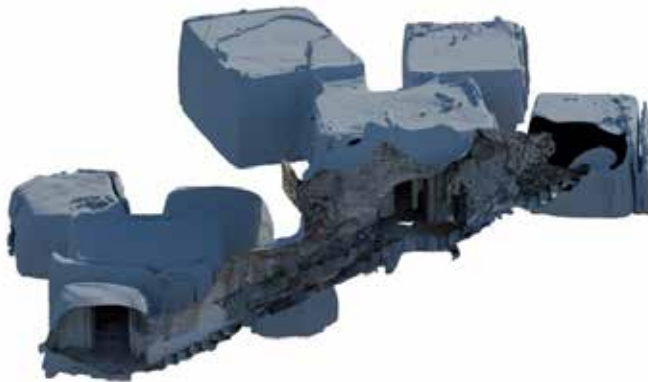


Figure 17: 3D models of Multi-roomed Rock-cut Tombs I and II based on Lidar data.

The entrance to Tomb II is through a rectangular doorway (1.10x1.65 m). Similar to the adjacent Tomb I, the doorway frame is decorated with a single ridge moulding all along the edge. The main chamber has a square plan with parallel walls and even corners, and its ceiling is 2.40 m high. Doorways for the subsidiary rooms of the tomb are cut as rectangular openings into the walls of the main chamber. The ceilings and back walls of the third and fourth rooms are curved, which indicates that the carving of these rooms was left unfinished.

The reason why the back rooms of Tomb II were left unfinished has remained an unanswered question until the present. Our Lidar-sensor scans of Multi-roomed Rock-cut Tombs I and II provide an explanation. When the 3D reconstructions of the two tombs are viewed together, Rooms 3 and 4 of Tomb II appear to lie just below the main chamber (Room 1) and the first room (Room 2) of Tomb I. The Lidar data demonstrate that the distance between the floor of the back room of Tomb I and the ceiling of the back room of Tomb II is only 1.5 m. In other words, if the unfinished Rooms 3-4 of Tomb II were carved deeper, they would have caused the Tomb I above to have collapsed (Fig. 16, 17). It is likely that the masons carving the tomb realised this risk and stopped expanding the rooms into the bedrock.

Multi-roomed Rock-cut Tombs I and II are similar in many ways. Both tombs are accessed by the same path, and both have a platform in front of the main entrance that is recessed from the path. The main entrance of both tombs is a rectangular doorway decorated with a single ridge moulding along the frame. The spatial arrangement of the main chamber and the subsidiary rooms is the same, and the ceiling of the main chamber has a similar height in both tombs. The distinguishing features of the Multi-roomed Rock-cut Tomb I are the large niche on the southern wall of the main chamber and the bottle-shaped pit in the third room of the tomb.

The third multi-roomed rock-cut tomb at Palu Fortress is accessed by a rock-cut staircase that begins at the southwestern corner of the rock-cut platform that lies northeast of the Urartian inscription. The steep path formed by these rock-cut steps leads north on the eastern side of the rocky outcrop to the platform in front of the tomb.

The multi-roomed Rock-cut Tomb III consists of a main chamber and a secondary room that is accessed by a doorway on the southern wall of the main chamber (Fig. 18). The main entrance of the tomb is a rectangular doorway that measures 1.80x1.00 m. The ceiling of the main chamber is flat, and it is 2.40 m high. There are two niches on the eastern and western walls of the main chamber and a single niche on its southern wall. The niches measure 45x55 cm, and there are small, ovoid pits carved inside them. Such pits inside niches are known from rock-cut tombs at Taşbulak, Şirinlikale, Atabindi, Dönertaş, and Kayalidere.

The second room of the tomb is accessed from a rectangular doorway on the southern wall of the main chamber. The western and southern walls of the room are finished relatively evenly, while the eastern wall is carved roughly, and its corners are left curved.

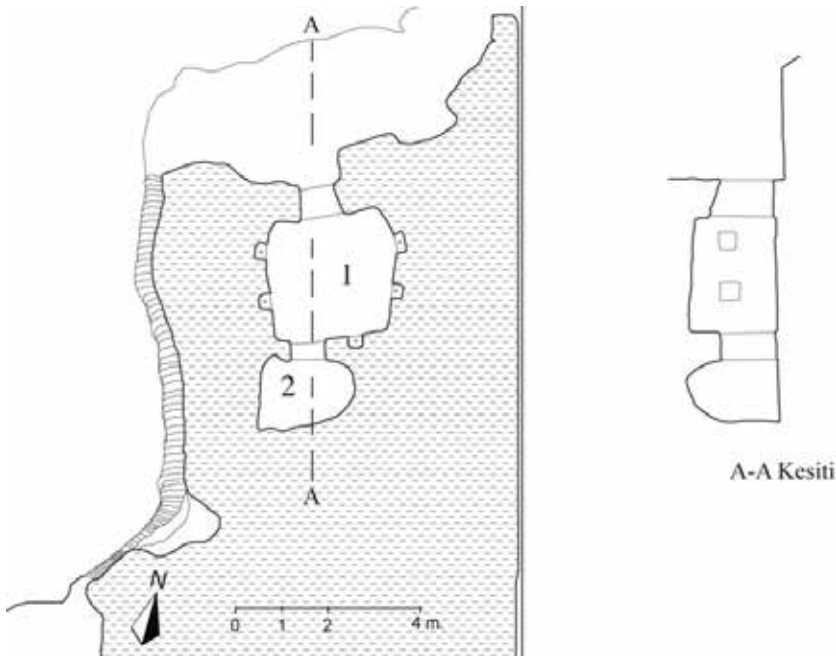


Figure 18: Architectural plan of Multi-roomed Rock-cut Tomb III.

There is a rock-cut niche on the face of the cliff just next to the entrance of Multi-roomed Rock-cut Tomb III. The niche is 3.50 m wide, 1.80 m high, and 60-70 cm deep. Its top is shaped like an arch. When closely observed, the face of the bedrock on the interior walls of the niche has two distinct colours preserved in patches. The brownish grey layer that is closer to the surface is an older surface that has been exposed to the elements for a longer time, whereas the lower part has a yellowish colour because it has been exposed to air for a shorter period. This appearance shows that the interior surface of the niche was cut back by approximately 5–10 cm at a much later time than the original carving of the niche. In fact, the lower section of the niche is recessed about 25-30 cm deeper than the rest of the surface, which shows that the niche was cut back a second time, but this task was left unfinished.

Single-Roomed Rock-Cut Tombs and Rock-Cut Room

Similar to the remains of the Urartian fortification/terrace walls and rock signs, single-roomed rock tombs at Palu Fortress were also overlooked by previous researchers. There is no information about the single-roomed rock-cut tombs of the site recorded in travellers' accounts or academic literature. Five single-roomed rock-cut tombs and a rock-cut room were discovered at Palu Fortress by our investigations (Table 1). All single-roomed tombs are located inside the Lower Citadel. They are easily accessible through a short rock-cut path and a few rock-cut steps. A common characteristic of single-roomed rock-cut tombs is that there are no klines (platform beds) inside them. When compared with the multi-roomed

rock-cut tombs of the Urartian period, workmanship in the stone carving is relatively poor in these single-roomed rock-cut tombs. In most cases, ceilings are carved unevenly, and the corners of the rooms are not cut at sharp angles. Moreover, there are no evenly cut doorways to serve as an entrance to the tombs; rather, the front façades appear as wide openings in the bedrock. One of the reasons for this appearance is the location of the tombs at the edge of the calcareous cliff, which has eroded with time. The great earthquake at Palu has also increased the impact of erosion on the front façade of the tombs. In particular, in the areas of the Lower Citadel where the tombs are located, massive rocks and boulders as large as 5 m tall have broken off the cliffs and tumbled down the slope.

Table 2. Dimensions and locations of single-roomed rock-cut tombs and the rock-cut room at Palu Fortress.

	Room size (m)	Location (GPS WGS-84)
Single-roomed Rock-cut Tomb 1	1.50x2.50	37S 582844 -42842110
Single-room Rock-cut Tomb 2	3.00x3.70	37S 582798 -42844113
Single-room Rock-cut Tomb 3	3.00x1.30	37S 582792 -42841030
Single-roomed Rock-cut Tomb 4	3.40x3.00	37S 582654 -42844044
Single-roomed Rock-cut Tomb 5	1.40x3.30	37S 583068 -42844157
Rock-cut Room	7.50x3.00	



Figure 19: Single-roomed Rock-cut Tomb 3.

Single-roomed Rock-cut Tomb 1 is situated on the rock massif that lies about 50 m southwest of the Urartian inscription. Access to the tomb is through a 1-m-wide path east of the rocky outcrop where the tomb is located. There is a rectangular platform (2.10x4.00 m) in front of the tomb. The entrance and the front façade of the tomb have been destroyed. The tomb chamber has a rectangular plan measuring 1.50x2.50 m. The floor of the tomb chamber is covered with the rubble from the destruction of the front façade of the tomb.

Single-roomed Rock-cut Tomb 2 is carved into a rocky outcrop about 45 m south of the entrance to the citadel. The front façade of the tomb faces west. There is a rock-cut platform (2.0x3.0 m) in front of the entrance to the tomb. The floor of the platform is ca. 3 m higher than the walking ground. Both this platform and the entrance to the tomb are covered by the rubble of the medieval fortification walls, which pass just next to the tomb. The tomb chamber is rectangular in plan and measures 3.00x3.70 m. The calcareous nature of the bedrock has made the site vulnerable in the face of earthquakes and due to this damage, parts of the tomb ceiling have also collapsed.



Figure 20: Single-roomed Rock-cut Tomb 5.

Single-roomed Rock-cut Tomb 3 lies about 9 m south of Single-roomed Tomb 2. The tomb floor is located about 1 m higher than the walking ground. The rectangular tomb chamber measures 3.00x1.30 m, and its ceiling is ca. 1.50 m high. There is no kline in the tomb chamber. The front façade of the tomb is open and faces east (Fig. 19).

Single-roomed Rock-cut Tomb 4 lies at the western tip of the citadel. The front façade of the tomb faces east, and it is wide like the other single-roomed tombs. The tomb chamber measures 3.40x3.00 m, and there is a wide rock-cut platform in front of the tomb.

Single-roomed Rock-cut Tomb 5 is situated in the southeastern sector of the citadel where outcropping rock massifs begin. The tomb chamber is rectangular and measures 1.40x3.30 m. Its front façade is open and faces southeast. The floor of the tomb chamber is carved evenly flat, and its ceiling is 1.60 m high (Fig. 20).

The rock-cut room lies south of the terrace walls that separate the Upper Citadel from the Lower Citadel. The entrance to this context is blocked by the rubble of the mediaeval fortification walls from above; nevertheless, the structure can still be accessed through a small gap within the rubble. The entrance to the context is through the entirely open front façade that is as wide as the room (3.0 m) and is arched at the top. The room has a rectangular plan, measuring 7.5x3.0 m, and the final 2 m of the depth of the room at the back seems to have been carved at a later stage to enlarge the context. The height of the ceiling reaches 4 m at certain points, but the ceiling is not at an even height across the context.

Stepped Rock-Cut Tunnels

Stepped rock-cut tunnels at Palu Fortress are as impressive and outstanding as the rock-cut tombs at the site. Carving these deep tunnels through the bedrock on the slope of the rocky ridge must have been a rather challenging task that required as much expertise as carving the rock-cut tombs.

There are four stepped rock-cut tunnels at Palu Fortress (Table 3). Previous research and publications have identified the characteristics of Tunnel A south of the fortress and Tunnel B northwest of the fortress. The two additional tunnels identified by our research at the site are Tunnel C, which lies on the northeastern slope of Palu Fortress along the Murat River valley, and Tunnel D, which is situated at the northeastern tip of the Lower Citadel.

Stepped Rock-cut Tunnel A is on the northwestern slope of the fortress. The entrance to the tunnel is through a large gallery carved into the rock (Fig. 21). The entrance to the gallery faces southwest and is located about 4.5 m higher than the walking ground. The gallery entrance is 4 m wide and 2.7 m high. Notches on the floor and the walls of the entrance indicate that it was narrowed by the building of stone building stone parapet walls around its sides. This observation is supported by the arrangement of the rock-cut steps on two sides of the path leading to the entrance. The 4.0-m-wide entrance narrows in a recessed form as one walks into the gallery so much that the width across the mid-section of the gallery is as narrow as 2.5 m.

Table 3. Dimensions and characteristics of stepped rock-cut tunnels at Palu Fortress.

	Location	Entrance size (m)	Exit from the Tunnel
Stepped Rock-cut Tunnel A	Northwestern slope	1.50x2.10	Not present
Stepped Rock-cut Tunnel B	Southwestern terrace		Not present
Stepped Rock-cut Tunnel C	Southwestern terrace	1.70x1.40	Present
Stepped Rock-cut Tunnel D	Northeastern citadel	1.60x1.70	Unidentified



Figure 21: Entrance to the gallery leading to Stepped Rock-cut Tunnel A (left), entrance to Tunnel A (right).

The ceiling of the gallery is formed as a barrel vault. After the entrance, wide, descending steps are cut into the bedrock floor of the gallery. The last section of the gallery is formed as an open-air platform that measures 7.0x2.7 m. This opening appears to be due to the weakness of the bedrock at this spot to support a ceiling. Similar to the wide entrance to the gallery, the open-air portion of the gallery was also narrowed with a stone parapet wall, as the foundation cuts for the stone blocks on the floor demonstrate. Another opening, only 1.70x0.90 m wide, is present in the continuation of the tunnel, which appears as an intentionally cut feature to aid lighting and air circulation in the tunnel.

The entrance to Rock-cut Tunnel A is at the end of the gallery described above (Fig. 21). The interior of the tunnel was blocked with the rubble that filled over the years, and access to the tunnel was not possible until recently. The rubble inside the tunnel was cleaned out during salvage excavations by the museum, and access was enabled. The depth of the tunnel into the bedrock from its entrance to its end is 54 m. The first portion of the tunnel is north-south-orientated for 65 rock-cut steps, and then its orientation turns east, and the tunnel continues for another 139 rock-cut steps. The tunnel then continues descending northwest with a sharp slope and ends without an exit.



Figure 22: Entrance to Stepped Rock-cut Tunnel B.

Stepped Rock-cut Tunnel B lies southwest of the ridge, next to the edge of the modern road that goes down to the Murat River (Fig. 22). Salvage excavations have been conducted by the museum inside and around the tunnel recently. Cleaning and excavation revealed that the tunnel has no exit. The entire length of the tunnel from the entrance to the end descends towards the Murat River for about 5-6 m and comes to an end inside the bedrock. On the basis of the deep cracks in the bedrock inside the tunnel, it may be concluded that the carving of the tunnel was unfinished due to safety concerns.

In addition to the two previously known tunnels at the site, the first additional tunnel documented by our investigations is Stepped Tunnel C, which starts ca. 115 m southwest of the entrance to Tunnel B (Fig. 23). The entrance to Tunnel C is adjacent to the rock-cut steps described below. The tunnel reaches the Murat River valley, which is about 80 m lower than its entrance. The entrance to the stepped tunnel measures 1.70x1.40 m, and it is accessed via rock-cut steps similar to the other tunnels at the fortress. The first 1.5-m-long portion of the tunnel after the entrance is filled with rubble. After this accumulation of rubble, however, the tunnel continues uninterrupted for 50 m, descending all the way to the Murat River. The lower portion of the tunnel turns slightly eastward and continues inside another rock massif. The tunnel has an opening here due to a collapse at the point of this transition from one rocky outcrop to another. A 10-m-long stretch of the tunnel can be followed inside after this point. In the rest of the tunnel, rubble of the collapses along the tunnel that are visible on the surface

along its length shows that the stepped rock-cut tunnel reaches the bank of the Murat River at the valley bottom. The stepped rock-cut tunnel that reaches the Murat River reported in Evliya Çelebi's account of the Palu Fortress must be this tunnel.



Figure 23: Entrance to Stepped Rock-cut Tunnel C (left), view from inside the tunnel (right).

The last stepped tunnel at Palu Fortress is carved into the northeastern tip of the rock massif on which the citadel lies. In contrast to the other three tunnels, the entrance to Stepped Rock-cut Tunnel D is opened at the top of the rock massif (Fig. 24). The entrance is severely damaged because of natural causes; nevertheless, steps cut into the bedrock can be followed all the way to the entrance to the tunnel. The entrance of the tunnel measures ca. 1.60x1.70 m. The rock-cut steps in this section are as wide as 1.50 m with a tread of 30 to 40 cm per step.



Figure 24: Exterior view of Stepped Rock-cut Tunnel D (left) and interior of the tunnel (right).

After about the first 8-9 metres of the tunnel from the entrance, the tunnel reaches the edge of the cliff and turns towards the bottom of the slope. The sides of the tunnel along its length have collapsed at certain locations due to natural causes. The final 15-m-long stretch of the tunnel is blocked because the rubble collapses from above. The exit of the tunnel is not visible at the base of the rocky slope. If the tunnel originally had an exit, it must have been filled up and covered by rubble and erosion from the slope over time.

Rock-Cut Steps and Cisterns

The rock-cut steps at Palu Fortress are on the southwestern slopes of the rock massif where the fortress lies (Fig. 25). The steps are carved on the lowest natural terrace that stretches from the banks of the Murat River towards the citadel, where Stepped Tunnel B and Stepped Tunnel C are located. This natural terrace stretches for approximately 230 m, and the rock-cut steps are found in two separate locations.

The first set of steps starts at about 2-3 m south of the entrance to Tunnel B and continues uninterruptedly for about 230 m along the back edge of the terrace, reaching the river after crossing over the modern railway tunnel. These steps are carved into the bedrock somewhat roughly and they do not abide by a standard measure. In the section where the rocky ridge is narrow, the steps are about 2 m to 3 m wide, while in the midsection where the ridge is

wider, there are three parallel groups of steps. The rough workmanship of the carving and their uneven widths give the impression that this set of steps may have been stepped/terraced foundation beds rather than a stepped path.

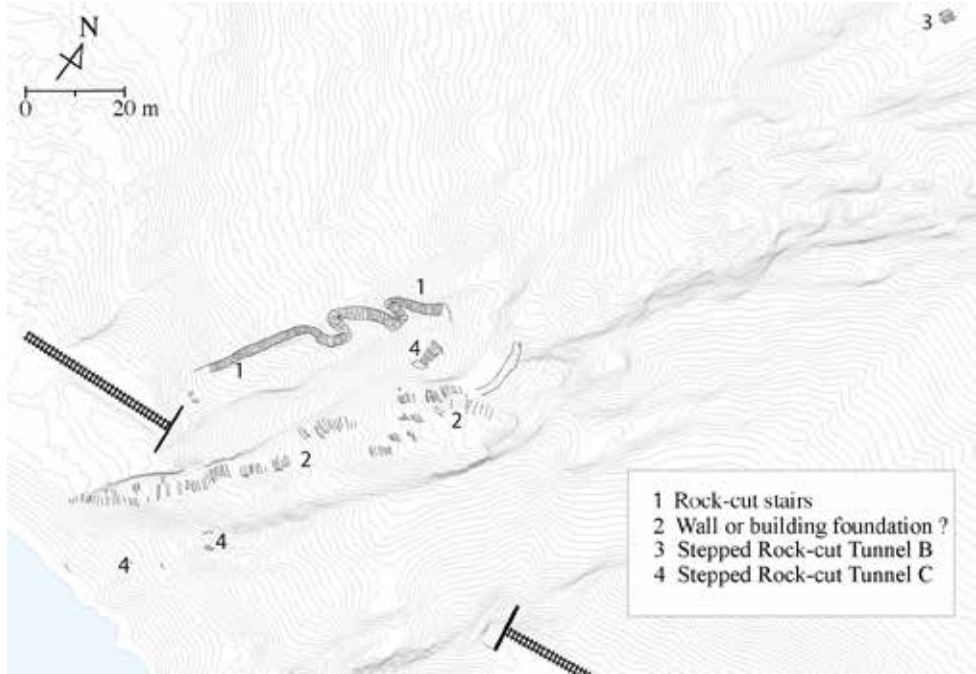


Figure 25: Topographic map of the rock-cut steps descending to the Murat River.

The second set of steps begin about 20 m southwest of the entrance to Tunnel B. A 1.5-m-wide and 2.0-m-deep trench was cut into the bedrock, and the steps were cut into this trench. It may be said that the stepped path probably extends down to the Murat River. During the construction of the railway, however, a part of the stepped path was destroyed, and therefore, the path could not be followed uninterruptedly (Fig. 26). Part of the steps descending to the Murat River are carved in a zig-zag pattern to create a path that is easy to tread, compensating for the steep incline of the slope.

Rock-cut, bottle-shaped cisterns at the Palu Fortress are located inside the Upper Citadel. Cistern I lie just next to the path that leads to the Multi-roomed Rock-cut Tombs I and II. The mouth of the cistern has an oval shape. The edges of the mouth have cracked and broken off due to natural causes in some areas. The mouth of the cistern measures 1.10 m across, but it tapers out towards the bottom like a wide flask, and the diameter across measures about 3 m in the midsection. The measurable depth of the cistern is 2.20 m; however, because of the rubble at the bottom of the cistern, the depth cannot be measured accurately. There are no traces of plaster on the walls of the cistern.



Figure 26: Foundations of fortifications descending to the Murat River (left) and rock-cut steps (right).

The second bottle-shaped cistern at Palu Fortress lies 25 m southeast of Cistern I at the peak of the Upper Citadel. Its mouth is also oval-shaped and measures 1.10 m across, similar to Cistern I. Because the cistern was filled with rubble at the time of our investigations, its depth could not be determined.

Stepped rock-cut tunnels and rock-cut cisterns found at fortress settlements in Eastern Anatolia have been commonly regarded as diagnostic criteria for identifying Urartian settlements. Undoubtedly, the expertise of the Urartians in stonemasonry has contributed to the wide acceptance of this idea by scholars. In fact, the presence of stepped rock-cut tunnels was considered significant evidence for dating fortresses and settlement sites to the Urartian Period. Recently, however, a comprehensive evaluation of the fortresses where stepped tunnels are found in Eastern Anatolia has called into question the basic premises of this dating. This evaluation also considered the types, functions, and purposes, as well as the geographical distribution of stepped rock-cut tunnels in Eastern Anatolia. Based on the examination of all these lines of evidence, the study concludes that the stepped rock-cut tunnels like single-roomed rock-cut tombs, are not associated with the Urartian Kingdom but are part of a cultural tradition that arrived in Eastern Anatolia in the Hellenistic Period (Köroğlu and Danişmaz 2018).

Rock-Cut Signs

Urartian rock-cut signs are defined as geometric signs cut into the bedrock as grooves on rocks or rocky outcrops near Urartian settlements (Belli 1989, 2000). These “circles” and V-shaped, L-shaped, sickle-shaped, and canal-shaped signs that are carved into the bedrock appear as the products of a deep-rooted tradition in the region like the rock-cut tombs.⁶

Four rock-cut signs carved onto two separate rock faces along the northern cliffs of the Palu Fortress have already been reported in previous publications and plans for the site. During our survey at the site, we identified another rock-cut sign on a large boulder northeast of the previously recorded signs.



Figure 27: Urartian Rock-cut Signs at Palu Fortress.

In total, there are rock-cut signs on three boulders on the north and northeastern skirts of the citadel (Fig. 27, 4). Rock-cut signs at Palu are situated outside the fortifications that enclose the citadel, as is the case at Upper Anzaf and Çavuştepe fortresses. At the first location where rock signs are found, there are three signs on the face of the bedrock on a boulder that

6. Rock signs at Palu Fortress are carved onto the face of boulders like those at Edremit, Deliçay, and Mağara Tepe. Note that the oval-shaped signs at Palu may be quarrying marks left on the bedrock from the extraction process of a stone block for a column base. Views about the purposes and functions of Urartian rock-cut signs vary (for details, see Konyar 2006).

lies about 5 m higher than the walking ground. The second boulder bears only a single sign. The third boulder with signs is situated close to the valley bottom of the dried creek about ca. 280 m northeast of the other two rock faces bearing signs. Probably, this third boulder was also originally located at a higher elevation near the other two with signs; however, due to the impact of the earthquake, this boulder, like others around it, split off the cliff and tumbled down the slope towards the valley bottom.

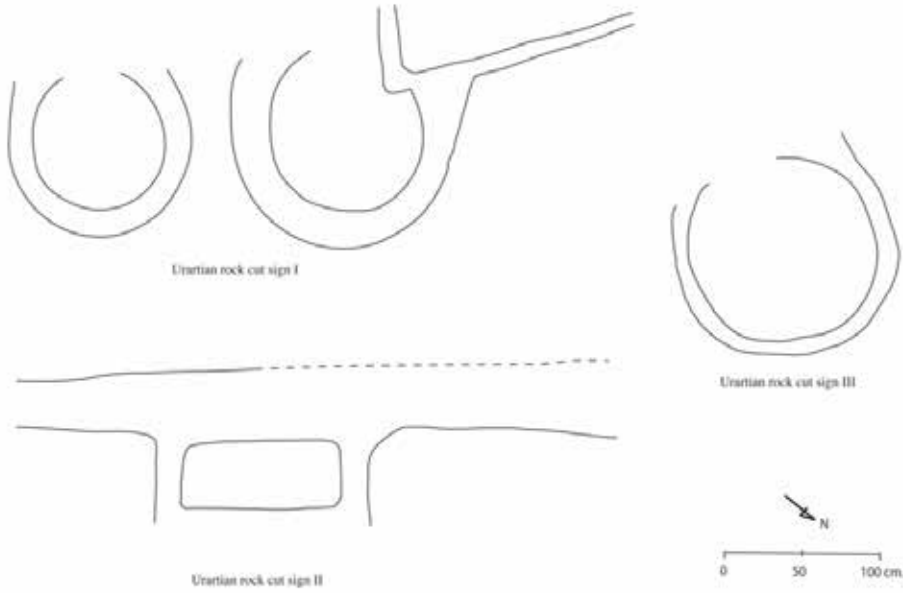


Figure 28: Scaled line drawings of Urtian Rock-cut Signs at Palu Fortress.

The first boulder with signs on the northern skirts of the fortress bears three rock-cut signs. Of the three signs, the one in the southwest is a partial “circle” that has a diameter of 1.35 m. The circular groove is about 10-15 cm wide, and it is 15-20 cm deep. Next to this sign is a second sign that is similar but is oval rather than a circle and has a 1.70-m-wide diameter. The final sign on the first boulder is L-shaped and about 1.70 m long. Its northern tip intersects with the oval sign (Fig. 28).

The second boulder that bears signs on the northern slope lies about 6-7 m east of the boulder with the first set of signs described above. The rock-cut sign on this boulder is a composite shape made up of a straight canal that is about 50 cm wide and 3.70 m long and a rectangle measuring 1.00x1.30 m attached to the canal on its southwestern side. The southeastern portion of the sign was damaged due to natural causes.

The previously unpublished rock-cut sign carved on the third boulder is also a partial “circle” identical to the sign on the first boulder. Its diameter is 1.5 m, and the circle is incomplete with a gap to the south.

Within the Urartian cultural geography, Urartian rock-cut signs are a type of archaeological evidence that is found in association with all known settlement types. They are known from Urartian royal fortresses like Upper Anzaf, Çavuştepe, and Bastam, Urartian period tribal centres like Atabindi and Tatvan, and Urartian provincial centres like the Palu Fortress (Danışmaz 2018a: fig. 5). Unlike the rock-cut signs at Anzaf and Atabindi, the rock-cut signs at Palu Fortress are not carved onto a bedrock façade. Signs at Palu are found on boulders at rocky outcrops. The form of these “signs” indicates that they may be quarrying marks caused by tools during the extraction of blocks for columns or column bases from the bedrock.

Discussion

Research related to the Urartian Kingdom at Palu Fortress has so far focussed on the cuneiform inscription and the multi-roomed rock-cut tombs at the site, overlooking other remains that have been documented for the first time by our team. New investigations have shown that the citadel of the Palu Fortress was planned in two parts. Partitioning of the sectors of a citadel as necessitated by the topography is among the known characteristics of Urartian settlements. A similar situation is observed at another Urartian provincial centre, Kayalıdere (Burney 1966), and at the Urartian royal city, Bastam (Kleiss 1980). The citadels of these cities were separated into different sectors, and temples and important administrative buildings were built in the highest sector.

Wide terrace walls demarcate the two sectors of the citadel of Palu Fortress, labelled Upper Citadel and Lower Citadel. The cuneiform inscription is located inside the Upper Citadel, and the multi-roomed rock-cut tombs are on its steep northwestern cliffs. Moreover, in a similar fashion to the terrace walls known from Urartian royal cities, on the steep slopes of the fortress, stepped foundation beds were cut into the bedrock and wide terrace walls were built on top to provide sufficient floor space for the monumental buildings of the Upper Citadel. This sector constitutes the peak of the citadel. Traces of sturdy foundations and fragments of large column bases bear witness to the presence of monumental buildings in the Upper Citadel during the Urartian period.

The Lower Citadel of Palu Fortress is enclosed by wide fortifications to the south and southeast. The fortification wall accommodates the topographic relief of the site, but it abides by a plan that the Urartian builders sought to establish. Wide, terraced foundation beds for the Lower Citadel fortifications were also cut into the steep cliffs and slopes of the site. The body of the fortification wall, which is as wide as 5 m in some sections, was built using the

dry-wall technique without the use of mortar. In addition, the wall body was reinforced by bastions placed at regular intervals to increase the strength of the fortifications.

The remains of wide fortification and terrace walls, foundation beds, and architectural elements of monumental buildings at Palu Fortress indicate that the establishment and construction of this fortress site was preplanned, similar to other Urartian settlements. In fact, Palu's significance for the Urartians is highlighted by the textual records of the period.

The Urartian Kingdom intended to establish hegemony in the Middle Euphrates basin, where Palu Fortress lies, since the foundation of the kingdom. Urartu's involvement in the region lasted until the final demise of the kingdom. Textual sources of the period indicate that successive military campaigns in this region were organised by almost all Urartian kings (Köroğlu 2022; Danişmaz 2021).⁷

Undoubtedly, one of the major challenges that the Urartians faced in attempting to establish hegemony in the region was the distance between the core of the kingdom and this western borderland. The Urartian capital is about 400 km from the Middle Euphrates basin, which lies on the periphery of the kingdom. Considering that an army could travel an average of 15 to 20 km per day on the rough terrain of Eastern Anatolia, just the trip back and forth would take the armies about three months and probably longer given the mountainous topography of the region.

As a strategic solution to this challenge, the Urartian state established a strong provincial administration in the region. The administration of the province was trusted by regional governors bearing the title ^{Lu}EN-NAM. Textual evidence shows that the Urartian provincial governors could launch a military expedition alone or in coalition with other governors without orders from the king. Governors are also known to have made amendments to tax and tribute arrangements in the name of the king (Danişmaz 2020: 266).

Palu Fortress was founded soon after the establishment of the Urartian Kingdom and a man named Titia was appointed as the provincial governor (CTU I: A 5-8). In the reign of Sarduri II, the political borders of the region changed after the Urartian armies crossed west of the Euphrates River, and a new provincial governor named Zaiani was appointed after the expansion of the Urartian territories (CTU I: A 9-18). Soon after, however, the Urartian armies were defeated definitively by Assur, and the political influence of the Urartian

7. After victorious battles against the Neo-Hittite Kingdoms, the Urartian Kingdom procured substantial labour force from the region by forced deportation of local populations (Tan 2020: 214 f.)

Kingdom began to diminish in the region.⁸ Textual sources indicate that in the 7th century BC, a man named Siplia served as the Urartian provincial governor in the region (Lanfranchi and Parpola 1990: 87).⁹

The only Urartian site in the region that is an eligible candidate for an Urartian provincial centre is the Palu Fortress. Archaeological remains at the fortress support the interpretation that Palu Fortress was built to serve as a provincial centre since its foundation. It follows that the three multi-roomed rock-cut tombs at the site must have belonged to the provincial governors of Palu and their families. The three family tombs at the site may be associated with the lineages of the three provincial governors named in the textual sources.

Considering the substantial labour expenditure necessary for carving the stepped rock-cut tunnels and single-roomed rock-cut tombs at Palu Fortress, we may surmise that the site was still a prominent settlement in the Hellenistic Period.¹⁰ As mentioned above, stepped rock-cut tunnels, single-roomed rock-cut tombs, and rock-cut cisterns in Eastern Anatolia were accepted as products of Urartian culture in earlier studies. For this reason, in the following decades, all fortresses and settlement sites where such rock-cut features were identified by surveys in the Middle Euphrates basin were also dated to the period of the Urartian Kingdom without questioning the validity of these chronological criteria. If we were to accept these criteria as trait marks of the Urartian Period, over 30 archaeological sites in Elazığ and Tunceli provinces alone would have to be dated to the Urartian period. Recent investigations in the region, however, strongly suggest that the stepped rock-cut tunnels, single-roomed rock-cut tombs, and rock-cut cisterns in Eastern Anatolia should be dated to the post-Urartian periods (Köroğlu and Danişmaz 2018).

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8. The first 12 years of the reign of King Sarduri II appear to be a period in which the Urartu was most actively engaged in military and political domination of the Middle Euphrates basin. Undoubtedly, an important factor that enabled the Urartians' penetration of this region was the political turmoil that the Neo-Assyrian Kingdom was experiencing at the time. During this period, the Urartians' military campaigns reached as far west as the western banks of the Euphrates River and the southern skirts of the Taurus mountains. The Urartians established hegemony over the Neo-Hittite Kingdoms in the region and defeated the armies of Assyrian King Adad-Nirari. The prowess of the Urartian Kingdom in this region, however, ended with the ascension of Tiglath-Pileser to the Assyrian throne. Eventually, the Urartian armies were defeated irreversibly by the Assyrians in a battle near Halpa, and the Euphrates River remained a natural boundary between the Urartu and the western world for a long time (Danişmaz 2018b).

9. This period was a phase in which the Urartian Kingdom sought to reclaim these territories.

10. Kinneir, who visited Palu in the early 1800s, believed that the significant collection of coins and medallions found at Palu indicates that the fortress must have been Balisbiga, an important city of the Sophene Kingdom (Kinneir 1813).

References

- Barbaro, J. & A. Contarini. 1873. *Travels to Tana and Persia*. New York: Burt Franklin Publisher.
- Bardizaksı, V., B. Natanyan, & K. Sirvantsdyants. 2010. *Palu-Harput 1878 Çarsacak, Çemişgezek, Çapakçur, Erzincan, Hizan ve Civar Bölgeler*. Edited by Arsen Yarman. Vol. II: Belge Yayınları.
- Brant, J. & A. G. Glascott. 1840. "Notes of a Journey through a Part of Kurdistan, in the Summer of 1838." *Journal of the Royal Geographical Society of London* 10: 341-434.
- Belli, O. 1989. "Urartu Kalelerindeki Anıtsal Kaya İşaretleri, Monumentale Felszeichen im Bereich Urartäischer Festungsanlagen." *Anadolu Araştırmaları* 11:65-121.
- Belli, O. 2000. "Doğu Anadolu'da Urartu Krallığı'na Ait Anıtsal Kaya İşaretlerinin Araştırılması." In *Türkiye Arkeolojisi ve İstanbul Üniversitesi*, edited by Oktay Belli, 403-408. İstanbul.
- Burney, C. A. 1966. "A First Season of Excavations at the Urartian Citadel of Kayalıdere." *Anatolian Studies* 16:55-111.
- Charlesworth, M. F. 1980. "Three Urartian Tombs at Palu in Turkey." *Archäologische Mitteilungen aus Iran* 13:91-97.
- CTU I: M. Salvini, *Corpus dei testi Urartei I: Le iscrizioni su pietra e roccia*, Rome 2008.
- Çevik, N. 1987. "Şebeteria, Batı Urartu'da Bir Kent ve Kaya Anıtları." Yüksek Lisans, Arkeoloji ve Sanat Tarihi, Atatürk Üniversitesi.
- Çevik, N. 2000. *Urartu Kaya Mezarları ve Ölü Gömme Gelenekleri*. Vol. VI-58. Ankara: Türk Tarih Kurumu.
- Çifçi, A. 2017. *The Socio-Economic Organisation of the Urartian Kingdom*. Leiden-Boston: Brill.
- Danişmaz, H. 2018a. "Palu Kalesi'ndeki Urartu Kaya İşaretleri." In *Uluslararası Palu Sempozyumu Bildiriler Kitabı*, edited by Enver Çakır, Kürşat Çelik and Yavuz Kısa, 193-199. Elazığ: Fırat Üniversitesi Harput Uygulama ve Araştırma Merkezi Yayınları.
- Danişmaz, H.. 2018b. "Political Relations between the Urartian and Assyrian Kingdoms: A Regional Comparison in Areas of Conflict." *Anadolu Araştırmaları* 21:105-123.
- Danişmaz, H. 2019. "Tunceli- Anbar Fortress and the Urartian Multi-Roomed Rock-Cut Tomb." *Anatolica* 45:121-130.
- Danişmaz, H. 2020. *Urartu Krallığı: Yönetim ve Organizasyon*. Ankara: Türk Tarih Kurumu.
- Danişmaz, H. 2021. "Orta Demir Çağı'nda Aşağı Murat Havzası." In *Tunceli (Dersim) Tarihinden Kesitler II*, edited by Şahin Yedek, 73-86. İstanbul: Hiperyayın.
- Kahraman, Seyit A. and Yücel Dağlı. 2006. *Günümüz Türkçesiyle Evliya Çelebi Seyahatnamesi: Konya - Kayseri - Antakya - Şam - Urfa - Maraş - Sivas - Gazze - Sofya - Edirne*. Vol. 3/1: Yapı Kredi Yayınları.
- Kinneir, J. M. 1813. *A Geographical Memoir of the Persian Empire*: John Murray.
- Kleiss, W. 1980. "Bastam, an Urartian Citadel Complex of the Seventh Century, B.C." *American Journal of Archaeology* 84:299-304.
- Konyar, E. 2006. "An Ethno-Archaeological Approach to the "Monumental Rock Signs" in Eastern Anatolia." *Colloquium Anatolicum*, 113-126.
- Konyar, E. 2011. "Urartuda Mezar Tipleri ve Gömü Âdetleri / Tomb Types and Burial Traditions in Urartu." In *Urartu: Doğu'da Değişim / Transformation in the East*, edited by Kemalettin Köroğlu and Erkan Konyar, 206-231. İstanbul: Yapı Kredi Yayınları.

- Konyar, E. 2022. *Urartu. Aşiretten Devlete*. İstanbul: Homer Yayınları.
- Köroğlu, K. 1996. *Urartu Krallığı Döneminde Elazığ (Alzi) ve Çevresi*. İstanbul: Arkeoloji ve Sanat Yayınları.
- Köroğlu, K. 2020. “Urartu: Krallık ve Aşiretler.” In *Urartu: Doğu’da Değişim*, edited by Kemalettin Köroğlu and Erkan Konyar, 1-35. İstanbul: Yapı Kredi Yayınları.
- Köroğlu, K. 2022. “Urartu Krallığı’nın Elazığ ve Çevresindeki Yerleşim Politikası.” In *Ülker Ardiçoğlu’na Armagan Müzecilige ve Kültüre Adanmış Bir Ömür Arkeoloji, Sanat Tarihi ve Tarih Yazıları*, edited by Hetto Ozan, 220-238. İstanbul: Kitapevi.
- Köroğlu, K, and Harun D. 2018. “The Origin of Stepped Rock-cut Tunnels in Eastern Anatolia.” *Ancient Near Eastern Studies* 55:107-124.
- Lanfranchi, G, and Simo P. 1990. *The Correspondence of Sargon II, Part II, Letters from the Northern and Northeastern Provinces*. Vol. I. Neo-Assyrian Text Corpus Project. Helsinki: Helsinki University Press.
- Layard, A. H. 1849. *Nineveh and its remains* 2. London: Murray.
- Özgüç, T. 1966. *Altintepe I, Mimarlık Anıtları ve Duvar Resimleri-Architectural Monuments and Wall Paintings*. Ankara: Türk Tarih Kurumu.
- Simeon, P. 2007. *Polonyalı bir seyyahın gözünden 16. asır türkiyesi*. İstanbul: Kesit Yayınları.
- Tan, A. 2020. “Urartu Krallığı’nda Tehcir Uygulamaları ve Toplumsal Yapıya Etkileri.” In *Eski Yakındoğu’da Sürgünler*, edited by İrfan Albayrak, 181-237. Ankara: Bilgin Kültür Sanat Yayınları.
- Tozer, H. F. 1881. *Turkish Armenia and Eastern Asia Minor*. London: Longmans Green and Company.



-*hi* in The List of Sheep Presenter Names in Bastam

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ABSTRACT

Urartian inscriptions from ca. 900 to 700 BC have been discovered in Iran, Armenia, Turkey, Iraq, and Nakhchivan. *hi* was used in the Urartian language in several cases, but as a suffix, it is challenging for translation as it forms patronymic, genitive, dative, adjective of appurtenance, and locative cases. There are several possibilities for its translation as “of,” “in,” and “from.” But *hi* could also be used to form the names of the cities or a noun or adjective. This suffix is usually used with the names of persons and geographical places or the root and is comparable to the suffix in Hurrian. A very rare example has been detected in a tablet from Bastam, which contains a list of sheep presenters or owners. The above list includes UDU 1-*hi* mX in four damaged lines, and the rest of the inscription is lost. The aim of the author is to detect the suffix function and translation. It seems that the persons were the owners of the sheep or the presenters who were not the owners. In this case, it can be translated as “of” or “from.” It is also possible that this list was a ration or blessing from the bone room to these people.

Keywords: Toprakkale, Urartian, Bastam, Patronymic Names



Introduction

Urartians ruled over the regions around Lakes Van, Çıldır, Sevan, and Urmia from *ca.* 9th to 7th centuries BC (Zimansky, 1995, p. 104). The Urartians used three systems of writing, i. e. Assyrian cuneiform, Urartian cuneiform, and Urartian hieroglyphs; their royal inscriptions are attested on a wide variety of media, including weapons, seals, steles, stone blocks, rocks, tablets, vessels, ceramics, metal objects, and ornaments. Urartian inscriptions have been discovered as administrative texts, letters of command, building inscriptions, annals, and votive inscriptions. Also, there are pieces of evidence of the everyday life of people during the Urartian reign. Wilhelm (2008b, p. 120) suggests two narrative categories of Urartian written evidence. First, the king's projects include fortifications, temples, vineyards, canals, and military campaigns and victories. The other is administrative-economic texts.

The Urartian written genres were limited in variability, and the lexicon, requests from deities, curses, openings, and endings were almost constant. However, the inscriptions are still worthy of illustrating Urartians' history, policy, beliefs, and culture.

The Urartian language is neither Indo-European nor Semitic but has a strong bond with the Hurrian language, both of which derive from an ancestral language named Hurro-Urartian (Benedict, 2011, p. 43). The Hurro-Urartian language may have been used in northeast Mesopotamia and the Caucasus in the third millennium BC.

The grammar of the Urartian language could be studied in comparison with that of Hurrian, but they are not identical. *-hi* seems a complicated suffix among several other suffixes in the Urartian language and is sometimes challenging to identify and translate correctly. Melikišvili (1971), Salvini (1979), and Wilhelm (2008b) contributed to this suffix.

This paper aims to first review the different roles of *-hi* to form the patronymic, adjective of importunance, dative, genitive, locative, and other forms. In addition, the author would like to recognize whether this suffix was always added to the noun and root.

Rusa II (first half of the 7th century BC), Argišti's son, founded and developed several fortifications and cities such as Bastam, Toprakkale, Adilcevaz Kef Kalesi, Ayanis, and Karmir-blur and reinforced the kingdom (Kleiss, 1988, pp. 30-31; Kroll, 2011, pp. 153-159, Grekyan 2013-2014, 66). Bastam is 9 km northwest of Qareziyaedin, about 40 km from Khoy, 85 km east of Maku, Western Azerbaijan province. Bastam was called *mrusai=URU=TUR* (The Small city of Rusa). Although it is the most developed Urartian fortification (Kleiss, 1988, p. 31; Biscione, 2012). It seems that the fortification was conquered and burned in the same era. However, some parts were reconstructed later (Kroll, 2013, p. 247). There are several sections inside the fort, including Haldi's temple. Moreover, there are houses and public constructions in the lower fort (Kroll, 2013, p. 248). Bastam was discovered in 1967

by Germans and was excavated during 1968 to 1979, except for 1971 and 1976 (Kleiss, 2008, www.iranicaonline.org).

The damaged short tablet of Bastam has an inscription with several names and numerals and *-hi* plays a significant role in it. As this suffix is mostly translated as ‘of’ the author would like to investigate whether there are more possibilities for the translation as ‘from’. She also would like to trace *-hi* added to the numerals as an exceptional example among the Urartian inscriptions and to investigate whether this list belonged to the people who presented offerings to the room or took a ration from it with the research both in the field and in libraries.

Varied roles of *-hi*

-hi is a very challenging suffix. Although it does not have gender or number, it could cause problems for the translators and interpreters. Melikišvili 1971 introduced *-hi* shortly but totally comprehensive and Salvini (1979) presented its detailed roles completely.

In several cases *-hi* was used to demonstrate patronymic names as *^mminua=ni ^mišpuini=hi* ‘Minua, (son) of Išpuini’ (Dara, 2017, p. 60), *^msarduri=ni ^margište=hi* ‘Sarduri, (son) of Argišti’ (Dara, 2017, p. 81, 5) and *^mrusa=še ^margište=hi=ni=še* ‘Rusa son of Argišti’ (Dara 2017, p. 125, §1-2). Melikišvili (1971, p. 31) called this suffix an affiliation suffix. The second name (the father’s name) bore *-hi* in this case.

This method of presenting patronyms was written in Urartian inscriptions when the king by whose order the inscription was engraved wanted to introduce himself and his father, whether he was the king before him or not. This even happened in the case of the father, son, and grandson as Išpuini, Minua and Inušpua (Salvini, 2008, pp. 177-178, A 4-1, 2-5, 13-16, 18-21, 29-32, 35-37, 45-48). This means that the son is from a family that could be royal and his father could be the king as Išpuini, the son of Sarduri I, or Minua, son of Išpuini. It is also possible that the father of the king was not a king himself but from a royal family or even another Urartian tribe such as Sarduri I, son of Lutibri, or Rusa, son of Erimena.

According to Wilhelm, regarding nominal morphology, there are noun-formation and derivational suffixes. *-hi* forms adjectives of appurtenance used with geographical or tribal names as *Abiliane=hi ebani* ‘the country of Abiliani’ and *Diaue=hi* ‘the [king] of Diauean’ or ‘the king from Diaue’ (Wilhelm, 2008b, p. 125). Salvini described this as genitive and locative forms, and according to Salvini and Wegner (2014, p. 31), this suffix was attached directly to the root. Salvini, who proposed a wide range of coordination composed by adding suffix *-hi* mentioned that the genitive role of *-hi* could also be substituted by the genitive suffix of *i* or *e(i)* as *^{KUR}Paršua=i ^{KUR}ebani* ‘Land of Paršua’ and *^{KUR}šatiru=i ^{KUR}ebani* ‘Land of Šatiru’ (Salvini, 1979, p. 98) or *^mrusai=URU=TUR* ‘Small city of Rusa’ (Dara, 2017, p. 125).

Salvini (1979, p. 111) suggested that the dative role of *-hi* could also be traced in several examples as *Rusa=hi=na=ue* ‘city of Rusa (Toprakkale). The author suggests that this could be regarded as an adjective of appurtenance as well.

The dative form of *-hi* is mentioned for belonging to something (cities) mostly to the king, and in this case, all three forms of genitive, dative, and adjective of appurtenance could be translated as ‘of’. Although *-hi* as the adjective of appurtenance with geographical names could also be translated as ‘from’.

Additionally, sometimes *-ni*, which has a wide range of grammatical functions in Urartian language i. e. to form an absolutive or ablative-instrumental (Wilhelm, 2008b, p. 125), could also compose the genitive role as well as *^{DIM}-ni URU* ‘‘City of Storm God’’ and in this case could perhaps be the equivalent of *-hi*.

Previously, the author mentioned that Salvini (1979, p. 106) also comments that *-hi* could compose locative adjectives i. e. the name of the countries as *Erikua=hi KUR=ni* ‘country of Erikua’ (Salvini, 1979, pp. 101-102) and name of a king or lord of a city or country as *^{URU}Turkriř=hi ewir=ni* or *^{URU}Halmeru=ni ^mTuřurie=hi*. They could be translated as both ‘Lord in/of Turkriř City’ and ‘Halmeru City of Tuřurie’.

In some cases there are no sign, word, or suffix used to illustrate that something belongs to somebody. On the mace of Qaquli queen (*^{MUNUS}qaquli MUNUS*) (Salvini 2012: 68, B 12 A-I), only her name is written to show that the mace belongs to her or her court.

Sometimes a problem emerges in expressions such as *Rusa=hi=ni=li* ‘city of Rusa (Toprakkale) (Salvini, 1979, p. 111) and *^{URU}Minua=hi=ni=e* ‘City of Minua’. Melikiřvili (1971, p. 30) explained *hi=ni=li* as a suffix to form the city names that were called according to the names of the kings. Salvini (2001, p. 282, CB AY-4) suggested the translation of ‘City of Minuařinili’ for *^{URU}Minua=hi=ni=e*, but the author preferred ‘City of Minua’ because the ending (*hi-ni* or *hi-ni-li*) could be regarded as the grammatical function. In this case, the city is built by the king on bare land or over the previous fort. Therefore, *hi=ni=li* and *hi=ni=e* has sometimes been regarded as a part of the name. However, there is a grammatical difference between the two translations as ‘City of Minuařinili’ is regarded as the name of the city and ‘City of Minua’ is translated as the adjective of appurtenance or possessive form.

This suffix also formed adjectives and nouns after *u* or *ú*: *egur=u=hi* ‘clean, pure’, *tarai=ú= hi* ‘?’ (Wilhelm, 2008b, p. 125; Dara, 2017, p. 43, 15), *řú`-hi* and *tarai=u=hi* (Melikiřvili, 1971, p. 31). Also this occurs after *i* or *e*: *ter=i=hi* ‘plantation’ and *qarm=e=hi* ‘?’; and *a*: *babana=hi* ‘mountainous?’. Accordingly, *-hi* is added to the root or part of the word with the assistance of specific sounds.

According to Melikišvili (1971, p. 30) it could also form a noun after *-iš-* as *uri=šhi* ‘property’ (Dara, 2015, p. 71). Wilhelm suggested that *ú-ri-iš-ḫi* (*uri=šhe*) has two parts: The root is attached to the suffix *-šhe* (Hurrian *šə*) (Wilhelm, 2008b, p. 125). Therefore, in this case *-ḫi* is attached to the root. Salvini (2012, p. 28, B5-1), Belli (1991, p. 46), Zimansky (1995, p. 109), and the author (Dara, 2015, p. 71) prefer the translated of *ú-ri-iš-ḫi* as ‘property’. However, a more accurate translation could be ‘the property of’.

Although the Urartian language is studied in comparison with the Hurrian language, according to Wilhelm *-ḫi* has no parallel in Hurrian but *-šhi* is presumably a suffix complex containing the abstract suffix *-še* (Wilhelm, 2008b, p. 125). Although the suffix *-ḫe* with the initial voiceless consonant is sometimes parallel to “of” or “belonging” (Wilhelm, 2008a, p. 106).

Salvini and Wegner (2014, p. 20) compared *-ḫi* after the sounds of *o/u* with Hurrian as well. Of course *-ḫi-* was also used as a part of the word and not the suffix as *GU4pa-ḫi-ni* ‘bull’ in Merge Karevan obverse inscription (Dara, 2017, p. 100, 40).

According to the above-mentioned examples the suffix *-ḫi* could be translated as ‘of’, ‘in’, ‘belonging’ and ‘from’ in different cases, or it might remain with no specific function and be a part of the word.

Sheep presenters’ list tablet

A broken fragment of a tablet has been discovered in Bastam and could have been written during the reign of Rusa II. It is in the National Museum of Iran with number 11771 GPM. It is 4.5 cm, 3.5 cm, and 1.5 cm on three sides. The broken side is 5 cm long. Its thickness is 2 cm, and the signs are from 0.3 to 0.5 cm tall (Dara, 2017, p. 155). There are parts of a four-line inscription remained on its obverse (Fig. 1). This has been studied by Salvini (2012, p. 131, CT Ba-4), Haroutyunyan (2001, p. 510), Payne (2006, p. 329, 14.2.17), and the author (Dara, 2017, p. 155).



Figure 1a. Obverse of the Bastam tablet (Dara, 2017, p. 153)



Figure 1b. Reverse of the Bastam tablet (Dara, 2017, p. 153)



Figure 1c. Bastam tablet (Photo by the author)



Figure 1c. Broken view of the Bastam tablet (Photo by the author)

The tablet was discovered through excavation in bone room 1 in Bastam (Fig. 2). Urartian bone rooms have also been discovered in Toprakkale and Karmir-blur. The bones in Bastam belonged to both wild and domesticated animals such as cattle, wild sheep, gazelle, wild goat, deer, and even dogs, which were probably watchdogs (Zimansky, 1979, pp. 54-55). The author suggests that perhaps these rooms were not built everywhere but were an Urartian custom in some larger fortifications and perhaps were an innovation of Rusa II.



Figure 2. Largest bone room in Bastam (Zimansky, 1979, p. 54)

Several inscribed bullae have been found in the upper levels of the bone rooms in Bastam, which could be interpreted as belonging to the second floor (Zimansky, 1979, p. 55) to prove the powerful administration center of Urartu in Bastam. These bullae were unearthed in three bone rooms on either side of the walls immediately down the hill and close to a gate complex (Zimansky, 1979, pp. 53-54). According to Zimansky (1979, p. 55), it is possible that the bullae were tied to parts of the animals' bodies and served as a kind of property marker or sticker. It is also possible that they were attached to baskets, bones sacks, or even perishable documents.

Bullae and burned animals and human bones in massive numbers were discovered without skulls in the bone room of Toprakkale. In addition, a massive collection of animal bones in a small chamber with no skulls was discovered in Karmir-blur. This was the reason Lehmann-Haupt and Belck concluded that these are the remaining parts of the Urartian sacrifice ritual (Zimansky, 1979, p. 53).

There are several challenges and problems in the interpretation of these rooms. In Bastam, there is still the question of whether these rooms were specified for meat or bone storage. Scholars go so far as to suggest that the numbers of the bulla and animals correspond together (Zimansky, 1979, p. 55). According to Kroll (1984, pp. 165-168), these rooms were places to store meat for the fort. Several unearthed bones are not burned, and perhaps they were protected by the meat and remained untouched by the flames (Zimansky, 1979, p. 55). However, Zimansky (1979, p. 107) argued that bone rooms were not meat storage because the size of the rooms was very small and it was not possible to store the corpse or meat of too many animals. Also, he thinks that the bones were intact, jumbled, and pressed, and if the meat was protecting the bones, this could not happen. He doubts the hypothesis of keeping the meat here as the seal impressions mostly belonged to Rusa II and the time of the destruction of the construction is later, and it is inconceivable that the meat of Rusa's reign could be kept until the end of the existence of these rooms. Zimansky (1988, p. 123) and

the author believe that using the Rusa's seal could be continued for years after his death. He (Zimansky, 1979, p. 55) suggested different possibilities for bone storage. According to him, another possibility is that these were leftovers from the king's table and were not supposed to be in the hands of evil people who wanted to curse the king.

There is only one scattered tablet discovered in the bone room of Bastam, and it is the sheep presenters' list. The function of the room perfectly corresponds to the context of the tablet, as Zimansky (1988, p. 114) suggested that the context of this tablet inscription is coordinated with the function of the room. He believed it seemed reasonable to assume that the bullae discovered at Bastam were tied to documents or baskets and were related to the distribution or disposition of the bones and that the king and other people were involved in this act (Zimansky, 1988, p. 114). Therefore, having access to a tablet in the bone room is important.

There are beginnings of the first four lines of a damaged inscription left on the tablet as following with the author's suggested translation (Dara, 2017, p. 155):

1. *UDU I-hi^ma-ru-[...]*

'One sheep of/from (Mr.) Aru[...]

2. *UDU I-hi^mmi-nu-[...]*

'One sheep of/from (Mr.) Minu[...]

3. *UDU I-hi^mruh-[...]*

'One sheep of/from (Mr.) UI[...]

4. *UDU rI-hi^mγ-[...]*

'One sheep of/from (Mr.) ?'

The exception of *-hi* in sheep presenters' tablet inscriptions

As previously mentioned, *-hi* has a wide range of grammatical functions in the Urartian language. *-hi* along with the name of the king's father as patronym, was the most common and was regarded as an affiliation suffix according to Melikišvili (1971, p. 31). In this case, it can be translated as 'son of'.

The other function for the suffix is the adjective of appurtenance, which is used with tribal and geographical names (Wilhelm, 2008b, p. 125). In this case, it was added to the name and was translated as 'of' or 'from'.

According to Salvini and Wegner (2014, p. 31), if the suffix was used to form genitive and locative forms, it was attached directly to the root. However, it could also be added to the geographical names, and both can be translated as ‘of’ and even ‘in’. In some cases *-hi* could form the dative role (Salvini, 1979, p. 111).

Additionally, *-hi-ni-li* or *-hi-ni* after the name of the king could form city names (Melikišvili, 1971, p. 30). In this case ‘of’ can be a good choice for the translation.

Sometimes *-hi* was used after *u, ú, i, e,* and *a* sound to form the noun or adjective. In this case, a noun or root ending with these specific sounds were used. There is no translation for this case. A root with the addition of *iš-hi* could form a noun (Wilhelm, 2008b, p. 125) and, in some cases, can be translated as “of.” Of course, in some cases *-hi* is not a suffix but a part of the word and remains untranslated.

As is obvious *-hi* in the known Urartian words has always been added to the root or personal, tribal, or geographical names. In most cases, it can be translated as ‘of’ but sometimes ‘from’ or rare ‘in’ can be also chosen as the translation.

Salvini (1979) published his comments on *-hi* and later (Salvini, 1988, p. 129) studies and published a tablet of Batam. According to him *-hi* in this inscription could have acted as *Adjectiva der Zugehörigkeit* in Hurrian. He mentioned that we know little about the numerals and ordinal numbers in Urartian, but M. de Tseretheli commented that the ordinal numbers were also written with the suffix *-hi* but Salvini reported this as a rare case. In this tablet *-hi* is added to the numerals and not the personal names as an extra ordinary example.

Salvini doubted whether the sheep were offered by these persons or taken by them as the end of the lines to show that the directive or dative case was damaged and lost. He thought that these sheep could have been given by the tribute to the rooms. Later, he published his translation of *-hi* as ‘to’ (Salvini, 2012, p. 131, CT Ba-4). This means that these sheep were given to these persons. However, the author did not recognize any other example.

The author suggests that as this tablet was discovered in a bone room in Bastam, there are two possibilities to analyze the inscription. First, it is possible that the sheep (for their meat or bones) were offered by people or officials to these rooms as a custom, tribute, or ritual act. In this case ‘from’ and ‘of’ can be regarded as suitable translations. The second and less probable is that people were taking cattle from this room as a ration or blessing. As the concept and function of the bone rooms in Urartian culture remain challenging and unknown, ritual or storage functions of the room could affect the conjecture of this tablet inscription. The author thinks that the second guess is less probable that these people were taking sheep, their meat, or their bones as a blessing or ration ‘from’ this room as the lack of similar tablets of rations or people’s offerings in the Urartian archives.

The author prefers that *-hi* can be regarded as the appurtenance or possessive adjective in this tablet inscription. It might also have the function of a dative role but surely not a locative genitive. Accordingly, it can be translated as ‘of’ or ‘from’ but with three possibilities. Perhaps it means that the mentioned names have presented their own sheep (of) to this room, or the sheep were brought by the others but “from” these persons or even the sheep belonged to others but were presented by or “from” these persons to the bone room. This means it could act as an ablative.

The problem of the sheep being used for the meet or bone is not the case. The author thinks that it was rarely possible to give a sheep to a person from bone rooms unless it was a kind of ration or blessing to the people. Therefore, it is more possible that some men (or women as the rest of the tablet is lost) named here brought or provided sheep to the bone room, and it is also possible that there were more lists in bone rooms that have been lost or destroyed. Therefore, the translation of ‘of’ or ‘from’ for *-hi* attached to the numerals seems suitable.

Results

-hi is among the most challenging suffixes in the Urartian language. There are several functions recognised for this suffix, including forming patronyms, adjective of appurtenance, genitive, dative, and locative. The proposed translations for the mentioned forms have been ‘of’, ‘from’, and ‘in’. In all of the mentioned forms *-hi* was added to the noun or root. However, *-hi* can also be a part of a word or form a noun or city name.

There is an inscription written on the damaged tablet discovered in the bone room of Bastam. This tablet inscription is indeed a list of people and sheep. The beginning of the first lines of the inscription remain unharmed, and there are names of the persons, numerals and *-hi*. Here the suffix is added to the numerals, which is rare.

As the tablet is discovered in the bone room, it is possible that people offered cattle and animal or their bones to this place as a ritual belief. According to Salvini, “to” could have been a proper translation as the persons brought the sheep to this room. However, there are other possibilities.

These persons could have been the owners of the sheep and they offered the sheep themselves (adjective of appurtenance) or they just owned the sheep and others brought them on their behalf. Therefore, the names are the owners (of) who present their offerings themselves or by the others “from” the owners and it was written that these sheep are offered “from” the mentioned persons or they wanted to mention the owners and “of” was more suitable. Also, it is possible that the presenters of the offering were not the owners. This means that the sheep belonged to others but were brought by or “from” these persons to the

bone room. In this case, perhaps the suffix acts as an ablative.

Additionally, as we are not aware and informed of the definite function of this room and the possible ritual in the room, it is possible that the sheep were ration or blessings ‘for/to’ this people. However, there is a lack of ration tablets from the Urartian kingdom, and we cannot recognize the tablet as one.

Therefore, perhaps it is more probable that these sheep were offered to this room for whatever reason, and the names are either the names of the owners who presented their offering themselves or by others or the presenters of the offering who were not the owners. The first case could be translated as “of” or “from,” and the last can be recognized as ‘from’.

The author hopes for new pieces of evidence from bone rooms or ration tablets from the Urartian kingdom to provide more accurate and understanding of the meaning of this suffix.

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References

- Benedict, W. C. (1960). Urartians and Hurrians. *JAOS* 80, 100–104.
- Belli, O. (1991). Inscribed metal objects. In R. Merhav (Ed.), *Urartu: a metalworking center in the first millennium B.C.E., (The Israel Museum, Jerusalem), May 28 - October 1991* (43–49). Jerusalem.
- Biscione, R. (2012). Urartian fortifications in Iran: an attempt at a hierarchical classification. In H. Baker and K. Kaniuth and A. Otto (Eds.), *Stories of long ago. Festschrift für Michael D. Roaf* (77-88). Munich: Ugarit Verlag.
- Dara, M. (2015). Urartian disc with the Urartian inscription in Tabriz Archaeology Museum (Disc-e mefraghi-e katibedar-e afsar-e asb-e urartuee dar muzeye bastanshenasi-e azarbayjan-e sharghi. *Zabanshenakht* 1, 61–78.
- . (2017). *Urartian cuneiform inscriptions from Iran (Katibehaye mikhiye urartouee az iran)*. Tehran: RICHT.
- Fournet, A. (2011). About some features of loanwords in Hurrian. *Aramazd* 6/1, 43–59.
- Haroutyounyan, N. V. (2001). *Korpus Urartskich Klinoobraznykh Nadpisej*. Yerevan: Nacional'naja Akademija Nauk Respubliki Armenii, Institut Vostokovedenija.
- Grekyan, Y. (2013-2014). When the gods leave people (The climatological hypothesis of the collapse of the Urartian State). *Aramazd* VIII/1-2, 57-94.
- Kleiss, W. (1988). Bastam II: Ausgrabungen in den urartäischen Anlagen 1977-1978. *Teheraner Forschungen* 5. Berlin.

- (2008). urartu-in-iran. Retrieved from <http://www.iranicaonline.org/articles/urartu-in-iran>.
- Kroll, S. (1984). Urartus Untergang in anderer Sicht. *Istanbuler Mitteilungen* 34, 151–170.
- Kroll, S. (2011). Urartian cities in Iran. In K. Köroğlu and E. Konyar (Eds.), *Urartu (Transformation in the east)* (150-169). Istanbul: Yapi Kredi Yayınlan.
- Kroll, S. (2013). Notes on the post-Urartian horizon at Bastam. In O. Tekin and M. H. Sayar and E. Konyar (Eds.), *Tarhan Armağani- M. Taner Tarhan'a sunulan makaleler (Esseys in honour of M. Taner Tarhan)* (247-250). Istanbul.
- Melikişvili, G. A. (1971). *Die urartäische Sprache*. Rome: Biblical Institute.
- Payne, M. (2006). *Urartu çiviyazılı belgeler kataloğu*. Istanbul: Arkeloji ve sanat.
- Salvini, M. (1979). Problemi di morfologia nominale in Urarteo, *AION* 1, 97–115.
- . (1988). Die urartäischen Schriftdenkmäler aus Bastam (1977–1978). In W. Kleiss (Ed.), *Bastam, Ausgrabungen in den urartäischen Anlagen 1977-1978*, Vol. 2 (125–144). Berlin: Gebr. Mann.
- . (2001). The inscriptions of Ayaniş (Rusaşinili cidurukai) cuneiform and hieroglyphic. In A. Çilingiroğlu and M. Salvini (Eds.), *Ayanis I* (251–319). Rome: CNR.
- . (2008). *Corpus dei Testi Urartei*, Vol. 1. Roma: CNR.
- . (2012). *Corpus dei Testi Urartei*, Vol. 4. Roma: CNR.
- Salvini, M., Wegner, I. (2014). *Einführung in die urartäische Sprache*. Weisbaden: Harrassowitz.
- Zimansky, P. (1979). Bones and bullae: An enigma from Bastam, Iran. *Archaeology News* November/December, 53–55.
- . (1988). MB2/OB5 Excavations and the problem of Urartian bone rooms. In W. Kleiss (Ed.), *Bastam, Ausgrabungen in den urartäischen Anlagen 1977–1978*, Vol. 2 (107–124), Berlin: Gebr. Mann.
- . (1995). Urartian material cultures as state assemblage: An anomaly in the archaeology of empire. *Bulletin of the American School of Oriental Research* 299/300, *The archaeology of Empire in Ancient Anatolia*, Aug-Nov, 103–115.
- Wilhelm, G. (2008a). Hurrian. In R. D. Woodard (Ed.). *The Cambridge encyclopedia of the World's ancient languages* (95–118). Cambridge-New York: Cambridge University.
- . (2008b). Urartian. In R. D. Woodard (Ed.). *The Cambridge encyclopedia of the World's ancient languages* (119–137). Cambridge-New York: Cambridge University.



Relief *Stelae* From Athens: The External Evidences Regarding Heracleia Pontica (The 5th to 4th Centuries B.C.)

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ABSTRACT

Heracleia Pontica despite having such an important place in the ancient world, the settlement constitutes one of the areas in the southwestern Black Sea where the need for archaeological studies is felt intensely. Therefore the subject of the research constitutes the examination of our knowledge of the development of the Heracleia Pontica between the Archaic and Hellenistic periods (5th and 4th centuries BC). The evidences which are uncovered from an abroad *polis* is evaluated in the context of regional archaeology, and a group of finds consisting of funerary relief *stelae* and proxeny decrees revealed by Aegean archaeology - associated with Paphlagonian city - are discussed. These artifacts, dated between the 5th and 4th centuries BC were unearthed in Athens since the 19th century. The funerary relief *stelae* and proxeny decrees are unique in that they belong to the people from Heracleia as indicated in their inscriptions. Moreover, they form various arguments in examining the social turmoil, exiles, and commercial activities of the associated city or the relations between Athenai and Heracleia Pontica. The finds discussed in this study constituting four funerary relief *stelae* and two proxeny decrees are considered to be related to Heracleians based on the inscriptions. Although they belong to the Heracleians, the fact that they were unearthed in Athenai makes them particularly remarkable.

Keywords: Heracleia Pontica, Athens, Black Sea, Funerary *Stelae*, Archaeology



Introduction

As it's known the chronological discrepancy between the archaeological and historical evidences of the Archaic and Classical periods on the coasts of southwestern Euxinos (Bithynia and Paphlagonia), has long been debated (Tsetskhladze, 2022, pp. 523-528; Manoledakis, 2017, pp. 181-182, 188-189; Marek, 1993, pp. 16-24; Petropoulos, 2005, pp. 15-16). Such an interesting aspect of the subject, researchers emphasize that most of the archaeological evidences specific to this period and area which the coasts of Bithynia and Paphlagonia form an important part, comes mostly from other sides of the Black Sea and even from the Aegean (Avram *et al.*, 2004, p. 927; Hoepfner, 2022, pp. 1-2; Erciyas, 2007, pp. 1195, 1201). Perhaps the best arguments for this statement constitute the excavation inventories of Heracleian *amphorae* from other shores of the Black Sea, instead of the Heracles' own city in Paphlagonia (Saprykin, 1997, pp. 3-18, 47-48, 60-61; Monakhov, 2019, pp. 60-64; Opait, 2010, pp. 389-393). It is also often stated that the lack of archaeological data observed especially on the southern Black Sea coast between the 7th and 4th centuries BC was due to intense modern urbanization, the scant archaeological works and the geographical difficulties in the region compared to other parts of Anatolia and Black Sea (Atasoy, 2018, pp. 109-113; Burstein, 1976, pp. 1, 14). But, we can see that the recent number of archaeological research carried out on western Paphlagonia has increased gradually (Hoffmann, 1989; Marek, 1989; 2003; Hill & Crow, 1993; Şerifoğlu, 2015; Atasoy & Erpehlivan, 2015; Bağdatlı Çam *et al.*, 2019^a; 2019^b; 2022; Yıldırım, 2017; 2021; 2023). Although the inventories of classical archaeology become limited as we move towards to inland when compared to coastal part (Matthews, 2009, pp. 149-154, 156-161; Lafli *et al.*, 2013, p. 67; Keleş & Çelikbaş, 2019, p. 197; Yıldırım, 2022, pp. 414-415; Gökoğlu, 1952, p. 65; Dökü *et al.*, 2006, p. 67-75; Karasalihoğlu, 2020, pp. 282-286; Karauğuz, 2008, p. 47). On the other hand, the deep-rooted and experienced Athenian archaeology continues to provide immense data and put forward arguments for the ancient southwestern Black Sea Region.

The subject of this research is to examination of the development of Heracleia Pontica between the Archaic and Hellenistic periods (5th and 4th centuries BC). The evidences comes from another region where we have a group of finds consisting of funerary relief *stelae* and proxeny decrees, uncovered on the Aegean side, however, associated with the Paphlagonian city. These arguments are fundamental as they reveal that archaeology is a multi-special and inter-regional science. Because they provide specimens on that the questions that cannot be answered in the relevant place can be clarified through data coming from other sites. Therefore this research will appeal primarily to data coming from Athenian archaeology but will help to enlighten Heracleian remote past.

Historical Background and Archaeological Context

Heracleia Pontica was founded as a Greek colony by Megarians and Boeotians in the mid-6th century BC, and attributed to Heracles or the *oikistes* Gnesiochos of Megara (Ruge, 1912, pp. 433-434; Avram *et al.*, 2004, p. 956). Whether the city was founded by a hero or a mortal, it represents one of the most powerful *poleis* in the southwestern Black Sea (Dörner, 1967, p. 1035; Öztürk, 2013, p. 507; Rempel & Doonan, 2020, p. 132). The foundation myth was shaped by a Delphic oracle that predicted the establishment of a city in honor of Heracles (Just., 16.3.; Malkin, 1987, p. 74; Belke, 1996, p. 208; Dana, 2011, pp. 55-56), and the hero carried out his last struggle with Cerberus in a cave at Pontic Heracleia (Xen., Anab., 6.2.2). Although Heracleia Pontica was founded in such an early period, it is equally interesting that the archaeological gap between the Archaic and Hellenistic periods can still be observed in its own territory. On the other hand, Tios the city just northeast of Heracleia was founded by *oikistes* Tios of Miletos or Pataros of Thrace has more archaeological data dating back to the third quarter of the 7th century BC (Yıldırım, 2023; Öztürk, 2014; 2023; Atasoy, 2015; Atasoy & Erpehlivan, 2015; Tsetskhladze, 2022; Tsetskhladze & Yıldırım, 2023). Towards the northeast, possibly Milesian initiatives Sesamos (Pre-Amastris), Kromna, and Kytoros whose founders are unknown, constitute other settlements adjacent to Heracleia Pontica (Burstein, 1976; 2006; Ehrhardt, 1996; Hind, 1999, pp. 27-28; Marek, 2003, p. 30; Avram *et al.*, 2004, pp. 955-960; De Boer, 2005, p. 171; Robu, 2012, p. 182).

The importance of Heracleia stems from its wealth, its success in urbanization, and its strategic point as a transit port-city controlling the grain trade coming from the Northern Black Sea (Strab., 12.3.6; Arr., Periplus, 13.3; Bittner, 1998, pp. 120-130; Burstein, 2006, p. 144; Erciyas, 2003, p. 1406; Braund, 2007, p. 53; Saprykin, 2014, 357). Although the archaeological potential of the region was tried to be shown by researchers in the 20th century (Leonhard, 1915, pp. 288-308; Kalinka, 1933, p. 46; Jacopi, 1937, pp. 6-10; Burney, 1956, pp. 180-183; von Gall, 1966, pp. 50-57), and even an important archaic statue which is a head fragment thought to belong to a tyrant or to a Persian satrap was found within the city (Akurgal, 1986; Summerer, 2005), the ancient settlement constitutes a point that more archaeological research is needed in this part of Black Sea today.

However, archaeological value of Heracleia Pontica in its own location was first emphasized by the studies of Dörner and Hoepfner (Dörner & Hoepfner, 1962, pp. 565-594; Dörner & Hoepfner, 1989, pp. 103-105; Dörner, 1990, pp. 34-36; Hoepfner, 1966; Hoepfner, 1972, pp. 37-46). During his research in Heracleia, Hoepfner identified a funerary stele fragment, a small section of the city wall, the remains of a building, and various architectural elements dating between the Early and Late Hellenistic periods (Hoepfner, 2022, pp. 59, 73-74, 91-95). Although they have not been implemented by archaeological excavations we have some stray finds of sculptures dating to later periods of the ancient city (Erichsen, 1972;

Pfuhl & Möbius, 1977; Cremer, 1992; Sezer, 2021; Özgan, 2022). The epigraphic past of the Heracleia, about which we are more fortunate, has been shaped by the data obtained from the city and the region itself (Robert, 1937; Jonnes & Ameling, 1994; Öztürk 2013; 2017; 2023). Current studies conducted underwater and on land have exciting potential (Davis *et al.*, 2018, pp. 74-75; Okan *et al.*, 2017, pp. 53-56; Bilir & Bilir, 2022, p. 49) but apart from these, there are inadequate and rather personal impressions we get through the short-term stops of the travelers (Akkaya, 1994, pp. 27-35; Erciyas, 2003, p. 1416).

In the ancient long-distance interaction of Heracleia two chief *poleis* of Attica, the Megara and the Athenai form the main centers. Although the first played a dominant role as the founder, the second seems to have been more effective since the end of the 5th century BC (Ehrhardt, 1996, p. 103; De Boer, 2006, p. 279). As far as we know, Hellas' interest in Paphlagonian coasts started with Megara in the 6th century BC. After Perikles' regional expedition to the Hospitable Sea, Athens seems to have strong impact on the cultural and political life of the ancient world and established ties via the tyrant dynasties, the rich families, and merchants of the city for a long time (Arist., *Pol.*, 7.5.7; Desideri, 1991; De Boer, 2005, pp. 167-172; Braund, 2007; Hall, 2019; Coşkun, 2019; Marek, 2017, p. 211).

It is known that Clearchus who can be considered as the second founder after Gnesiochos (Memn., 1.1; Berve, 1967, pp. 316-318; Arslan, 2018, pp. 95-96), similarly his son Timotheos and Chion from the same city had close relations with Plato and Isocrates in Athens (Isok., *Epist.*, 7.12-13; Christy, 2016, p. 259). The ties of the Heracleian philosopher Heracleides and the mathematician Amyclas with Plato, Speusippus, Aristotle (Diog. Laert., 5.86; Bosworth, 1994, pp. 15-17; Mikalson, 1998, p. 259; Arslan, 2018, pp. 100-101), and the relations between two cities in reign of tyrant Dionysios can be cited as other examples in this regard (Arslan, 2016; Lester-Pearson, 2021, p. 149; Gallotta, 2022, pp. 241-242). However, within the archaeological context that generate remarkable evidences of these relations between the two *poleis*, the funerary relief *stelae* or proxeny decrees of Heracleot *metoikoi* (*metic-resident alien*) (Adak, 2003, pp. 20-39; Watson, 2010, p. 259; Üreten, 2017, pp. 29-36), who settled in Athens between the late 5th and 4th centuries BC, are of particular importance. Because these constitute arguments that shed light on the early Heracleia Pontica.

These finds are remarkable in several aspects. As will be mentioned below, unlike the finds which are only inscripted, the citizens of Heracleia clearly wanted to show themselves in these relief *stela* or proxeny decrees. Although the reliefs are presented within the standard imagery of Classical art specific to the period, a tendency can be detected to show themselves as undifferentiated individuals, as a part of the new place they belong to, even though they come from a distant place (Boardman, 1995; Lawton, 1995; Childs, 2018). The fact that the *stelae* in question were found in Athens, a city quite far from Heracleia, can be another striking aspect in itself. Moreover, the imagery we encounter, especially in proxeny decrees is quite

strong. It is significant that the holy family members accompanying the citizens of Heracleia were consciously chosen as Athena and Heracles. This allegory or context established between Athenai and Heracleia through the individuals in question who were deemed worthy of honor is clear enough. Because they are the Heracleian citizens (Culasso-Gastaldi, 2004, pp. 257-262; Garland, 1982; Mikalson, 1998; Breder, 2013^a; Closterman, 2007).

With all this, it should be emphasized that the number of cities named Heracleia in the ancient world was numerous (Asheri, 1975, pp. 33-38; Heineman, 2021: p. 262). It is known that this situation makes it difficult to determine the real *polis* of which related Heracleians were its citizens. However, considering the arguments to be expressed below, it can be said that Heracleia Pontica, is one of the cities that comes to mind the most.

Description of the Finds

I) Proxeny of Sotimos: One of the earliest pieces of evidences is an inscribed relief proxeny decree found in Athens (Fig. 1), (Lawton, 1993, pp. 3-4 fig. 5). The stele was reported to have been discovered near Erectheion, southwest of Parthenon in 1835. When it was found the top and bottom parts were missing (Ritter, 2001, p. 130 abb. 9; Jonnes & Ameling, 1994, p. 162). It is made of white marble and according to preserved condition, its dimentions were 41.5 cm wide, and 51.4 cm high (Lawton, 1995, p. 118 no. 72 pl. 38; Meyer, 1989, pp. 88, 274 taf. 12.2). The relief section, with three human figures on it, rises on a 7.1 cm high *ovolo* and *taenia* molding (Walbank, 1970, p. 329 no 29 pl. 8 fig. 1). Although the entire inscription was not preserved well, it can be clearly read that “*Sotimos of Heracleia*” and his family were honored with the titles of *proxenos* and *euergetes* by the people of Athens (Ritter, 2001, pp. 151-153; EM. 6609; IG I³ 74).

The upper part of the relief is missing and it has been determined that the leading role in the stele is reserved for the goddess Athena, sitting on a quadrangular platform. The goddess who was depicted larger than the other figures, leaning on her shield with her back and upper right arm, is turned to the right in profile. On the opposite, a male figure, who is probably Sotimos, was depicted wearing sandals, a *himation*, and facing Athena (West, 1935; Culasso-Gastaldi, 2004, p. 261). On the far right of the scene, there is a third figure whose upper part was missing only knees were preserved, just like the Sotimos in the middle (Fig. 1). He was described as Heracles whose upper body seems to be shifted to his right. There, a small piece of the club that the hero leans on the ground, therefore the figure has been identified as Heracles (Lawton, 1995, p. 118; Walbank, 1970, pp. 107, 329; Ritter, 2001, p. 139). The proxeny stele in question, whose connections with Heracleia Pontica will be discussed below, is dated to the late 5th century BC (Ritter, 1997, p. 28 abb. 6; Mattingly, 1996, p. 151).

Perhaps one of the most crucial series of evidences in the context of our study was identified in a monumental *peribolos* tomb from the necropolis of Kerameikos in Athens,

which we learned through Aegean archaeology and epigraphy (Ohly, 1965, p. 342 abb. 38; Garland, 1982, p. 136; Breder, 2013^a, p. 172-174; Hoepfner, 2022; Wijma, 2024, p. 219). Of the total seventeen *periboloi* in the area defined as the terrace on the slope in the southwest of Kerameikos, one example is important for our topic which was a monumental burial plot proposed to have belonged to a family from Heracleia (Fig. 2), (Brueckner, 1909, pp. 64-74; Conze, 1893, p. 95 no. 411 pl. 98; Stroszeck, 2021; Karagöl, 2022, p. xv). The funerary group was discovered in 1863 and was dated to the mid-4th century BC or the third quarter of the same century (Banou & Bournias, 2014, pp. 21-25, 233 fig.). The *peribolos* was built with limestone blocks as a funerary plot with a wall of approximately 50 cm thick running on three sides. It is in the form of a podium, 800 cm wide in the front, and has 535-600 cm depth on both short sides and approximately 280 cm height in the front (Fig. 3), (Brueckner, 1910, p. 109; Richter, 1967, p. 45; Stroszeck, 2002/2003, p. 172).



Figure 1: Proxeny decree of Sotimos of Heracleia. Athens. (National Museum of Athens 3850).
(After; Lawton 1993: fig. 5).

It was determined that the plastered front wall has a narrow eave line on the top. The sarcophagi of this family members were made in limestone, and said to be buried under the ground, just behind the *stelae* (Brueckner, 1910, pp. 123-129 abb. 12-24; Himmelmann, 1999, p. 33). For the *peribolos*, a reconstruction of six or seven *stelae* in total, three of those were attributed by inscriptions has been proposed (Bergemann, 1997, p. 138) (Figs. 2-3). The

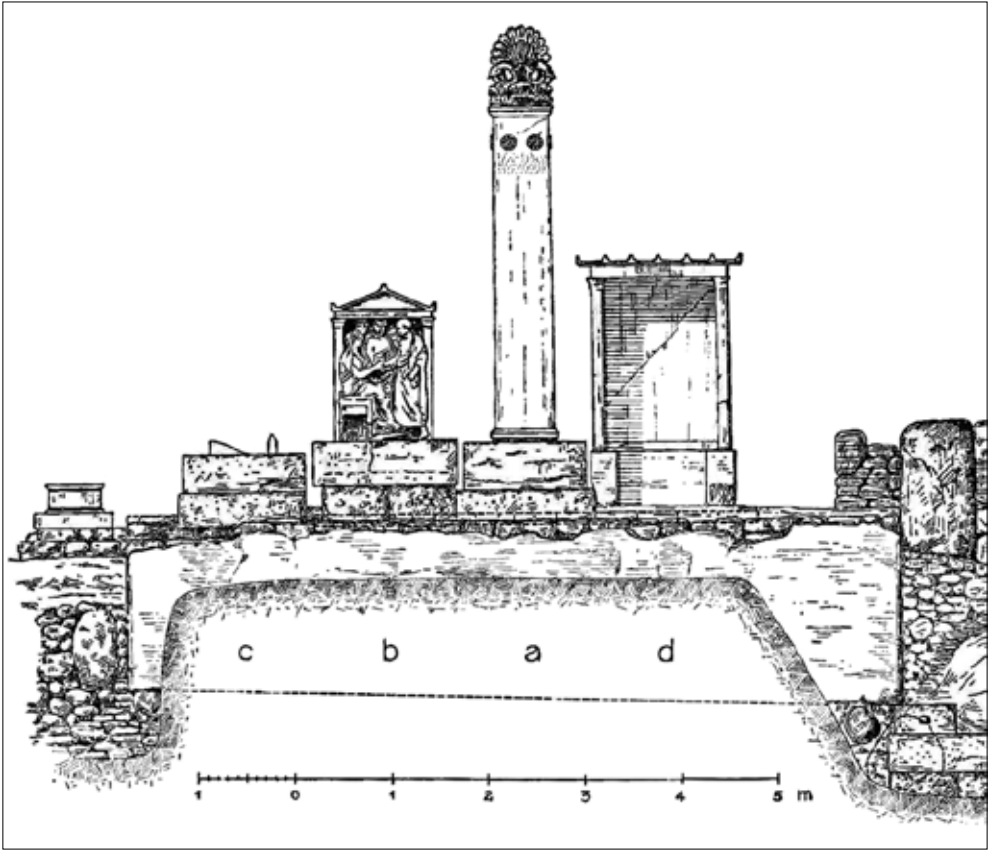


Figure 2: *Peribolos* of Heracleot family from Kerameikos. Athens. (After; Brueckner 1909: abb. 37-38. reproduced drawing).

plot, where the graves of the Heracleian family members Agathon, his wife Korallion and his brother Sosikrates are buried, is located at the eastern beginning of a street, between the tomb monuments of Dionysios and Dexileos, respectively dated to the 5th and the 4th century BC (Hildebrandt, 2006, p. 129; Banou & Bournias, 2014, p. 205; Avram, 2013, p. 180 no. 1551; Wijma, 2024, pp. 221-224).

II) *Stele of Korallion*: In point of our study, the important find of Heracleot *peribolos* is a gable-roofed, *naiskos*-type funerary relief stele made of Pentelic marble. The stele - approximately 165 cm high and 100 cm wide - was standing on a limestone base (Fig. 4), (Conze, 1893, p. 95 taf. 98 no. 411; Diepolder, 1931, p. 50; Breder, 2013^b, p. 32; (KM. 688). It is framed horizontally with an inscribed epistyle, starting from the bottom of the pediment. This frame continues with vertical plasters on both sides, and natural ground is depicted at the base (Breder, 2013^a, p. 173; Stroszeck, 2021, p. 60; Bergemann, 1997, p. 184, taf. 39/1-2, taf. 81/1-2, taf. 69/2).



Figure 3: *Peribolos* of Heracleot family from Kerameikos. Athens. *Stelae* of Agathon, his brother Sosikrates and his wife Korallion. (After; Stroszcek 2003: abb. 13).

The main scene on the stele is reserved to four human figures in relief. Korallion, the owner of the *naiskos*, is sitting on a *diphros* wearing a *khiton* that reaches down her feet. With her right hand extended forward, Korallion poses *dexiosis* with her husband Agathon who is standing towards her (Himmelmann, 1999, pp. 33, 35 abb. 12, 98; Avram, 2013, p. 145 no. 1005).

In the middle of the two main figures, there is another standing and bearded male like the one on his right, and it was proposed that it probably personifies Agathon's brother Sosikrates in the background (Banou & Bournias, 2014, pp. 200, 223; Clairmont, 1993, no. 4415). In the left background the bas-relief head of a young male, likely depicting the family's servant, and his left hand resting on his chin is standing behind Korallion (Fig. 4). In the bottom of the scene, there is a dog figure looking towards its owner Korallion. One of the most striking features of this stele that presents a dramatic funerary scene is the perception of depth that is tried to be given by the placement of the figures. The relief was gradually deepened and sized from the background to the front, and the entire scene was enlivened by extending the two main front figures over the frame (Karo, 1943, p. 32 pl. 32; Humphreys, 2018, pp. 366-372). It has been shown that "*Korallion, wife of Agathon*" was read on the epistyle of the *naiskos* stele, dated to the second half of the 4th century BC (Diepolder, 1931, p. 49 taf. 45.2; Schmaltz, 1983, pp. 108-109 abb. 7; IG II² 11891).



Figure 4: Relief stele of Korallion, wife of Agathon of Heracleia from *peribolos*. Athens-Kerameikos (After; Conze 1893 taf. 98 abb 411, drawing).



Figure 5: Marble *lekythos* from *peribolos* of Heracleot family. Athens-Kerameikos (After; Brueckner 1909 abb. 41).

Based on the reconstruction of other family plots in the immediate vicinity, scholars have revealed that the marble *lekythoi* was placed at both ends of this *peribolos*, and served as grave marks (Stroszeck, 2013, p. 8; NM. no. 1127). Thus, a marble *lekythos* in relief dating back to the second half of the 4th century BC was unearthed at the eastern end of this *Heracleot* monument (Fig. 5), (Conze, 1900, p. 160 no. 748 taf. 130). There is a scene with a total of three figures on the panel placed between the shoulder and the base of the *lekythos*. But unfortunately, the *lekythos* made of Pentelic marble is missing on its neck and handle. On the main scene, a bearded and *khiton* dressed old male is depicted sitting on the *klismos* facing left with a young male behind him. On the opposite, there is another but relatively younger and standing male in similar clothing. Two men facing each other are portrayed in *dexiosis* pose which we are familiar with ancient *stelae* (Brueckner, 1909, p. 69 abb. 41; Garland, 1982, p. 137).

From the *Heracleot peribolos* another monumental find, the stele of Agathon should be mentioned. This constitutes a *naiskos* stele which is 180 cm high, and 146 cm wide. It was

made of *hymattion* marble and placed at the western end of the *peribolos*. The stele rises on a limestone base has no figurative scene but an epigram inscribed as “*Agathon, son of Agathokles of Heracleia*” on its epistyle (Figs. 2d-3), (Breder, 2013^a, p. 173; IG II 2090). It is estimated that the flat roofed and antefix decorated stele on its top was once painted and had a theme referring to Agathon (Conze, 1906, p. 309 taf. 297 no. 1443; Walter-Karydi, 2015, pp. 200 abb. 109, 252-253). We also know that the stele which belongs to Tibeios of Ticeion, the northeastern neighbor of Heracleia Pontica, unearthed in Athens was also painted in a similar technique and dated to 5th to 4th century BC (Bäbler, 1998, p. 97 no. 37; Öztürk, 2014, p. 158).

The other find at the eastern end of Heracleot *peribolos* consists of another marble *naiskos* that was probably once painted but only a limestone base and small fragments are known to remain (Figs. 2c-3), (Garland, 1982, p. 137).

One of the tombs belonging to the Heracleot family and the most monumentalized in size - 390 cm high, 60-57 cm wide (bottom and top) - constitutes an *anthemion* stele made of Pentelic marble (Figs. 2a-3), (Kurtz & Boardman, 1971, p. 125 fig. 24 (a); Bergemann, 1995, p. 29; Knigge, 1988, p. 122; Hildebrandt, 2006, pp. 305-306, no. 170). There are no human figures depicted at this stele just as mentioned above. But on the upper part of the stele, under two flower rosettes, the names of two brothers “*Agathon and Sosikrates, the sons of Agatholes of Heracleia*” are mentioned (Stroszeck, 2002/2003, p. 172; Conze, 1906, p. 327 pl. 319 no. 1535; IG II² 8551).

III) Stele of Dromon: As Conze and Ginesti-Rosell pointed out, in the end of the 19th century another funerary relief stele of a Heracleian man was unearthed in Piraeus, port of Athens (Conze, 1900, p. 141 no. 662 taf. 126; Avram, 2013, p. 158 no. 1205). The find made of Pentelic marble, partly missing, is 27 cm wide, 42 cm high, and 5 cm thick (Clairmont, 1993, no. 2433; Ginesti-Rosell, 2012, p. 318 no. 423 fig. 237). The upper part of the find is depicted in the form of an *akroteria* with a bas-relief palmetted decoration (Fig. 6). Here an inscription, “*Dromon of Heracleia*” written in two lines under the palmetted section, was placed on a base with *ovolo* and *taenia* molding. Just below there are two human figures in bas-relief dated to the late 4th century BC (Conze, 1900, p. 141; Ginesti-Rosell, 2012, p. 318; G II² 8636). The scene on the stele about half is missing, is quite figurative. An old and bearded male figure, wearing an *eksomis* like mantle that leaves his right shoulder and arm exposed, is sitting on a *klismos*. He extends his right hand to a young woman standing in front of him, thus it represents a *dexiosis* scene indicating a farewell (Scholl, 1996, p. 269, no. 171).

IV) Stele of Konna: In her study published in 2012, Ginesti-Rosell identified another relief stele from the National Archaeological Museum of Athens, dated to the 4th century BC



Figure 6: Relief stele of Dromon of Heracleia. Athens-Piraeus (National Museum of Athens 1127) (After, Ginesti-Rosell 2012 fig. 237).



Figure 7: Relief stele of Konna, the daughter of Attos the Heracleian. Probably found in Athens (National Museum of Athens 2760) (After, Ginesti-Rosell 2012 fig. 240).

(Fig. 7), (Ginesti-Rosell, 2012, p. 321 no. 430 fig. 240; Avram, 2013, p. 167 no. 1345). The find is made of Pentelic marble and has a pointed profile on the top. It is 33 cm wide, 63 cm high. The inscription “*Konna, daughter of Attos of Heracleia*” written in two lines, was just below an *ovolo-taenia* molding (Ginesti-Rosell, 2012, p. 320 no. 430 fig. 240; G II² 8699; NM. no. 2760). The stele was probably found in Athens or its immediate surroundings. But the depiction of the figures is very difficult to specify because it was broken from the section where it was found, as Ginesti-Rosell stated. However, there is a man and a woman depicted facing each other and a third hardly distinguishable figure can only be discerned (Ginesti-Rosell, 2012, p. 321).

V) Stele of Lykinos: Apart from the examples stated above, Ginesti-Rosell also refers to another funerary relief stele made of Pentelic marble. Accordingly, its decoration consists of a bearded man holding the hand of a woman dressed in *khiton* and *himation*. We do not have visual or any descriptive information about this broken artifact that was unearthed in Piraeus.



Figure 8: *Proxeny* decree of Sostratos of Heracleia. Athens-Acropolis (Epigraphical Museum of Athens 7221) (After, Culasso-Gastaldi 2004).

But its dimensions were quite small in size, measuring 24 cm in width and 26 cm in height. It was revealed that “*Lykinos of Heracleia*” was written on the inscription (Ginesti-Rosell, 2012, p. 320 no. 428; IG II² 8717; Avram, 2013, p. 169 no. 1381).

VI) *Proxeny* of Sostratos: Another find with relief that can be considered in the context of our study is a *proxeny* decree belonging to “*Sostratos of Heracleia*” (Fig. 8), (Boardman *et al.*, 1988, p. 747 no. 329; Culasso-Gastaldi, 2004, p. 256; EM. 7221). Due to its preserved state, it is understood that the stele unearthed in the Acropolis of Athens originally was standing on a quadrangular base. The find is a broken and very poorly preserved fragment that is 39 cm high and 32 cm wide. It is framed along the left edge with a 3 cm wide border vertically, and at the bottom, a *taenia* molding in 4.5 cm high was inscribed horizontally (Meyer, 1989, p. 297; Palagia, 1990, p. 57; Walbank, 2008, p. 27 fig. 25; IG II² 419).

In the scene with relief, the first figure on the left is recognized as Heracles. The hero depicted standing frontally is the only identifiable figure by his attribute club, leaning on the ground (Palagia, 1990, p. 56-57; Culasso-Gastaldi, 2004, p. 258). On the other side, Heracles

is putting his left hand on a platform and holding a lion's skin. The other figure in the scene is quite obscure due to its weathered conditions. The female figure facing Heracles, whose her right leg, shield, and part of her spear have been preserved, is considered as Athena. It is claimed that Sostratos was originally depicted as standing by Athena once and might be placed in the weathered section (Lawton, 1995, p. 150 no. 158). In the single-lined inscription found on the *taenia*, a man named "*Sostratos of Heracleia*" is honored as *proxenos*. The decree is dated to the end of the 4th century BC (Lawton, 1995, pl. 83; Culasso-Gastaldi, 2004, p. 257; SEG 39.324, 43.1294, 45.231).

Evaluation of Finds

As result through Athenian archaeology and epigraphy, we can reveal four grave *stelae* (II-Fig. 4, III-Fig. 6, IV-Fig. 7, V) and two proxeny decrees (I-Fig. 1, VI-Fig. 8), all containing relief scenes belonging to individuals whose originated from Heracleia were identified. Another work with relief was recognized, which represents a different example, is a marble *lekythos* probably used as a grave mark and having no inscription (Fig. 5). But it should also be noted that the *lekythos* in question is extremely important because it was unearthed from the *peribolos* of Heracleot family in Kerameikos and has a figurative scene similar to other funerary *stelae*.

Among the finds identified and listed chronologically, the earliest is the proxeny decree of Sotimos dated between 424-410 BC (Ritter, 2001, p. 139). West and Lawton interpreted the granting of such honor to Sotimos, due to the close relations between Athens and Heracleia Pontica (West, 1935, p. 74; Lawton, 1995, p. 118; Ritter, 2001, p. 130). Indeed after the Perikles' expedition, the *polis* seems to have begun to come under influence of Athens from the second half of the 5th century BC (Meritt *et al.*, 1950, p. 116; Burstein, 2006, p. 143; Coşkun, 2019, p. 18; Lewis, 2024, p. 173). Athens' demand for significant amount of grain, which was supplied from the Northern Black Sea, must have made Heracleia a key port-station in terms of marine trade. Therefore these commercial activities apparently resulted in the establishment of close relations between the Black Sea and the Aegean (Saprykin, 1997, p. 53; Whitby, 1998, pp. 119-120; Braund, 2007, pp. 53-55).

At this point, it should be noted that attention is drawn to the historical record regarding the arrival of Lamachos near Heracleia, who started his duty to tax the cities of Euxinos in 424 BC (Diod., 12.72.4; Thuk., 4.75). But he had to return to Athens by land because his fleet anchored in Kales River was destroyed in a heavy flood (Walbank, 1970, p. 332; Gallo, 2013, p. 159). In the same year, the proxeny issued to Sotimos of Heracleia in Athens thus gained meaning. As result the decree was associated with the possible assistance of this Heracleot family in escaping the difficult situation that Lamachos encountered on the Paphlagonian coast, and then the Hareakleia of which Sotimos was a citizen was located on the Southern

Black Sea (Fig. 1), (Lawton, 1995, p. 118). On the other hand, it is almost clear that the proxeny referred to a period when tyranny had not been established in Heracleia Pontica yet. Therefore both the proxeny and the historical record may refer to a communication between Heracleia and Athenai when there was a democratic environment before the tyranny in related Pontic city (Saprykin, 1997, p. 51; Desideri, 1991, p. 10; Arslan, 2018, pp. 100-102).

Following this argument, that introduces the close relations between Athenai and Heracleia in the last quarter of the 5th century BC, we must appeal to the archaeological evidence from Kerameikos. The monumental *peribolos* and the *stelae* it contains which is dated to the 4th century BC are also valuable in themselves since they were used by the Heracleian family for very long period (Bergemann, 1997, p. 12; Closterman, 2007, p. 644). Because related arguments had enabled the scholars to establish some correlations between the social developments in the Paphlagonian port and the burial plot of the Herakelaian family in Kerameikos. Accordingly, these artifacts coming from Athens can be considered as indirect evidences which contributes to the archaeology and the history of the Heracleia in the Black Sea (Ohly, 1965; Hoepfner, 2022)¹.

It can be thought that the *peribolos* in question seems to be an extension of the tomb monuments that started to appear in Athens in the mid-5th century BC (Figs. 2-3), (Leader, 1997, p. 684). Moreover, as Closterman and other scholars pointed out, it is clear that these kind of monuments emphasize marriage, the commemoration of family members, and family unity as the context of this tradition (Closterman, 2007, p. 650-651; Kurtz & Boardman, 1971, pp. 106-108; Garland, 1988, p. 131). On the other hand, the meaning of this *peribolos* associated with a Black Sea settlement might have represented some kind of social and political developments in Heracleia, such as forced migrations or exiles of families (Garland, 1982, pp. 137-138). Accordingly, some of the individuals exiled by tyrants probably might have migrated to Athens where they already knew this city due to their commercial and/or political activities (Hoepfner, 2022: pp. xviii-xix). Thus the *peribolos* belonging to the Heracleian family presumably appeared as a symbol of their new life as foreign residents or metics there (Ohly, 1965, p. 343; Brueckner, 1909, p. 64-65; Breder, 2013^a, p. 173). Considering the chronological sequence of the 4th century BC that determined the Heracleot funerary *stelae* (Hildebrandt, 2006, pp. 305-306, 129-131; Breder, 2013^a, p. 172, pl. 292 abb. 27) - the sequence also constitutes the period when tyrant domination was still continuing in Heracleia - it is possible to say that lives of the metic families in question could have been oscillated between slavery or new opportunities offered by *poleis* such as Athenai and Sinope (Figs. 2-3, 4-7), (Loddo, 2022, pp. 156-161; Manoledakis, 2022, p. 272; Lewis, 2024, p. 171-175).

1 In his book translated into Turkish in 2022, Hoepfner's mention of related Heracleian *peribolos* in Kerameikos of Athens is very important in terms of archaeology and history of the Paphlagonia or the Southwestern Black Sea. *see.*, (Hoepfner, 2022).

On the other hand, especially when it comes to the Southern Black Sea region researchers often specified that such metic families may be elites and wealthy merchants who dominate maritime trade (Woolmer, 2013, p. 228; Braund, 2007, p. 55; Xen. Anab., 1.8.5-6). Besides, the individuals we know from historical records or proxeny decrees, are involved in commercial activities between Athens and Heracleia Pontica. One of the earliest examples is a Heracleian shipman identified in an Athenian inscription from the 4th century BC (Ginesti-Rosell, 2013^a, pp. 304-305).

Another remarkable name is mentioned in the speeches of Demosthenes, whose name is Lykon (Demost., Against Callip., 52.3-9). He was a merchant from Heracleia and he died during his journey to Libya heading off from the Athenian port in the 4th century BC. After his death, a lawsuit was filed for a large amount of cash that Lykon left before his departure (Mack, 2015, p. 77).

Another argument illustrates a crisis experienced by Heracleides of Salamis in the port Heracleia Pontica which appears in a proxeny decree from Athens dating around 330-325 BC (Lambert, 2018, p. 55; Woolmer, 2013, pp. 228-229). Heracleides probably stopped at the port of Heracleia Pontica during his marine trade from the Black Sea to Athens where his ship's sails were confiscated by Dionysios. As determined by the epigraphic sources, the problem was resolved by a decree issued in Athens, and an official was sent to Dionysios. This is vital as it reveals the position of Heracleia Pontica in Black Sea maritime trade and represents another argument coming from outside its borders (Casson, 1967, pp. 122-124; Reed, 2003, p. 117). A grain donation to Athens, attributed to a person named Dionysios, is also documented (Meritt, 1941, p. 49). Therefore it is considered that the name mentioned in the inscription dating around 324 BC may refer to the Heracleian tyrant (Casson, 1986, p. 183; Lambert, 2018, p. 302; IG II² 360, 363).

Apart from the funerary relief stele of Korallion (Fig. 4) and marble *lekythos* (Fig. 5) from the same burial site, the most significant finds are those of Dromon (320 BC) (Fig. 6) and of Lykinos (4th century BC) (V) who were from Piraeus and another find was of Konna possibly from Athens (4th century BC), (Fig. 7), (Ginesti-Rosell, 2012, pp. 318-321 no. 423, 428, 430). The proxeny stele of Sostratos from the Acropolis of Athens (Fig. 8) dated between 330-325 BC should also be underlined (Palagia, 1990, p. 57; Lambert, 2012, p. 134).

When taking into account the existence of these names in such a remote place from their homeland, whose identities are far more defined on the funerary *stelae* and proxeny decrees, it comes to mind that they constitute metic family members who lived in Athens somehow. Because the chronology coincides with the tyranny in Heracleia Pontica and possible forced migrations, in other words, exiles caused by the anti-democratic policies, successfully practiced by Clearchus, Satyros, Timotheos, and his brother Dionysios (Mandel, 1988, pp. 59-63; Van Oppen de Ruiter, 2020, pp. 18-19; Gallotta, 2022, pp. 239-244).

Discussion and Conclusion

In fact, the earliest abroad evidence regarding the close relations of Heracleia Pontica with Hellas is a votive group sent to Olympia, but cannot be verified by archaeology. There is only a historical record (Paus., 5.26.7) of this important but relatively obscure group of statues relating to the city's long-distance interaction (Farnell, 1921, p. 132; Burstein, 1976, pp. 35, 119; Tsetschladze, 2022, p. 528). These statues, dated to the late archaic period, are a votive group by Heracleots. The works were dedicated to the father of the founder hero of the Pontic city, to the Olympia, as an appreciation of a victory against the Mariandynians in Paphlagonia (Boardman, 1990, p. 7 no. 1704; Erciyas, 2003, p. 1408; Manoledakis, 2022, p. 97).

Among the external archaeological arguments we have evaluated (I-VI), there are those known other than Sotimos and Sostratos of Heracleia (Figs. 1, 8), who were awarded honors such as proxeny by Athens. Stele of Mnemon and Kallias of Heracleia found in Athens dated to 337-326 BC were excluded from our study because they do not belong to the works in relief, but should also be considered (Lambert, 2007, pp. 114-115; Reed, 2003, p. 127). It has also been determined that in another decree given approximately the same date (337-320 BC), the name Pandios of Heracleia was mentioned. And there were records of two different Heracleians of the same century but could not be read (Woodhead, 1997, p. 123 no. 82, 157-159, no. 104; Lambert, 2007, p. 105 no. 83, 122 no. 126, 125 no. 143; Ginesti-Rosell, 2013^b, pp. 299-300; Avram, 2013, pp. 145-188).

Also, the grain supplies provided by the Heracleot merchants to Athens mentioned in inscriptions, are interpreted by scholars as their political or commercial expectations (Csapo & Wilson, 2022, p. 22; Lambert, 2007, p. 105 no. 81, 114; Lambert, 2012, p. 144, 156-158; Adak, 2003, p. 85, 154; IG II² 408). However, we see that which of the homonymous cities belonged to these people has been a point of discussion among scholars for a while. Because it has been determined that there are at least more than twenty cities founded by the son of Zeus, bearing his name across the Mediterranean, Aegean, and the Black Sea (Ruge, 1912, pp. 423-440; Heineman, 2021, p. 262). But, depending on the historical conjunctures in Athenai and in Heracleia Pontica, the grain demand of the former and the critical position of the latter in the Black Sea maritime trade seem to make it possible to correlate the two settlements in interpretation of the archaeological material (Karo, 1943, p. 32; Boardman, 1995, pp. 114, 119 fig. 112-2; Stroszeck, 2002/2003, p. 172; Hildebrandt, 2006, pp. 129-130; Childs, 2018, p. 39).

In addition, the individuals and/or the family members referred as Heracleian are not limited to those mentioned above. Many names presumably related to this city have been introduced in finds such as proxeny decrees, *stelae*, and *kioniskoi* found in Athens or around.

A considerable inventory has been put forward that illustrates the extent of the relationship between the two cities. Accordingly, more than six hundred Heracleians had been shown in the Attica region and most of them were - although uncertain - probably of Pontic origin. Additionally, by considering this inventory, it has been claimed that the Heracleots constitute the second most populous metic group in Athens². If the group of finds, unearthed in Athenai and Piraeus consisting of Classical period grave *stelae* belonging to the Paphlagonians is attached to this inventory, we can understand that Heracleia's interaction with Athenai could have been much more consolidated (Bäbler, 1998, pp. 93-100, 228-233 no. 33-40; Ginesti-Rosell, 2016, pp. 189-190).

All these statements seem to have enabled the background of a consensus in associating the archaeological evidences we discussed in this study, with the city of Heracleia in the Black Sea. Indeed, most scholars agree that the people who were buried in the monumental Heracleot *peribolos* of Kerameikos are of Pontic origin (Hoepfner, 2022, p. xviii; Knigge, 1988, p. 121; Burstein, 1976, pp. 72-79, 237; Childs, 2018, p. 39; Loddo, 2022, p. 158). Although for proxy of Sostratos, the southern Italy was considered, recent researches point it to the Black Sea (Lambrechts, 1958, pp. 151-157; Mikalson, 1998; Culasso-Gastaldi, 2004, pp. 258-259; Lambert, 2012, p. 124).

We can say that the situation is similar for funerary *stelae* other than the related *peribolos*. Based on epigraphic evidences, obtained from funerary *stelae* dated between the 4th and 3rd centuries BC, Ginesti-Rosell revealed the presence of thirty people in Athens, most likely from the city of Heracleia Pontica (Ginesti-Rosell, 2012, pp. 92-93, 308-322). Scholars state that Pontic candidates - Sotimos and Sostratos - are prevailing for the references to Heracleians as well in the proxy decrees. Since the Black Sea maritime trade and wheat demands were vital for Athens from this period onwards, one may think that the Southern Black Sea representative as Heracleia appears to be the strongest candidate, among all homonymous cities (Culasso-Gastaldi, 2004, pp. 258-259; Fraser, 2009, pp. 181-188). We do not much about the Sostratos of Heracleia. But it seems he should have had a similar past in relations with Athens just as the Sotimos. By considering his decree, this man must have been respected by Athenians somehow.

2 “The turbulent politics of Heracleia on the Pontus in the fourth and early third centuries B.C.,... created a large group of exiles, and many of these found their way to Athens. In fact, within the foreign population... the Heracleotai stand out, initially by sheer numbers, second only to immigrants from Miletos. From tombstones alone we can identify in Athens, from the mid-fourth century B.C. to the second century A.D., over 600 Heracleotai...”, *see.*, (Mikalson, 1998, p. 254; Avram, 2013, pp. 145-188; Öztürk, 2014, p. 160); For the Athenian inscriptions referring Heracleians and their relations with Pontic Heracleia, *see.*, (Brueckner, 1909, pp. 64-65; Robert, 1973, pp. 437-442; Osborne & Byrne, 1996, pp. 72-98; Pitt, 2022, p. 148 fig. 66.1; Vestergaard, 2001, pp. 84-87; Erciyas, 2003, p. 1415 with her references to Saprykin, 1997, pp. 288, 290). On the records from Rostovtzeff dated between 2nd-1st century B.C. *see.*, (Rostovtzeff, 1941, pp. 1455; Ferguson, 1911, p. 316); On records between 3rd to 1st centuries B.C. *see.*, (Pope, 1947, pp. 53-56); For the records in Aegean and Hellas between 4th to 1st centuries B.C. *see.*, (Asheri, 1972, pp. 26-27; Ferrario, 2014, p. 270; Nemeth, 2001, pp. 333, 340; Fraser, 2009, p. 186; Jonnes & Ameling, 1994, pp. 115-120, 162 no. 120).

In this respect, Heracleia's possible membership in the Delian League is not surprising. Because, we can claim this due to its name being almost identified in the tribute lists of 424 BC (Avram *et al.*, 2004, p. 956; Demir, 2001, p. 539). Therefore one may think that it is also possible to discover external or abroad evidences of Pontic Heracleians, who escaped from the pressure of the tyrants, thanks to the Aegean studies (West, 1935; Stroszeck, 2002/2003; Culasso-Gastaldi, 2004; Ginesti-Rosell, 2012).

It can be considered that, as external evidences, the *stelae* and proxeny decrees in question, which were discovered in Athens are very valuable finds contributing to the archeology and history of Heracleia Pontica. They are also unique in revealing the role of the city in its long-distance interaction. Another dimension is that, as Hoepfner - who made valuable contributions to the archaeology of Heracleia - pointed out for Heracleot *peribolos*, they constitute the arguments we have in understanding the social developments, separations and evolution of the settlement (Hoepfner, 2022; Ohly 1965; Karagöl, 2022). These footprints of the Heracleians, who oscillated between oligarchy, democracy, and tyranny, unearthed in such a remote place, have an interdisciplinary nature (Arist., Pol., 5.5.6). Archaeology, epigraphy, and history played an active role in introducing this knowledge to the regional archaeology, and they will stimulate the motivation of continuous archaeological excavations which are crucially needed in Heracleia Pontica.

As mentioned above, the descriptions and dating of the works have been constructed by scholars, in parallel with the social developments in Athenai and/or in Heracleia Pontica (I-VI), (Richter, 1967, p. 45). Based on the finds, we can suggest that the Athenian influence in Heracleia began institutionalized after the expedition of Perikles and the city's membership of the Delian League. Then, by the establishment of the tyranny, we can see that this effect was felt even more, especially in elite families. Soon, when the grain trade was intensified in the Black Sea, it made the Heracleian port one of the favorite points for Athenai. It must have also triggered the migration of rich Heracleian merchants to Athenai as *metoikoi* (Bergemann, 1995, 33; Saprykin, 2017, p. 352; Marek, 1984, 46 no. p. 36). As a result, Heracleia became a crucial maritime trade hub on the way to the Aegean, thus gained an important role in the Athenian trade network (Saprykin, 1997, p. 59; Keen, 2000, p. 66; Reed, 2003, p. 30). Preserving this relationship was extremely vital both for the elites of Heracleia and for Athenai, in terms of ensuring the continuity of grain supply from the Northern Black Sea. Therefore, the opinion that the Heracleians reflected on the *stelae* presumably belonged to merchants, who somehow benefited from this commercial relationship, is getting stronger (Casson, 1967, p. 120-124; Himmelmann, 1999, p. 33). On the other hand, it can be assumed that the inscribed *stelae* pointing to their origins as Heracleians, appears as a symbol of their loyalty to the city, where they were born or their parents belonged to.

There are two key chronological thresholds considered to decipher the works, especially

the Heracleot *peribolos* of Kerameikos. These thresholds are determined as 364 BC and 338 BC (Knigge, 1988, pp. 122-123). The first one appears as the date when Clearchus overthrew the regime in Heracleia and then the exile of the democrats (Berve, 1967, pp. 316-320). However, another important threshold about Heracleia is an earthquake (Arist., *Met.*, 2.8. 367a), possibly occurred around 360 BC, and thought to have caused great destruction³ (Ramsay, 2009, p. 88). It can be thought that this event not only facilitated the tyrant's job, who was trying to take over the administration but also stimulated the migration of citizens. If so, it should be noted that Heracleia may have experienced two different but devastating events in the second quarter of the 4th century BC. One of these must have been constituted from the political crisis led by Clearchus, and the other probably a natural disaster caused by the North Anatolian Fault.

The last chronological threshold is a decree that allowed the use of stones of Kerameikos to strengthen the Athenian city walls due to the likely threat by Philip II (Kurtz & Boardman, 1971, p. 107; Bergemann, 1997, p. 138). Of course, a little while the renewal of the necropolis and the law prohibiting excessive spending on grave monuments also affected this process in various ways (Garland, 1982, pp. 127-128, 135). Accordingly, the tombs in question, are estimated as individuals buried in the *peribolos* built between 364 and 338 BC whom, probably Clearchus exiled (Childs, 2018, p. 39).

The problem with democratic exiles in Heracleia started in the second quarter of the 4th century BC in the reign of Clearchus and continued increasingly during the administrations of Satyros, Timotheos and Dionysios. It was not solved during the reign of Alexander the Great, Perdikkas, Antigonos, and Lysimachus but was partially ceased by Nymphis, immediately after the Battle of Kurupedion (Asheri, 1972, pp. 27-28; D'Agostini, 2020, pp. 71-72). With the evidences discussed, we can better understand that the problem in question, which has been experienced in the city for approximately 80 years is long-term and serious.

In this study, the archaeological and historical potential of ancient Heracleia Pontica is tried to be evaluated in the light of finds from outside its borders (I-VII, Figs. 1-8), (Atasoy, 2018, pp. 111-112). Consequently, through Aegean and Athenian archaeology the urban development of the settlement being able to based much stronger structures, and it is possible to find more detailed answers to the question of what is known on early Heracleia.

In addition, with the help of achieved responses from outside the Paphlagonian region, it is clear that we can deepen the dimensions of regional archaeology, the interaction between the Black Sea and the Aegean in between the Archaic and Hellenistic periods. Along with these, it should be emphasized that Heracleia Pontica which constitutes one of the most important sites in Northwest Anatolia, deserves continuous archaeological excavations.

3 See., also forthcoming, "Securing An Earthquake Record".

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References

Ancient Sources:

- Arist., Met., Aristotle, (1952). *Meteorologica* (H. D. P. Lee, Trans.), E. Capps, W. H. D. Rouse, L. A. Post & E. H. Warmington (Eds.), London: The Loeb Classical Library, Harvard University Press.
- Arist., Pol., Aristoteles, (1959). *Politics* (H. Rackham, Trans.), E. Capps, W. H. D. Rouse, L. A. Post & E. H. Warmington (Eds.), Cambridge: The Loeb Classical Library, Harvard University Press.
- Arr., Periplus, Arrianus (2005). *Periplus Ponti Euxini* (M. Arslan, Çev.), İstanbul: Odin Yayıncılık.
- Demost., Against Callip., Demosthenes, (2003). *Demosthenes Speeches 50-59 - Against Callippus* (Victor Bers, Trans.), Austin: University of Texas Press.
- Diod., Diodoros of Sicily, (1954). *Bibliothèque Historique - The Library of History* (Russel M. Geer, Trans.), E. Capps, W. H. D. Rouse, L. A. Post, & E. H. Warmington (Eds.), Massachusetts: Loeb Classical Library, Harvard University Press.
- Diog. Laert., Diogenes Laertius, (2018). *Lives of the Eminent Philosophers* (P. Mensch, Trans.), J. Miller (Ed.), Oxford: Oxford University Press.
- Isok., Epist., Isocrates, (1945). *Epistulae-Letter 7 "to Timotheus"* (L. van Hook, Trans.), E. Capps, W. H. D. Rouse, L. A. Post & E. H. Warmington (Eds.), The Loeb Classical Library, London: Harvard University Press.
- Just., Junianus Justinus (1853). *Epitome of the Philippic History of Pompeius Trogus* (J. S. Watson, Trans.), London: Henry G. Bohn.
- Memn., Memnon, (2007). *Memnon Heracleia Pontike Tarihi Peri Herakleias-De Rebus Herakleiae* (M. Arslan, Çev.), İstanbul: Odin Yayıncılık.
- Paus., Pausanias, (1926). *Description of Greece* (W. H. S. Jones, H. A. Ormerod, Trans.), E. Capps, T. E. Page & W. H. D. Rouse (Eds.), London: Loeb Classical Library.
- Strab., Strabon (1961). *The Geography of Strabo* (H. L. Jones, Trans.), T. E. Page & E. Capps (Eds.), Cambridge: Loeb Classical Library, Harvard University Press.
- Thuk., Thucydides, (1920). *History of the Peloponnesian War* (C. F. Smith, Trans.), E. Capps, T. E. Page & W. H. D. Rouse (Eds.), LOEB Classical Library, London: G. P. Putman's Sons.
- Xen., Anab., Xenophon, (1947). *Anabasis* (C. L. Brownson, Trans.), E. Capps, W. H. D. Rouse, L. A. Post, E. H. Warmington & T. E. Page, (Eds.), Cambridge: The Loeb Classical Library, William Heinemann.

Modern Sources:

- Adak, M. (2003). *Metöken als Wohltäter Athens. Untersuchungen zum sozialen Austausch zwischen ortsansässigen Fremden und der Bürgergemeinde in klassischer und hellenistischer Zeit (ca. 500-150 v. Chr.)*. München: WF Verlag.
- Akkaya, T. (1994). *Herakleia Pontike (Karadeniz Ereğlisi)'nin Tarihi Gelişimi ve Eski Eserleri*: İstanbul: Troya Yayıncılık.
- Akurgal, E. (1986). Neue Archaische Skulpturen aus Anatolien. In: H. Kyrieleis (Ed.), *Archaische und Klassische Griechische Plastik. Akten des Internationalen Kolloquiums vom 22–25. April 1985 in Athen* (pp. 1-14). Mainz: Philipp von Zabern.
- Arslan, M. (2016). Herakleia Pontike’li Historiograflar ve Eserleri. *Philia Suppl.*, 1, 98-110.
- Arslan, M. (2018). Arkaik Dönem’de Tiranlık ve Herakleia Pontikeli Klearkhos - Tyranny in Archaic Period and Clearchus of Heraclea Pontica. In M. Arslan & F. Baz (Eds.), *Arkeoloji, Tarih ve Epigrafi'nin Arasında: Prof. Dr. A. Vedat Çelgin'in 68. Doğum Günü Onuruna Makaleler*, (93-128), İstanbul: Arkeoloji ve Sanat Yayınları.
- Asheri, D. (1972). Über die Frühgeschichte von Herakleia Pontice. In F. K. Dörner (Hrsg.), *Herakleia Pontike: Forschungen zur Geschichte und Topographie* (pp. 9-34). Österreichische Akademie der Wissenschaften, Denkschriften 106, Ergänzungsbande zu den Tituli Asiae Minoris V. Wien: Hermann Böhlau Nachf.
- Asheri, D. (1975). Eracle, Eraclea e i Cylicranes: Mitologia e Decolonizzazione Nella Grecia del IV sec. a.C., *Ancient Society*, 6, 33-50.
- Atasoy, S. & Erpehlivan, H. (2015). Tios'ta Erken Yerleşmeye Ait Keramikler – Ceramics From the Early Settlement at Tios. In S. Atasoy & Ş. Yıldırım (Eds.), *Zonguldak'ta Bir Antik Kent: Tios, 2006-2012 Arkeolojik Çalışmaları ve Genel Değerlendirme* (pp. 202-207). Ankara: T.C. Kültür ve Turizm Bakanlığı, 202-217.
- Atasoy, S. (2015). Tios Kentinin Siyasi Tarihi. In S. Atasoy & Ş. Yıldırım (Eds.), *Zonguldak'ta Bir Antik Kent: Tios, 2006-2012 Arkeolojik Çalışmaları ve Genel Değerlendirme* (pp. 15-28). Ankara: T.C. Kültür ve Turizm Bakanlığı.
- Atasoy, S. (2018). Surveys and Excavations on the Southern Black Sea Coast. In M. Manoledakis & G. R. Tsatskheladze (Eds.), *Essays on the Archaeology and Ancient History of the Black Sea Littoral* (pp. 109-146). Colloquia Antiqua 18. Leuven: Peeters.
- Avram, A., Hind, J. & Tsatskheladze, G. R. (2004). The Black Sea Area, In M. H. Hansen & T. Heine Nielsen (Eds.), *An Inventory of Archaic and Classical Poleis* (pp. 924-973). Oxford: Oxford University Press.
- Avram, A. (2013). *Prosopographia Ponti Evxini Externa*, Leuven: Peeters.
- Bäbler, B. (1998). *Fleissige Thrakerinnen und wehrhafte Skythen Nichtgriechen im klassischen Athen und ihre archäologische Hinterlassenschaft*. Stuttgart: B. G. Teubner.
- Bağdatlı Çam, F., Bora, A. & Bilici Altunkayaaher, H. (2019^a) New Archaeological Expeditions in the Ancient City of Amastris, In G. R. Tsatskheladze, S. A., A. Temür, D. Yiğitpaşa (Eds.), *Settlements and Necropoleis of the Black Sea and its Hinterland in Antiquity: Select Papers From the Third International Conference 'The Black Sea in Antiquity and Tekkeköy: An Ancient Settlement on the Southern Black Sea Coast', 27-29 October 2017, Tekkeköy, Samsun*, (190-207), Archaeopress Archaeology, Oxford: Archaeopress Publishing Ltd.

- Bağdatlı Çam, F., Bora, A. & Bilici Altunkayalier, H. (2019^b), Amastris (Amasra) Antik Kentinde Arkeolojik Tespitler - Archaeological Explorations in Ancient City of Amastris (Amasra), TÜBA-AR, 24, , 169-188.
- Bağdatlı Çam, F., Bilici H., Elalmış, İ., Sağlan, S., Öztürk, B., Alkaç, E., Kürüm, Bora, A., M., Verim, E., Paksoy, S., Bora, Y. & Akgün, S. (2022). Bartın İli Antik Dönem Yerleşimleri: 2017-2019 Yılı Araştırma Sonuçları. In F. B. Çam (Ed.), *Bartın İli ve İlçeleri Yüzey Araştırması (BİYA) İlk Tespitler ve Belgeler: Paphlagonia'dan Parthenios'a I* (s. 13-111). İstanbul: Arkeoloji ve Sanat Yayınları.
- Banou, E. S. & Bourmias, L. K. (2014). *Kerameikos*. Athens: John S. Latsis Public Benefit Foundation.
- Belke, K. (1996). *Paphlagonien und Honorias*. (Tabula Imperii Byzantini 9). Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- Bergemann, J. (1995). Attische Grabreliefs: Besprechung ausgewählter Beiträge aus den Jahren 1982 bis 1991. *Göttingische Gelehrten Anzeigen*, 247/1-2, 10-52.
- Bergemann, J. (1997). *Demos und Thanatos: Untersuchungen zum Wertsystem der Polis im Spiegel der Attischen Grabreliefs des 4. Jahrhunderts v. Chr. und zur Funktion der Gleichzeitigen Grabbauten*. Munich: Biering and Brinkmann.
- Berve, H. (1967). *Die Tyrannis bei den Griechen I-II*. München: C. H. Beck'sche Verlagsbuchhandlung.
- Bilir, A. & Bilir, G. (2022). Heracleia Pontica: Akheron Nekropolü Kazıları ve İlk Bulgular. In A. Efiloğlu, G. Arslan, Y. Namal & Ç. Tan (Eds.), *Zonguldak: Antik Çağ'dan Cumhuriyet'e Bir Kentin Tarihi* (pp. 43-57). Ankara: Zonguldak Bülent Ecevit Üniversitesi.
- Bittner, A. (1998). *Gesellschaft und Wirtschaft in Heracleia Pontike: Eine Polis zwischen Tyrannis und Selbstverwaltung*, Bonn: Dr. Rudolf Habelt GmbH.
- Boardman, J., Palagia, O. & Woodford, S. (1988). Herakles. In J. Ch. Balty, E. Berger, J. Boardman, P. Bruneau, F. Canciani, L. Kahil, V. Lambrinoudakis & S. Erika (Eds.), *Lexicon Iconographicum Mythologiae Classicae IV/1* (pp. 728-838). Zürich: Artemis Verlag.
- Boardman, J. (1990). Herakles Dodekathlos. In J. Ch. Balty, E. Berger, J. Boardman, P. Bruneau, F. Canciani, L. Kahil, V. Lambrinoudakis & S. Erika (Eds.), *Lexicon Iconographicum Mythologiae Classicae V/1* (pp. 5-16). Zürich: Artemis Verlag.
- Boardman, J. (1995). *Greek Sculpture The Late Classical Period*. London: Thames and Hudson.
- Bosworth, A. B. (1994). Heracleides of Pontus and the Past: Fact or Fiction, In I. Worthington (Ed.), *Ventures into Greek History* (pp. 15-27). Oxford: Clarendon Press.
- Braund, D. (2007). Black Sea Grain for Athens? From Herodotus to Demosthenes. In V. Gabrielsen & J. Lund (Eds.), *The Black Sea in Antiquity Regional and Interregional Economic Exchanges* (pp. 39-68). Black Sea Studies 6, Aarhus: Aarhus University Press.
- Breder, J. (2013^a). *Attische Grabbezirke klassischer Zeit*. Wiesbaden: Harrassowitz Verlag.
- Breder, J. (2013^b). Zur Architektur attischer Grabbezirke klassischer Zeit. In K. Sporn (Hrsg.), *Griechische Grabbezirke klassischer Zeit. Normen und Regionalismen. Akten des Internationalen Kolloquium am Deutschen Archäologischen Institut, Abteilung Athen, 20-21 November 2009* (pp. 29-44). München: Hirmer Verlag.
- Bruceckner, A. (1909). *Der Friedhof am Eridanos bei der Hagia Triadha zu Athen*. Berlin: Georg Reimer.
- Bruceckner, A. (1910). Κεραμεικου Ανασκαφαι. *Archaiologikē ephēmeris*, 95-144.
- Burney, C. A. (1956). Northern Anatolia Before Classical Times. *Anatolian Studies*, 6, 179-203.

- Burstein, S. M. (1976). *Outpost of Hellenism: The Emergence of Heraclea on the Black Sea*, London: University of California Press.
- Burstein, S. M. (2006). The Greek Cities of the Black Sea. In K. H. Kinzl (Ed.), *A Companion to the Classical Greek World* (pp. 137-152). Malden: Blackwell Publishing Ltd.
- Casson, L. (1967). *The Ancient Mariners: Seafarers and Sea Fighters of the Mediterranean in Ancient Times*. New York: The Macmillan Company.
- Casson, L. (1986). *Ships and Seamanship in the Ancient World*, Princeton: Princeton University Press.
- Childs, W. A. P. (2018). *Greek Art and Aesthetics in the Fourth Century B.C.* Princeton: Princeton University Press.
- Christy, J. P. (2016). Chion of Heraclea: Letters and the Life of a Tyrannicide. In K. de Temmerman & K. Demoen (Eds.), *Writing Biography in Greece and Rome Narrative Technique and Fictionalization* (pp. 259-177). Cambridge: Cambridge University Press.
- Clairmont, C. W. (1993-1995). *Classical Attic Tombstones 1-6*, Kilchberg: Akanthus.
- Closterman, W. E. (2007). Family Ideology and Family History: The Function of Funerary Markers in Classical Attic Peribolos Tombs. *American Journal of Archaeology*, 111/4, 633-652.
- Conze, A. (1893). *Die Attischen Grabreliefs I*, Berlin: Verlag von W. Spemann.
- Conze, A. (1900). *Die Attischen Grabreliefs II*, Berlin: Verlag von W. Spemann.
- Conze, A. (1906). *Die Attischen Grabreliefs III*, Berlin: Verlag von Georg Reimer.
- Coşkun, A. (2019). Pontic Athens An Athenian Emporion in Its Geo-Historical Context, *Gephyra*, 18, 11-31.
- Cremer, M. (1992). *Hellenistisch-Römische Grabstelen im Nordwestlichen Kleinasien 2. Bithynien*, (Asia Minor Studien Band 4/2), Bonn: Dr. Rudolf Habelt.
- Csapo, E. & Wilson, P. (2022). Greek Theatre and Autocracy in the Fifth and Fourth Centuries. In E. Csapo, H. R. Goette, J. R. Green, B. Le Guen, E. Paillard, J. Stoop & P. Wilson (Eds.), *Theatre and Autocracy in the Ancient World* (pp. 17-35). Berlin: Walter de Gruyter GmbH.
- Culasso-Gastaldi, E. (2004). *Le Prossenie ateniesi del IV secolo a.C. gli onorati asiatici*. Alessandria: Edizioni dell'Orso.
- D'Agostini, M. (2020). Can Powerful Women Be Popular? Amastris: Shaping A Persian Wife into a Famous Hellenistic Queen. In R. A. Faber (Ed.), *Celebrity, Fame, and Infamy in the Hellenistic World* (pp. 70-89). Toronto: University of Toronto Press.
- Dana, M. (2011). Les relations des cités du Pont-Euxin ouest et nord avec les centres culturels du monde grec. *Ancient Civilizations from Scythia to Siberia*, 17, 47-70.
- Davis, D., Brennan, M. L., Opait, A. & Beatrice, J. S. (2018). The Ereğli E Shipwreck, Turkey: An Early Hellenistic Merchant Ship in the Black Sea. *The International Journal of Nautical Archaeology*, Vol. 47-1, 57-80.
- De Boer, J. G. (2005). The Foundation of Agathopolis/Alaeouteichos and the Athenian Black Sea Policy in the 5th Century BC, In D. Kacharava, M. Faudot, E. Geny (Eds.), *Pont-Euxin et polis: polis hellenis et polis barbaron. Actes du Xe Symposium de Vani, 23-26 septembre 2002*, (167-180). Besançon: Institut des Sciences et Techniques de l'Antiquité.
- De Boer, J. G. (2006). The Greek Colonies in the Pontic Area During the 5th Century BC, Athens, The Rise of the "Barbarian" Kingdoms and the Ionian Revolt: An Economic Approach. *Talanta*, Vol. 36-37, 269-287.

- Demir, M. (2001). Perikles'in Karadeniz Seferi Üzerine Yeni Bir Yorum. *Belleten*, Vol. 65/243, 529-540.
- Desideri, P. (1991). Cultura Eracleota : da Erodoro a Eraclide Pontico. In B. Rémy (Ed.), *Pontica I: Recherches sur l'histoire du Pont dans l'Antiquité* (pp. 7-24). İstanbul: Institut Français d'Études Anatoliennes-Georges Dumézil.
- Diepolder, H. (1931). *Die attischen Grabreliefs des 5. und 4. Jh. v.Chr.* Berlin: H. Keller.
- Dökü, F. E., Dinç, G. & Şimşek, F. (2006). Ahmet Gököğlü Not Defterleri: Paphlagonia Bölgesi İlk Kültür Envanteri. *Anadolu-Anatolia*, 30, 65-82.
- Dörner, F. K. (1967). Heracleia. In Konrat Ziegler, Walther Sontheimer (Hrsg.), *Der Kleine Pauly Lexikon der Antike 2*, (pp. 1035-1036). Stuttgart: Alfred Drucken Müller Verlag.
- Dörner, F. K. (1990). Historisch-archäologische Forschungen in Bithynien und an der Türkischen Schwarzmeerküste. *Nürnberger Blätter zur Archäologie*, 1/2, 34-36.
- Dörner, F. K. & Hoepfner, W. (1962). Vorläufiger Bericht Über Eine Reise in Bithynien 1961. *Archäologischer Anzeiger*, 565-594.
- Dörner, F. K. & Hoepfner, W. (1989). Das Eiland Thynias-Apollonia. *Istanbuler Mitteilungen*, 39, 103-106.
- Ehrhardt, N. (1996). Ilias B 508 und die Gründer von Heraclea Pontica. *Hermes*, 124/1, 101-103.
- Erciyas, D. B. (2003). Heracleia Pontica – Amastris. In D. V. Grammenos & E. K. Petropoulos (Eds.), *Ancient Greek Colonies in the Black Sea, II* (pp. 1403-1431). Thessaloniki: Publications of Archaeological Institute of Northern Greece.
- Erciyas, D. B. (2007). Cotyora, Kerasus and Trapezus: The Three Colonies of Sinope. In D. V. Grammenos & E. K. Petropoulos (Eds.), *Ancient Greek Colonies in the Black Sea 2, II* (pp. 1195-1206). (BAR International Series 1675). Oxford: Bar Publishing.
- Erichsen, A. (1972). Ein Hekate-Relief in Heracleia Pontike. In F. K. Dörner (Hrsg.), *Heracleia Pontike: Forschungen zur Geschichte und Topographie* (pp. 47-49). Österreichische Akademie der Wissenschaften, Denkschriften 106, Ergänzungsbande zu den Tituli Asiae Minoris V. Wien: Hermann Böhlau Nachf.
- Farnell, L. R. (1921). *Greek Hero Cults and Ideas of Immortality*, Oxford: The Clarendon Press.
- Ferguson, W. S. (1911). *Hellenistic Athens: An Historical Essay*. London: Macmillan and Co. Ltd.
- Ferrario, S. B. (2014). *Historical Agency and the 'Great Man' in Classical Greece*. Cambridge: Cambridge University Press.
- Fraser, P. M. (2009). *Greek Ethnic Terminology*. Oxford: Oxford University Press.
- Gallo, L. (2013). Athens and the Pontic Poleis in the Tribute List of 425/424 BC. In G. R. Tsatskhadze, S. Atasoy, A. Avram, Ş. Dönmez & J. Hargrave (Eds.), *The Bosphorus: Gateway Between the Ancient West and East (1st Millennium BC–5th Century AD) Proceedings of the Fourth International Congress on Black Sea Antiquities Istanbul, 14th–18th September 2009* (pp. 159-161). (BAR International Series 2517). Oxford: BAR Publishing.
- Gallotta, S. (2022). Riflessioni storiche sulle relazioni internazionali di Dionisio, tiranno di Eraclea Pontica. *Erga Logoi*, 10/1, 237-253.
- Garland, R. S. J. (1982). A First Catalogue of Attic Peribolos Tombs. *The Annual of the British School at Athens*, 77, 125-176.
- Garland, R. (1988). *The Greek Way of Death*, Ithaca: Cornell University Press.

- Ginesti-Rosell, A. (2012). *Epigrafia Funerària d'Estrangers a Atenes (segles VI-IV aC) - Die Grabinschriften der Ausländer in Athen (6. bis 4. Jh. v. Chr.)*, Tarragona: Institut Català d'Arqueologia Clàssica.
- Ginesti-Rosell, A. (2013^a). Las profesiones de los metecos en el texto y en la imagen. In Santiago Álvarez, Rosa-Araceli; Oller Guzman, Marta (Hrsg.), *Faventia Supplementa 2: Contacto de poblaciones y extranjería en el mundo griego antiguo: estudio de fuentes* (pp. 303-317). Bellaterra: Universitat Autònoma de Barcelona.
- Ginesti-Rosell, A. (2013^b). Próxenos, métoikos, isotelés. La integración de extranjeros en Atenas. In Santiago Álvarez, Rosa-Araceli; Oller Guzman, Marta (Hrsg.), *Faventia Supplementa 2 Contacto de poblaciones y extranjería en el mundo griego antiguo: estudio de fuentes* (pp. 287-302). Bellaterra: Universitat Autònoma de Barcelona.
- Ginesti-Rosell, A. (2016). Fremde Klänge, fremde Bilder? Grabinschriften für Personen aus dem Schwarzmeerraum im klassischen Athen. In V. Cojocaru, D. Braund, T. Castelli, A. Coşkun, M. Dana, L. Grumeza, J. Hupe, A. Rubel & D. Stah (Eds.), *Mobility in Research on the Black Sea Region: The Proceedings of the International Symposium organized by the Iaşi Branch of the Romanian Academy, in collaboration with German Cultural Centre of Iaşi (July 5-10, 2015)* (pp. 183-203). (Pontica et Mediterranea 6). Cluj-Napoca: Mega Publishing House.
- Gökoğlu, A. (1952). *Paphlagonia-Paflagonya (Kastamonu, Sinop, Çankırı, Safranbolu, Bartın, Bolu, Gerede, Mudurnu, Iskilip, Bafra, Alaçam ve Civarı) Gayri Menkul Eski Eserleri ve Arkeolojisi*, Kastamonu: Doğrusöz Matbaası.
- Hall, E. (2019). The Tragedians of Heraclea and Comedians of Sinope. In D. Braund, E. Hall & R. Wyles (Eds.), *Ancient Theatre and Performance Culture Around the Black Sea* (pp. 45-58). Cambridge: Cambridge University Press.
- Heineman, K. (2021). Oechalia, Delphi, and Omphale. In D. Ogden (Ed.), *The Oxford Handbook of Heracles* (pp. 251-265). Oxford: Oxford University Press.
- Hildebrandt, F. (2006). *Die attischen Namenstelen Untersuchungen zu Stelen des 5. und 4. Jahrhunderts v. Chr.*. Berlin: Frank & Timme.
- Hill, S. & Crow, J. (1993). 1991 Yılı Amasra Yüzey Araştırması. *Araştırma Sonuçları Toplantısı*, 10, 19-25.
- Himmelman, N. (1999). *Attische Grabreliefs*, Wiesbaden: Springer Fachmedien Wiesbaden GmbH.
- Hind, J. (1999). The Dates and Mother Cities of the Black Sea Colonies (Pseudo-Scymnus and The Pontic Contact Zone). In O. Lordkipanidze, P. Lévêque (eds.), *La Mer Noire zone de contacts: actes du VIIe Symposium de Vani (Colchide) - 26-30 IX 1994, (25-34)*. Besançon: Institut des Sciences et Techniques de l'Antiquité.
- Hoepfner, W. (1966). *Herakleia Pontike-Ereğli: Eine Baugeschichtliche Untersuchung*. (Österreichische Akademie der Wissenschaften, Denkschriften 89, Ergänzungsbande zu den Tituli Asiae Minoris, II-1). Wien: Hermann Böhlau Nachf.
- Hoepfner, W. (1972). Topographische Forschungen. In F. K. Dörner (Hrsg.), *Herakleia Pontike: Forschungen zur Geschichte und Topographie* (pp. 37-46). (Österreichische Akademie der Wissenschaften, Denkschriften 106, Ergänzungsbande zu den Tituli Asiae Minoris V). Wien: Hermann Böhlau Nachf.
- Hoepfner, W. (2022). *Herakleia Pontike: Karadeniz Ereğli' de Mimari-Arkeolojik Belgeleme ve Araştırmalar* (C. T. Yıldırım, Çev.). İstanbul: Ege Yayınları.

- Hoffmann, A. (1989). Zum Bedesten in Amastris: Ein römischer Marktbau?. *Istanbuler Mitteilungen*, 39, 197-210.
- Humphreys, S. C. (2018). *Kinship in Ancient Athens An Anthropological Analysis I-II*. Oxford: Oxford University Press.
- IG II² (1913-1916). Kirchner, I. (Ed.), *Inscriptiones Graecae II-III. Inscriptiones Atticae Euclidis anno posteriores*, Berlin: De Gruyter. (<https://www.atticinscriptions.com/>).
- IG I³ (1981-1998). Lewis, D. M., Jeffery, L. H., Erxleben, E. & Hallof, K. (Eds.), *Inscriptiones Graecae I Inscriptiones Atticae Euclidis anno anteriores*, Berlin: De Gruyter.
- Jacopi, G. (1937). Missione Archeologica Italiana in Anatolia: Relazione Sulla Prima Campagna Esplorativa (Settembre-Novembre 1935-XIII-XIV. *Bolletino del Reale Istituto d'Archeologia e Storia dell'Arte*, 7/1-6, 3-26.
- Jonnes, L. & Ameling, W. (1994). *The Inscriptions of Heraclea Pontica*, Bonn: Rudolf Habelt.
- Kalinka, E. (1933). Aus Bithynien und Umgebung. *Jahreshefte des Österreichischen Archaeologischen Instituts*, 28, 44-111.
- Karagöl, A. (2022). Heracleia Pontike ile Wolfram Hoepfner Hoca'nın Yeniden Buluşması. In Hoepfner, W., *Heracleia Pontike: Karadeniz Ereğli'de Mimari-Arkeolojik Belgeleme ve Araştırmalar* (pp. xiii-xix) (C. T. Yıldırım, Çev.), İstanbul: Ege Yayınları.
- Karasalihoğlu, M. (2020). Prehistorik Çağlardan Doğu Roma Dönemi Sonuna Kadar Kastamonu Kentinin Kültürel Tabakalaşması. *Mediterranean Journal of Humanities*, 10, 279-300.
- Karauğuz, G. (2008). Karadeniz Ereğlisi ve Amasra Arkeoloji Müzelerinde Bulunan Bazı Eserler Hakkında. *Araştırma Sonuçları Toplantısı*, 25/1, 55-64.
- Karo, G. (1943). *An Attic Cemetery: Excavations in the Kerameikos at Athens Under Gustav Oberlaender and the Oberlaender Trust*. Pennsylvania: The Oberlaender Trust.
- Keen, A. G. (2000). Grain for Athens: The Importance of the Hellespontine Route in Athenian Foreign Policy Before the Peloponnesian War. In G. J. Oliver , R. Brock , T. J. Cornell & S. Hodkinson (Eds.), *The Sea in Antiquity* (pp. 63-73). (BAR International Series 899). Oxford: BAR Publishing.
- Keleş, V. & Çelikbaş, E. (2019). Hadrianoupolis Nekropolleri ve Mezar Tipleri. In E. Özer, A. Türkan, M. Dinç, A. Yaman, Ö. D. Çakmaklı & M. Taşkıran (Eds.), *Anadolu'da Hellenistik ve Roma Dönemlerinde Ölü Gömme Adetleri Uluslararası Sempozyumu (23-26 Temmuz 2018), Bildiri Kitabı* (pp. 187-211). (Aizanoi IV Özel Sayı). Ankara: Bilgin Kültür Sanat Yayınları.
- Knigge, U. (1988). *Der Kerameikos von Athen Führung Durch Ausgrabungen und Geschichte*. (Deutsches Archaeologisches Institut Athen). Athen: Krene Verlag.
- Kurtz, D. C. & Boardman, J. (1971). *Greek Burial Customs*, New York: Cornell University Press.
- Lafli, E., Kan Şahin, G. & Patacı, S. (2013). Iron Age Ceramics From Southwestern Paphlagonia. *Anatolia Antiqua*, 21, 33-68.
- Lambert, S. D. (2007). Athenian State Laws and Decrees, 352/1-322/1: III Honouring Foreigners B. Other Awards. *Zeitschrift für Papyrologie und Epigraphik*, 159, 101-154.
- Lambert, S. D. (2012). *Inscribed Athenian Laws and Decrees 352/1–322/1 BC Epigraphical Essays*, Leiden: Brill.
- Lambert, S. D. (2018). *Inscribed Athenian Laws and Decrees in the Age of Demosthenes Historical Essays*, Leiden: Brill.

- Lambrechts, A. (1958). *Tekst en uitzicht van de Atheense proxeniedecreten, tot 323 v. C.*, Brussel: Paleis der Academiën.
- Lawton, C. L. (1993). An Attic Document Relief in the Walters Art Gallery. *The Journal of the Walters Art Gallery*, 51, 1-9.
- Lawton, C. L. (1995). *Attic Document Reliefs: Art and Politics in Ancient Athens*. New York: Clarendon Press.
- Leader, R. E. (1997). In Death Not Divided: Gender, Family, and State on Classical Athenian Grave Stelae. *American Journal of Archaeology*, 101/4, 683-699.
- Leonhard, R. (1915). *Paphlagonia: Reisen und Forschungen im Nörlichen Kleinasien*, Berlin: Dietrich Reimer.
- Lester-Pearson, M. (2021). Tyranny under Alexander the Great and the Diadochi: the Clearchids of Heraclea Pontica. *Dialogues d'Histoire Ancienne. Supplément*, 21, 141-160.
- Lewis, D. M. (2024). The Local Slave Systems of Ancient Greece, In Samuel D. Gartland, David W. Tandy (eds.), *Voiceless, Invisible, and Countless in Ancient Greece: The Experience of Subordinates 700-300 BCE* (155-183). Oxford: Oxford University Press.
- Loddo, L. (2022). Between Tyranny and Democracy: Political Exiles and the History of Heraclea Pontica. *Erga Logoi*, 10, 155-179.
- Mack, W. (2015). *Proxeny and Polis: Institutional Networks in the Ancient Greek World*, Oxford: Oxford University Press.
- Malkin, I. (1987). *Religion and Colonization in Ancient Greece*, Leiden: E. J. Brill.
- Mandel, J. (1988). The Uniqueness of the New (Later) Tyranny in Heraclea Pontica. *Euphrosyne: Revista de Filologia Clásica*, 16, 35-70.
- Manoledakis, M. (2017). The Early Greek Presence in the Southern Black Sea. In M. Manoledakis, G. R. Tsetschkladze & I. Xydopoulos (Eds.), *Essays on the Archaeology and Ancient History of the Black Sea Littoral* (pp. 173-241). Leuven: Peeters.
- Manoledakis, M. (2022). *An Approach to the Historical Geography of the Southern Black Sea Littoral (First Millennium BC)*. Colloquia Antiqua Supplements to the Journal Ancient West & East, G. R. Tsetschkladze (Ed.). Leuven: Peeters.
- Marek, C. (1984). *Die Proxenie*. European University Studies, Reihe III Geschichte und ihre Hilfswissenschaften, Frankfurt am Main: Peter Lang.
- Marek, C. (1989). Amastris Geschichte Topographie Archäologische Reste. *Istanbuler Mitteilungen*, 39, 373-389.
- Marek, C. (1993). *Stadt, Ära und Territorium in Pontus-Bithynia und Nord-Galatia*. (Istanbuler Forschungen 39). Tübingen: Ernst Wasmuth Verlag.
- Marek, C. (2003). *Orbis Provinciarum Pontus et Bithynia: Die Römischen Provinzen im Norden Kleasiens*, Mainz: Philipp von Zabern.
- Marek, C. (2017). *Geschichte Kleasiens in der Antike*, München: Verlag C. H. Beck.
- Matthews, R. (2009). A Dark Age, Grey Ware and Elusive Empires: Paphlagonia through the Iron Age, 1200-330 BC. In R. Matthews & C. Glatz (Eds.), *At Empires' Edge: Project Paphlagonia Regional Survey in North-Central Turkey* (pp. 149-171). (British Institute at Ankara Monograph 44). Ankara: British Institute at Ankara.

- Mattingly, H. B. (1996). Athens and the Black Sea in the Fifth Century B.C. In *Sur les traces des Argonautes. Actes du 6e symposium de Vani (Colchide), 22-29 septembre 1990, (Annales littéraires de l'Université de Besançon, 613)* (pp. 151-158). Besançon: Université de Franche-Comté.
- Meritt, B. D. (1941). Greek Inscriptions. *Hesperia*, 10/1, 38-64.
- Meritt, B. D., Wade-Gery, H. T. & McGregor, M. F. (1950). *The Athenian Tribute Lists III*. Princeton: The American School of Classical Studies at Athens.
- Meyer, M. (1989). *Die Griechischen Urkundenreliefs*, Berlin: Gebr. Mann.
- Mikalson, J. D. (1998). The Heracleotai of Athens. In G. Schmeling & J. D. Mikalson (Eds.), *Qui Miscuit Utile Dulci Festschrift Essays for Paul Lachlan MacKendrick* (pp. 253-263). Wauconda-Illinois: Bolchazy-Carducci Publishers.
- Monakhov, S. J. (2019). Once More on the Subject of Heracleian Amphorae with Stamps of the Manufacturer Etymos. *Ancient Civilizations from Scythia to Siberia*, 25, 59-78.
- Nemeth, G. (2001). Metics in Athens. *Acta Antiqua Academiae Scientiarum Hungaricae*, 41, 331-348.
- Ohly, D. (1965). Kerameikos-Grabung Tätigkeitsbericht 1956-1961. *Archäologischer Anzeiger*, 2, 277-376.
- Okan, E., Bilir, A. & Duman, M. (2017). Batı Karadeniz Kıyıları Arkeolojik Sualtı Araştırması: 2016 Yılı Çalışmaları. *Tina*, 7, 48-63.
- Opait, A. (2010). Sinopean, Heraklean and Chersonesan "Carrot" Amphorae. *Ancient Civilizations from Scythia to Siberia*, 16, 371-401.
- Osborne M. J. & Byrne, S. G. (1996). *The Foreign Residents of Athens. An Annex to the Lexicon of Greek Personal Names: Attica*. Leuven: Peeters.
- Özgan, R. (2022). Heracleia Pontika'dan Bir Portre. *Arkhais Anatolika*, 5, 1-23.
- Öztürk, B. (2013). Heracleia Pontika (Zonguldak-Karadeniz Ereğli) Antik Kenti Epigrafik Çalışmaları ve Tarihsel Sonuçları, In. N. Türker, G. Köroğlu & Ö. Deniz (Eds.), *1st International Conference on the Black Sea Regional Culture 06-09 October 2011, Sinop, Türkiye Proceedings Book* (pp. 505-527). Karabük: Karabük University.
- Öztürk, B. (2014). Some Observations on Tianoı Abroad and the External Relations of Tiejon/Tios (Eastern Bithynia). In V. Cojocaru, A. Coşkun & M. Dana (Eds.), *Interconnectivity in the Mediterranean and Pontic World During the Hellenistic and Roman Periods: In Memory of Professor Heinz Heinen* (pp. 155-185). (Pontica et Mediterranea 3). Cluj-Napoca: Mega Publishing House.
- Öztürk, B. (2017). Corrigenda et Addenda to the Inscriptions of Heracleia Pontike From Karadeniz Ereğli Museum - Karadeniz Ereğli Müzesi'ndeki Heracleia Pontike Yazıtlarına Düzeltme ve Eklemeler. *TÜBA-AR*, 20, 199-207.
- Öztürk, B. (2023). Some Aspects of the Socio-Cultural Life of Roman Heraclea Pontica in the Light of the Epigraphic, Numismatic and Literary Evidence. In G. R. Tsetschladze & Ş. Yıldırım (Eds.), *Tios/Tiejon on the Southern Black Sea in the Broader Context of Pontic Archaeology* (pp. 168-194). Archaeopress Archaeology, Oxford: Archaeopress Publishing Ltd.
- Palagia, O. (1990). Two Statues of Hercules in the Forum Boarium in Rome. *Oxford Journal of Archaeology*, 9/1, 51-70.
- Petropoulos, E. K. (2005). *Hellenic Colonization in Euxeinus Pontos Penetration, Early Establishment, and the Problem of the "Emporion" Revisited*. (BAR International Series 1394). Oxford: BAR Publishing.
- Pfuhl, E. & Möbius, H. (1977). *Die Ostgriechischen Grabreliefs I-II*, Mainz am Rhein: Philipp von Zabern.


- Pitt, R. K. (2022). *Attic Inscriptions in UK Collections British Museum Funerary Monuments*. (AIUK Volume 4.6, AIO Papers Series). London: British Museum.
- Pope, H. (1947). *Foreigners in Attic Inscriptions: A Prosopography Arranged Under Ethnics in Alphabetical Order*. Chicago: Ares Publishers.
- Ramsay, N. (2009). *Earthquakes in the Mediterranean and Middle East A Multidisciplinary Study of Seismicity up to 1900*. Cambridge: Cambridge University Press.
- Reed, C. M. (2003). *Maritime Traders in the Ancient Greek World*. Cambridge: Cambridge University Press.
- Rempel, J. & Doonan, O. (2020). Rural Hinterlands of the Black Sea During the Fourth Century BCE: Expansion, Intensification and New Connections. *Anatolian Studies*, 70, 127-151.
- Richter, G. M. A. (1967). *The Sculpture and Sculptors of the Greeks*. (The Metropolitan Museum of Art). New Haven: Yale University Press.
- Ritter, S. (1997). Athenas Helme zur Ikonographie Der Äthna in der Klassischen Bildkunst Äthens. *Jahrbuch Des Deutschen Archäologischen Instituts*, 112, 21-57.
- Ritter, S. (2001). Fremde Götter und Heroen in Attischen Urkundenreliefs. *Jahrbuch des Deutschen Archäologischen Instituts*, 116, 129-162.
- Robert, L. (1937). *Études anatoliennes: Recherches sur les inscriptions grecques de l'Asie Mineure*, (Études orientales publiées par V Institut français d'archéologie de Stamboul sous la direction de M. Albert Gabriel, fase. V), Paris: de Boccard.
- Robert, L. (1973). Sur les inscriptions de Délos. *Bulletin de Correspondance Hellénique Suppl.*, 1, 435-489.
- Robu, A. (2012). Les établissements mégariens de la Propontide et du Pont-Euxin: réseaux, solidarités et liens institutionnels, *Pallas*, 89, 181-195.
- Rostovtzeff, M. (1941). *The Social and Economic History of the Hellenistic World I-III*, Clarendon: Oxford University Press.
- Ruge, W. (1912). Herakleia. In W. Kroll (Ed.), *Paulys Realencyclopädie der Classischen Altertumswissenschaft VIII/1* (pp. 433-434). Stuttgart: J. B. Metzlersche Buchhandlung.
- Saprykin, S. J. (1997). *Heracleia Pontica and Tauric Chersonessus Before Roman Domination VI-I Centuries BC*. Amsterdam: Adolf M Hakkert.
- Saprykin, S. (2014). The Pontic Proxies and the sea Routes of the Ancient Greeks in the Euxine, *The International Journal of Maritime History*, 26/2, 353-363.
- Saprykin, S. J., (2017). Ancient Sea Routes in the Black Sea. In P. de Souza & P. Arnaud (Eds.) *The Sea in History - The Ancient World* (pp. 345-361). Woodbridge: The Boydell Press.
- Schmaltz, B. (1983). *Griechische Grabreliefs, Erträge der Forschung*. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Scholl, A. (1996). *Die Attischen Bildfeldstelen des 4. Jhs. v. Chr.: Untersuchungen zu den kleinformatigen Grabreliefs im spätklassischen Athen*. Berlin: Gebr. Mann.
- Sezer, S. S. (2021). Heracleia Pontica Antik Kenti'nden Heykeltraşlık Eserleri. *Lycus*, 3, 53-76.
- Stroszeck, J. (2002/2003). Der Tod in der Fremde. Bestattungen von Ausländern in der klassischen Antike. *Nürnberger Blätter zur Archäologie*, 19, 159-181.
- Stroszeck, J. (2013). Sema , Mnema , Mnemeion und Theke: Zu Inschriftlich Begrenzten Gräbern im Kerameikos. *Athenaia*, 6, 7-27.

- Stroszeck, J. (2021). Friedhof vor den Toren Der Stadt Die Gestaltung der Grabbezirke im Kerameikos. *Archäologie Weltweit*, 1, 57-60.
- Summerer, L. (2005). Achämeniden am Schwarzen Meer: Bemerkungen zum Spätarchaischen Marmorkopf aus Herakleia Pontike. *Ancient Near Eastern Studies*, 42, 231-252.
- Şerifoğlu, T. E. (2015). The Cide-Şenpazar Region in the Iron Age (ca. 1200 to 325/300 BC). In B. S. Düring & C. Glatz (Eds.), *Kinetic Landscapes: The Cide Archaeological Project: Surveying the Turkish Western Black Sea Region* (pp. 212-245). Berlin: De Gruyter.
- Tsetsckhladze, G. R. (2022). Classical Archaeology of the Pontus in the Archaic Period: Some Current Problems and Prospective Solutions. In C. Colombi, V. Parisi, O. Dally, M. A. Guggisberg & G. Piras (Eds.), *Comparing Greek Colonies Mobility and Settlement Consolidation from Southern Italy to the Black Sea (8th – 6th Century BC) Proceedings of the International Conference (Rome, 7–9.11.2018)* (pp. 522-564). Berlin: De Gruyter.
- Tsetsckhladze, G. R. & Yıldırım, Ş. (2023). Introduction: Tios (Tieion) in the Context of Black Sea Colonisation. In G. R. Tsetsckhladze & Ş. Yıldırım (Eds.), *Tios/Tieion on the Southern Black Sea in the Broader Context of Pontic Archaeology* (pp. 1-22). Archaeopress Archaeology, Oxford: Archaeopress Publishing Ltd.
- Üreten, H. (2017). Metoikoslar: Antikçağın Göçmenleri. In O. Köse (Ed.), *Geçmişten Günümüze Göç I* (pp. 29-39). Samsun: Canik Belediyesi Kültür Yayınları.
- van Oppen de Ruiter, B. F. (2020). Amastris: The First Hellenistic Queen. *Historia*, 69/1, 17-37.
- Vestergaard, T. (2001). Milesian Immigrants in Late Hellenistic and Roman Athens. In G. J. Oliver (Ed.), *The Epigraphy of Death Studies in the History and Society of Greece and Rome* (pp. 81-109). Liverpool: Liverpool University Press.
- Von Gall, H. (1966). *Die Paphlagonischen Felsgräber*, (Istanbuler Mitteilungen, Beiheft I). Tübingen: Wasmuth.
- Walbank, M. B. (1970). *Athenian Proxeny of the Fifth Century BC*. (Doctoral Dissertation), Vancouver: The University of British Columbia.
- Walbank, M. B. (2008). *Fragmentary Decrees From The Athenian Agora*, (Hesperia Supplement 38). New Jersey: The American School of Classical Studies at Athens.
- Walter-Karydi, E. (2015). *Die Athener und ihre Gräber (1000-300 v.Chr.)*. Berlin: De Gruyter.
- Watson, J. (2010). The Origin of Metic Status at Athens. *The Cambridge Classical Journal*, 56, 259-278.
- West, A. B. (1935). Prosopographical Notes on the Treaty between Athens and Halia. *The American Journal of Philology*, 56/1, 72-76.
- Whitby, M. (1998). The Grain Trade of Athens in the Fourth Century BC. In H. Parkins & C. Smith (Eds.), *Trade, Traders and the Ancient City* (pp. 99-124). London: Routledge.
- Wijma, S. (2024). Spoken from the Grave: The Construction of Social Identities on the Funerary Monuments of Metics in Classical Athens, In Samuel D. Gartland, David W. Tandy (eds.), *Voiceless, Invisible, and Countless in Ancient Greece: The Experience of Subordinates 700-300 BCE* (207-242). Oxford: Oxford University Press.
- Woodhead, A. G. (1997). *Inscriptions: The Decrees*. (The Athenian Agora Results of Excavations Conducted by the American School of Classical Studies at Athens 16). Princeton: The American School of Classical Studies at Athens.

- Woolmer, M. (2013). *The Athenian Mercantile Community: A Reappraisal of the Social, Political and Legal Status of Inter-Regional Merchants During the Fourth Century*, (Doctoral Dissertation), Ann Arbor: Cardiff University 2008, ProQuest LLC.
- Yıldırım, Ş. (2017). Tios-Tieion: Söylenecek Çok Önemli Bir Şeyi Olmayan Kent. *Trakya Üniversitesi Edebiyat Fakültesi Dergisi*, 7/13, 206-242.
- Yıldırım, Ş. (2021). Tieion Akropolisi. *Belleten*, 85/303, 383-422.
- Yıldırım, Ş. (2023). The Acropolis Temple of Tios (Tieion). In G. R. Tsetskhladze & Ş. Yıldırım (Eds.), *Tios/Tieion on the Southern Black Sea in the Broader Context of Pontic Archaeology* (pp. 33-51). Archaeopress Archaeology, Oxford: Archaeopress Publishing Ltd.
- Yıldırım, Y. S. (2022). 2019 Yılı Karabük İli ve İlçeleri Roma ve Bizans Dönemi Yüzey Araştırması. *Araştırma Sonuçları Toplantısı, 2019-2020*, 411-428.



Hopper–Rubbers or Olynthus Mills from Şarhöyük/ Dorylaion: Recent Evidence on Typology and Chronology

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ABSTRACT

Şarhöyük/Dorylaion (Dorylaeum) is one of the largest mounds in central Anatolia and boasts a stratigraphical sequence that spans from the Late Chalcolithic period to the end of the 12th century AD. This paper focuses on a particular set of discoveries made at Şarhöyük, namely the Olynthus millstones, or the hopper-rubbers, which are generally considered as an important development stage from basic grinding mills to complex grinding techniques. Most of the millstones discovered were found in the Hellenistic layers, either in situ or in secondary contexts. With the exception of the mill with hand grips, all other samples that can be classified based on a certain typology belong to the Olynthus Mills group with Vertical Holes for Pivot, commonly referred to as Frankel's Type II.4 or Bombardieri's Type IIID.3e. However, it is plausible to suggest subtypes within this group. The aim of this study is to analyse a specific 'eastern type' Olynthus mill and the timeframe of its usage based on archaeological data from Şarhöyük/Dorylaion and its surrounding region.

Keywords: Dorylaion/Dorylaeum, Hopper-rubber, Olynthus mill, Mediterranean, Hellenistic, Achaemenid



Introduction

Şarhöyük, located approximately 2 km northeast of modern Eskişehir city centre, is one of the largest mounds in the region with a diameter of approximately 400 x 450 m and a height of 17 m above the modern plain level, covering a vast area of an outer town and a necropolis (Fig. 1). Known to the archaeological world since late 1880's and identified with the ancient city of Dorylaion (Dorylaeum) (Ramsay 1890, 168; Cox and Cameron 1937, XII), Şarhöyük has a history of systematic excavations since 1989, beginning with Prof. Dr. Muhibbe Darga, taken over by Prof. Dr. Taciser Tüfekçi Sivas in 2005, and being carried on by the author since 2015 (Tüfekçi Sivas 2018; Baştürk 2019). According to recent data, nine cultural periods have been identified:



Figure 1: Location of Şarhöyük/Dorylaion.

ŞH 0 Late 19th century–Turkish War of Independence Trenches (early 20th century)

ŞH I Late Roman/Byzantine period

ŞH II Roman period

ŞH III Hellenistic period

ŞH IV Iron Age

ŞH V Late Bronze Age

ŞH VI Middle Bronze Age

ŞH VII Early Bronze Age (no architectural layers)

ŞH VIII Late Chalcolithic period (no architectural layers)

The hopper-rubber millstones discussed below were unearthed in the Hellenistic layers (ŞH III), one of the best studied periods on the mound, as a result of long-term excavations. Architectural data belonging to the Hellenistic period were unearthed on the western slope, above the Middle and Late Phrygian layers; in the central sector, where a large Hellenistic quarter (Yedidağ 2019, 582-594) was brought to light beneath the Byzantine and Roman foundations; and on the southern slope, where the Byzantine and Roman period destruction was detected to be minimal. Despite continuous building activities and a series of faint sub-stratigraphical formations, a temporary but detailed periodisation of the Hellenistic period can be presented as follows, with the help of the excavations carried out on the southern slope:

ŞH III.1 Late Hellenistic–Early Roman

ŞH III.2 Late Hellenistic

ŞH III.3 Middle–Late Hellenistic

ŞH III.4 Early–Middle Hellenistic

ŞH III.5 Early Hellenistic

ŞH III.6.1 Early Hellenistic

ŞH III.6.2 Late Classical to Early Hellenistic Transition

Hopper–Rubbers or the ‘Olynthus Mill’

Although this type of mill has been found in archaeological excavations since the mid-1800’s, Flinders Petrie (1888, 27) was the first to define the device as an instrument for grinding. The working principles have been examined by several scholars, mainly based on the reliefs of a Megarian bowl from Thebes (Kourouniotis 1917; Moritz 1958). Childe (1943, 22) was the first to suggest a term for the implement: *‘The hopper-rubbers... I propose to call*

the device'. The term 'Olynthus mill' was coined by Moritz (1958, 46) as a result of earlier detailed studies of this type of mill at this site. The initial comprehensive study was conducted by Frankel (2003), who discusses the terminology and working principles and puts immense effort into creating an extensive typology for the tool. Frankel follows Moritz and utilises the term Olynthus mill, which most scholars currently use. Bombardieri (2010) provided the most recent and comprehensive contribution to the typology of grinding stones and mills, naming the tool as 'the Olynthus Hopper Mill'. While Frankel's typology is commonly used to define different forms of the device, I tend to use both Frankel's and Bombardieri's classifications. However, the term hopper-rubber may also be valid as it emphasises the device's structure and avoids any regional assumptions about its origins.

With the exception of those lacking slots for a rod or with hand grips (discussed below), the Olynthus mill is a lever-operated device consisting of two primary components: an upper stone in the shape of a square or rectangle with a corresponding depression carved out of the top, and a larger block positioned beneath the first to facilitate grain grinding. The depression, also known as a 'hopper', features a narrow slit at the bottom that serves as a funnel for directing grain into the grinding process. A lever is inserted into the slots cut into the longer axis of the stone to generate a back-and-forth movement. When the lever is attached to a vertical pivot point, it increases the length of the lever and the angle of the horizontal oscillation.

Olynthus Mills Unearthed at Şarhöyük/ Dorylaion: Typological Features

During more than 30 years of excavation at Şarhöyük/Dorylaion, more than 40 pieces of Olynthus millstones have been recovered, some of them intact, some partially preserved, and some as tiny pieces barely surviving. Here, I will attempt to classify the general typological characteristics of the samples from Şarhöyük and then proceed to present the intact and in situ finds accordingly, working with those samples that can be confidently assigned to a particular type. The discussion on regional and chronological aspects will be presented accordingly.

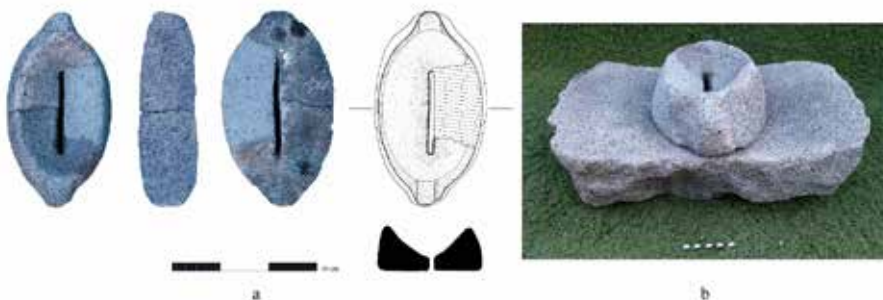


Figure 2: Olynthus Mill with hand grips (ŞH–O 1). a. repaired finding and drawing; b. hand grip mill placed on a grinding stone from the same layer.

Olynthus Mill with Hand Grips (Fig. 2)

A rare type of Olynthus mill (Figure 2a) was discovered in the central Hellenistic quarter within the Late Hellenistic layers (ŞH III.2). The basalt artefact was not found in its original position because it was potentially repurposed as a slab on a wall that was subsequently destroyed by a pit in the later period (ŞH III.1). The mill, which has an elliptical shape with two gripping projections on the longer sides, was fractured and only partly preserved (subsequently reconstructed by the excavation team). The elliptical hopper narrows towards the slit. The sample, classified as ŞH-O 1 (Şarhöyük – Olynthus 1), may have been used with the frequently found flat and concave grinding stones in the Hellenistic layers, as suggested by its slightly convex bottom (Fig. 2b).

Olynthus Mills with Vertical Holes for Pivot (ŞH-O 2)

A subtype of the lever-operated Olynthus mill is the ‘Upper Stone with Vertical Hole for Pivot’ (Frankel 2003, 12; Bombardieri 2010, 181-182). This type features a horizontal projection, or spur, adjacent to one of the handle slots, serving as a bolster for the horizontal rod fixed to the vertical pivot. Frankel’s typology is grounded in limited evidence due to the lack of attention to these artefacts in excavation reports or publications (Frankel 2003, 1). Most of the findings have been undervalued—and still are—having been published with a distant image or even without one, and suffering from a lack of necessary drawings or figures. Consequently, any typological endeavour is hampered by the limited dataset, which largely consists of only a few photos. In this regard, I shall attempt to add the profiles of the finds, where available, to improve the typological aspects of this peculiar form.

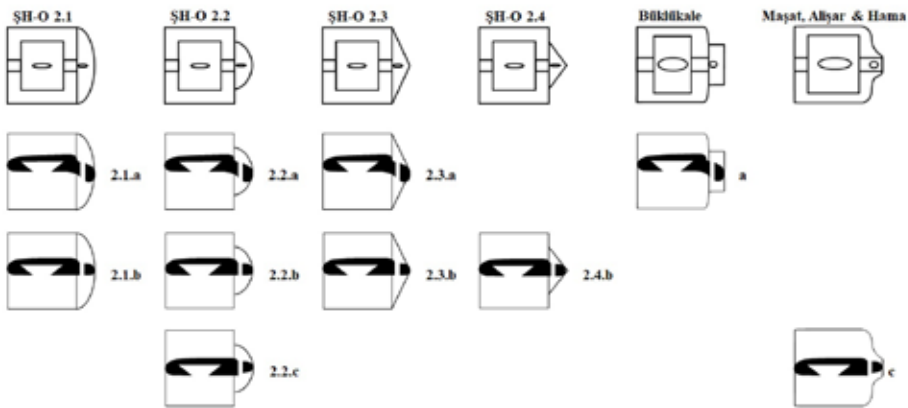


Figure 3: Typology of Olynthus mills with protrusions from Şarhöyük/Dorylaion with variations from other settlements.

This category of Olynthus mills, specifically Frankel's Type II.4 and Bombardieri Type IIID.3e, is one of the less common types compared with the standard ones. Nevertheless, findings from Şarhöyük/Dorylaion and the surrounding area may challenge this notion. To date, all recovered specimens from Şarhöyük with a specific typology belong to this type, and recent evidence from the region supports the idea that Şarhöyük is no exception. Thus, the typology of the lever operated hopper-rubbers from the site was formed according to the shape of the projections (Fig. 3): semi-circular (ŞH–O 2.1), narrow semi-circular (ŞH–O 2.2), triangular (ŞH–O 2.3), and narrow triangular (ŞH–O 2.4).

ŞH–O 2.1 features a semicircular extension that typically measures one-fifth of the width of the primary block. This projection extends from the edges of the block with a natural curve. Two samples have been defined so far as belonging to this type. The second type, ŞH–O 2.2, seems to be a better worked modification of this, with the semicircular protrusion applied narrower, creating shoulders on each side. The edges of the semicircular protrusion are left in line with the borders of the hopper. This type represents the majority of samples from Şarhöyük, with at least five well-defined samples. ŞH–O 2.3 is a more sophisticated version of those with semicircular projections. The broad projection is shaped like a triangle, projecting most of the time at a length equal to one-fifth of the width of the block. Three samples are proven to be in this typology. The most challenging type to identify is ŞH–O 2.4, characterised by narrow triangular protrusions. Only one sample was successfully identified, whereas other potential candidates were too fragmented to receive a typological evaluation. This could be attributed to the physical weakness of the form or the fact that the form was produced in fewer numbers because of its fragile structural integrity.

Another typological classification is based on the cross-sectional shape of the form, specifically the protrusion (see Fig. 3). To make this classification, it is necessary to have the entire artefact in an intact condition, at least the entire projection with the part where it protrudes from the main body. As mentioned previously, comparisons with items superficially photographed will not suffice. Therefore, it is essential to include proper section drawings or profile photos to ensure a comprehensive evaluation. There are three main types of sections present in the analysed samples, and these are differentiated by adding lowercase letters to type numbers (such as ŞH–O 2.1.a, or ŞH–O 2.3.b).

The initial subtype (a) of the cross-sections exhibits a downward extension from the primary body (Fig. 3). It is widely believed that the wear of the stone over time is responsible for this, but the samples examined suggest that this profile is a deliberate choice. First, the cutting marks on these stones clearly indicate that the downward protrusion is intentional. Additionally, in certain examples (such as Fig. 8d), the pivot hole is positioned behind the downward protrusion, clearly indicating that the grinding surface had to be positioned at some distance from this point. Second, if the abrasion on the lower surface is the result of

long-term use, then we have to accept that a number of samples, or most of them in the case of Şarhöyük, were not resourcefully used. Some samples from different sites show a very steep downward extension, sometimes twice the total thickness of the main block. Of course, there is some degree of wear on any used millstone, but this should not be more than half the thickness of the stone itself, if it is produced to operate efficiently. Regardless of whether it was intentional or the result of abrasion, it is clear that the upper stone had to be placed on the lower stone in a different way because of the deep hollow surface: it may have had to be placed forward, between the pivot and the body, closer to the pivot. Such positioning will naturally decrease the angle of oscillation; however, it will have a smaller friction surface. Or, the worn stones had to be discarded after a certain degree of abrasion unknown to us, which I think is not plausible and demonstrable.

The second profile type has flat bottoms (b). The protrusions on these samples lie in the same plane as the main body. The entire upper millstone comes into contact with the lower stone, and unlike the previous type mentioned, the positioning of the upper stone is not restricted. This permits a longer lever and an increased oscillation angle. Nevertheless, the completely flat surface proves to be a handicap: it also increases the frictional surface.

The third type seems to attempt to regulate the handicap mentioned above. In type (c), the protrusion is clearly carved out above the surface level. Still supporting the horizontal rod, this design reduces both the total weight of the device and the area of contact, limiting the friction area to the grinding surface.

Archaeological Contexts of Olynthus Mills from Dorylaion

The majority of hopper-rubber millstones found at Şarhöyük/Dorylaion were discovered in the Hellenistic layers, with only a few being utilised in the Byzantine (ŞH I.2) cist graves. Those that remain intact, however, all stem from the Hellenistic era (ŞH III), but from different subphases and contexts.

Olynthus Mill Upper Stone from the Late Hellenistic Period (Fig. 4)

The upper stone of an Olynthus mill was unearthed in the latest phase of the Hellenistic occupation (ŞH III.2), in an area very close to the surface soil and destroyed by the later layers. The stone was found covering a pithos, which was buried into the ground up to its mouth (Fig. 4a). Although the evidence from the context is not sufficient, the general appearance gives clues about a workshop or storage space, frequently attested in the other Hellenistic sectors and layers of the mound.



Figure 4: Olynthus mill upper stone (ŞH–O 2.1.a) covering pithos from the Late Hellenistic period. a. unearthed millstone in the field; b. photographs and drawing of the millstone.

The basalt stone (Fig. 5b) has a square form with a semi-circular protrusion extending downwards (ŞH–O 2.1.a). The rectangular hopper deepens down to the narrow slit at an angle of approximately 45°. It is clear that the stone was in use for a long time and may have been mistreated, for it bears marks of hacks and chips all around. One may easily suggest that the stone was discarded from its intended function and was employed as it was found; however, using such a heavy piece as a lid is neither pragmatical nor rational. Thus, the finding may well have served as a millstone somewhere around, but the archaeological data set is incomprehensible.



Figure 5: Olynthus mill upper stone (ŞH-O 2.2.b) from Middle/Late Hellenistic period. a. unearthed millstone in the field; b. photographs and drawing of the millstone.

Olynthus Mill Upper Stone from Middle/Late Hellenistic Period (Fig. 5)

Another Olynthus mill upper stone was found being used in a wall (Fig. 5a) belonging to the Middle / Late Hellenistic phase (ŞH III.3) of the Hellenistic quarter in the central sector of Şarhöyük. This sublayer represents the transition from the well-organised Early Hellenistic quarter to a slightly dispersed settlement arrangement. The walls of the room in relation with a hearth and a series of pits were destroyed by Byzantine burials cutting into them.

It is difficult to correlate this basalt stone (Fig. 5b) with a certain type; however, the narrow semicircular protrusion and flat bottom surface associate it with the second type (ŞH–O 2.2.b). The size is smaller than that of the other excavated ones. The hopper is trapezoidal and does not show any right angles or straight lines; however, some preliminary cutting marks indicate that the hopper was intended to be rectangular. It is obvious that the work on the stone was not finished, but the wear and scuff traces under the bottom suggest that it was not discarded because of the rudimentary workmanship: it was used for a time, then somehow ended up in a wall construction.

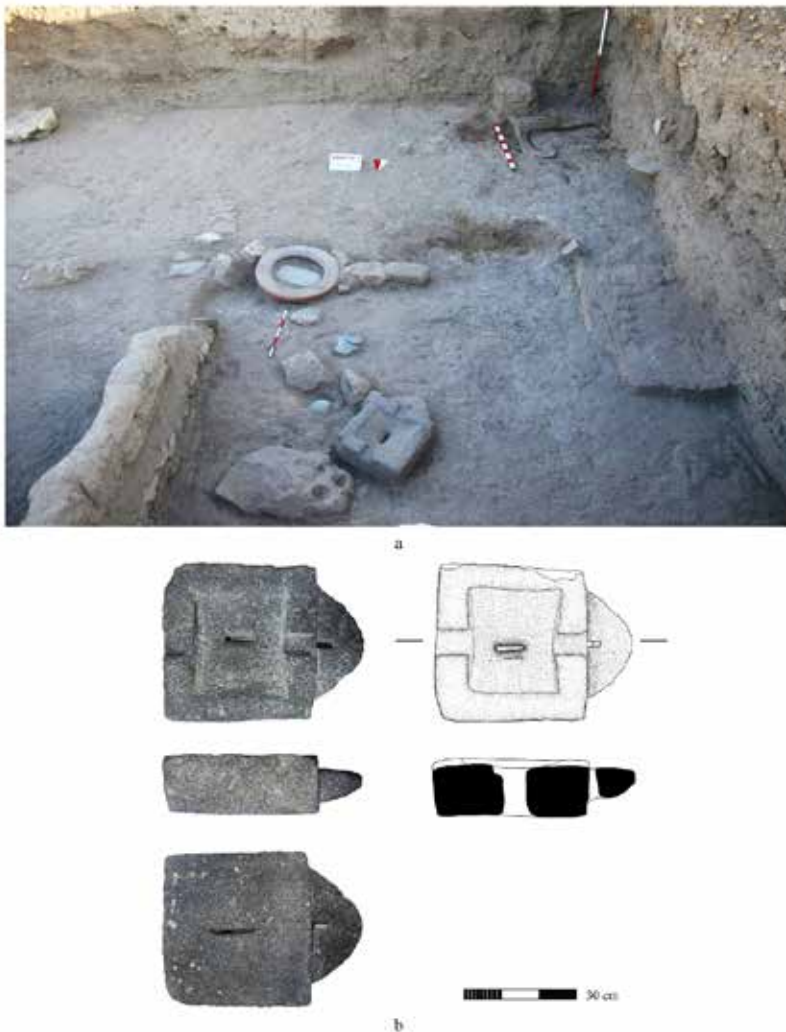


Figure 6: Olynthus mill upper stone (ŞH–O 2.2.c) from Early Hellenistic workshop or kitchen. a. unearthed millstone in the field; b. photographs and drawing of the millstone.

Olynthus Mill Upper Stone from Early Hellenistic Workshop or Kitchen (Fig. 6)

The basalt upper stone of an Olynthus mill was unearthed in the central Hellenistic quarter in a layer dated to the later phase of the Early Hellenistic period (ŞH III.5). Although the layer was slightly destroyed by the subsequent phase, the architectural features of the context consisting of numerous and various sherds, two hearths, iron objects, and small pithoi suggest a small workshop or kitchen rather than a domestic chamber (Fig. 6a). The millstone lay on the floor next to another small and plain grinding stone, a smaller stone slab with a socket, and a larger stone block. The millstone can be considered *in situ*; however, there are some issues to be addressed. The larger stone next to it does not show the necessary features of a lower stone of an Olynthus mill, it has no flat surface for grinding, it is not a vesicular volcanic rock, and there are no traces of a higher platform, or even a table, to properly operate this type of Olynthus mill with a rod. If the millstone was in use here, it would have been in its secondary location, where it would have been used as a grindstone rather than a mill. Alternatively, it could have been used just as a pole base supporting the roof or canopy.

The stone, with a narrow semicircular projection carved above the bottom surface, is a good example of its type (ŞH–O 2.2.c). The millstone was beautifully finished with straight edges and smooth surfaces. However, it is also interesting to see such a shallow hopper on such a decent work.

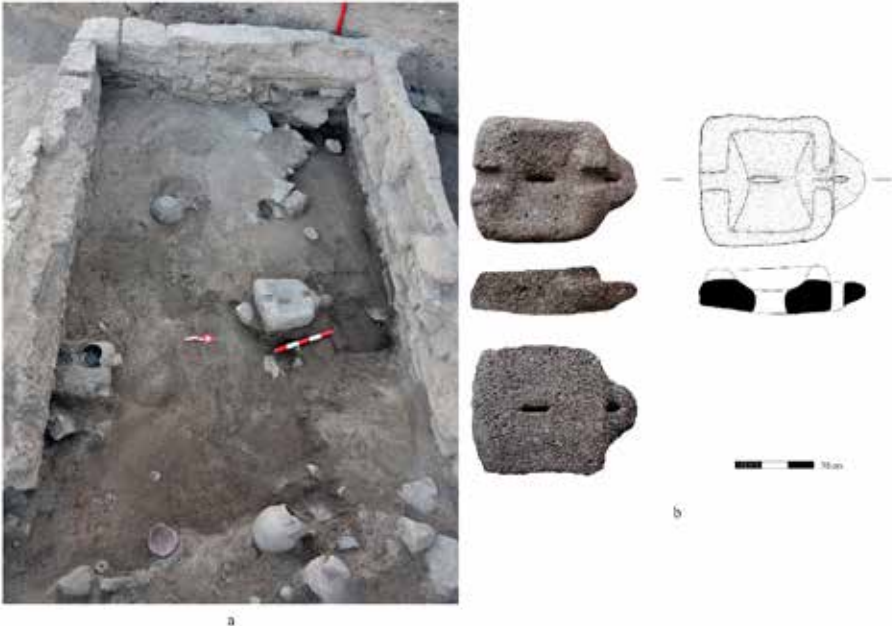


Figure 7: Olynthus mill upper stone (ŞH–O 2.2.c) from Early Hellenistic workshop or storehouse. a. unearthed millstone in the field; b. photographs and drawing of the millstone.

Olynthus Mill Upper Stone from Early Hellenistic Workshop or Warehouse (Fig. 7)

The last intact Olynthus millstone presented here comes from a house with two construction phases (Fig. 7a), dated to the earliest phase of the Hellenistic period. Pottery evidence suggests that the mudbrick house (ŞH III.6.2) with stone foundations was constructed towards the end of the fourth century BC as a relatively large dwelling, directly cutting into the Late Achaemenid (ŞH IV.1) layers (Baştürk and Baştürk 2021, 29-37). Sometime after the initial construction phase, the house underwent a series of modifications: secondary mudbrick walls without stone foundations were added to divide the space, and the room was repurposed as a workshop or depot for daily activities. The last phase of the house (ŞH III.6.1) can be securely dated to around 280 BC with the help of a number of intact vessels (local and imported), multiple pottery sherds of kitchen ware, coarse service vessels and small storage jars, a lamp, and a coin of Lysimachus from the floor, all recovered *in situ* from the same context and sealed by an earthquake (Baştürk and Baştürk 2021, 30). The context also contained 15 loom weights, two iron knives, uncertain iron objects, and a bone handle, making one think that the room was functioning as a warehouse or small workshop for daily routine. The upper stone was unearthed in the middle of the room, lying on the floor, surrounded by the abovementioned findings. Several small stones were found in the room, concentrated in the northwest corner, suggesting that they were part of an installation for operating the Olynthus mill, and the upper stone rolled off the installation during the seismic shock. However, the possibility of the mill operating in that corner remains a speculation, as no lower stones have been found suitable for grinding. One may also propose that the millstone was stored there for future use somewhere else, or it was used as a pole base after the space had been rearranged. The archaeological evidence is insufficient to fully support any of these hypotheses.

The basalt stone is of Type ŞH–O 2.2.c, similar to the previous sample, with a narrow semicircular projection carved above the bottom surface (Fig. 7b). However, unlike the previous one, the bottom surface was worn in a convex profile, suggesting that it was used on a concave lower stone.

Olynthus Millstones from Various Hellenistic Contexts (Fig. 8–9)

Over 40 pieces of Olynthus millstones have been excavated to date, but only 20 with a particular typology or obvious shape were selected for this study. Most come from Hellenistic layers, while some of them (Figs. 9f, 10c) were found to be used in Byzantine cist burials cutting into the Hellenistic walls.

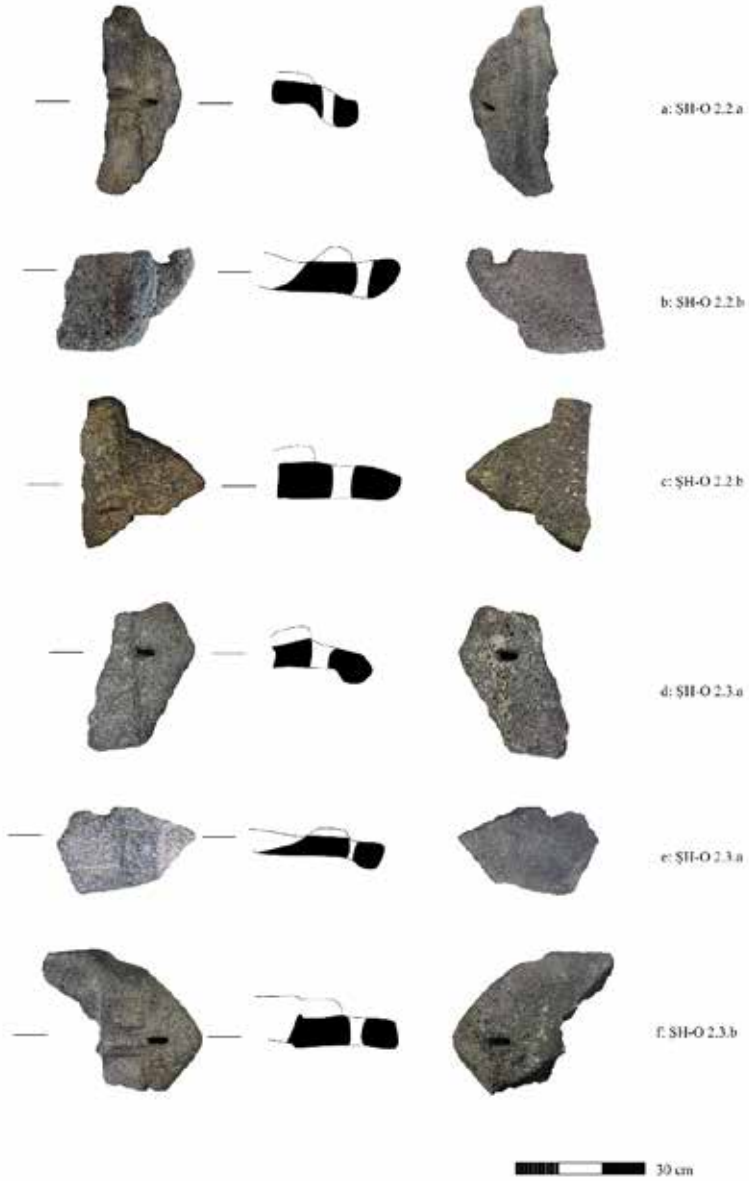


Figure 8: Olynthus mill upper stone samples of certain types.

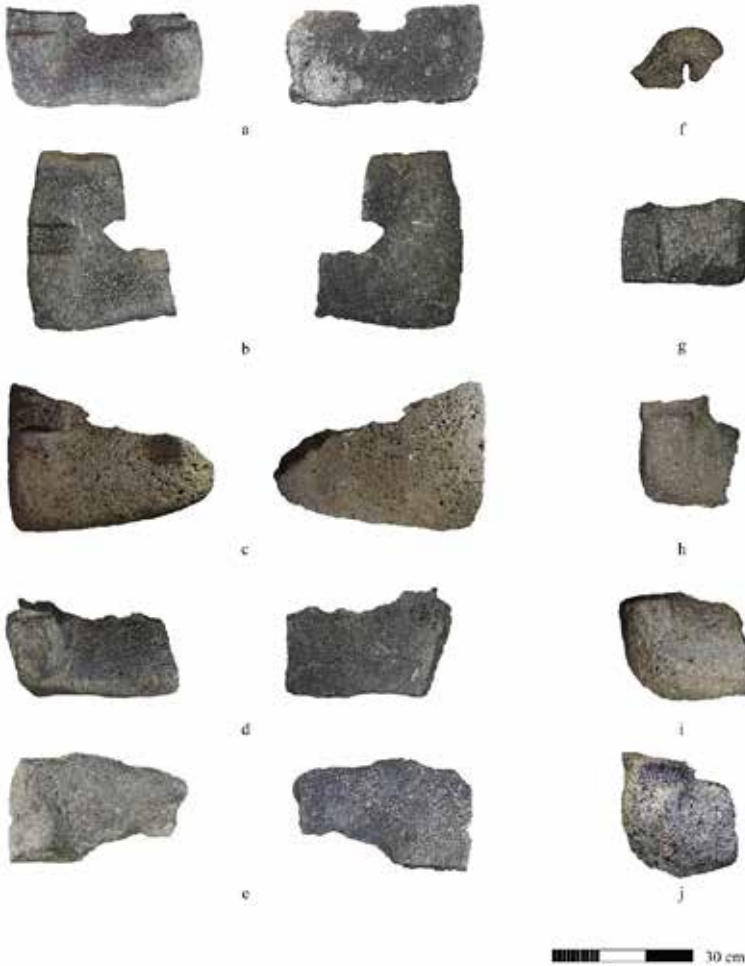


Figure 9: Miscellaneous Olynthus millstone samples without a certain type.

The samples featuring triangular protrusions (Fig. 8d–e) exhibited superior finishing compared with those with semicircular projections (Fig. 8a–c). Two primary block shapes are evident: square (Figs. 4, 6, 7, 9a, 9d) and slightly tapered on the protrusion side (Figs. 5, 9b, 9c, 9e). The well-crafted ones, such as Fig. 6 above, have unexpectedly shallower hoppers than the other samples (Figs. 8e, 9d). All hoppers except one sample were rectangular in shape: Figure 9a appears to have a butterfly-shaped hopper; however, it is difficult to confirm whether this is an intentional design or a manufacturing error as the other half of the hopper and the protrusion are missing. None of the examples have striation on the lower surface of the upper stones.

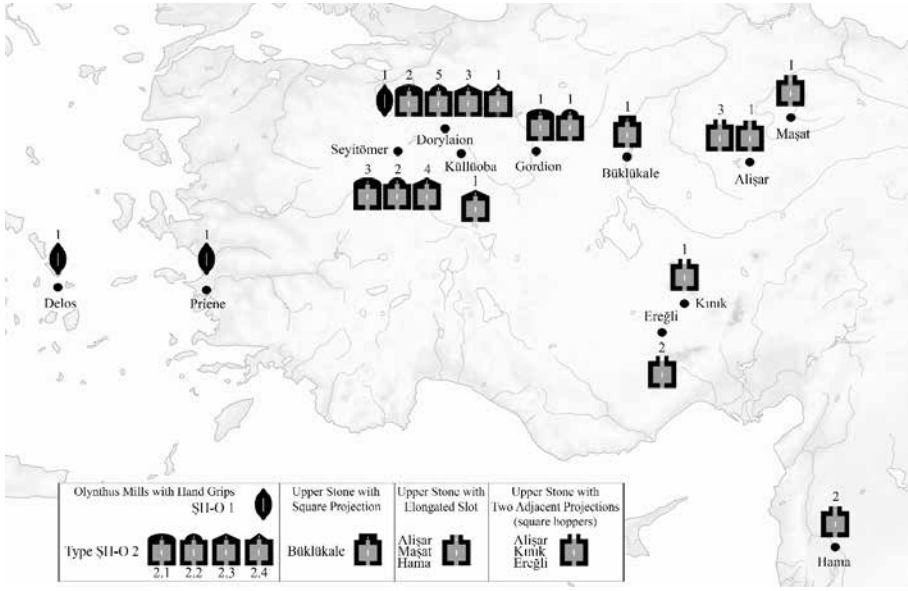


Figure 10: Typological distribution and comparison of Olynthus millstone types from Şarhöyük/Dorylaion. Numerals on the symbols of the types indicate the number of findings.

Discussion (Fig. 10)

The origin of Olynthus mill remains uncertain as their first appearance has yet to be determined. The archaeological evidence is clear that the Olynthus mill has its origins in the eastern Mediterranean. However, uncertainty surrounds the location of its invention, as it remains unclear whether it was created on the Greek mainland or in Anatolia. The earliest samples identified by archaeological layers date back to 425–400 BC in Athens, with similar ones found in Olynthus dating to the fifth century BC (Alanzo and Frankel 2017, 5).

The earliest type of Olynthus mill is also a matter of debate; it probably was a transformation from the basic hand grip saddle-querns to the mill with a hopper and hand grips (Frankel 2003, 8; Bombardieri 2005, 499). However, this device could have also been used as a smaller and portable type of the standard implement (Frankel 2003, 8; 17–18).

Only a few samples of Olynthus mills with hand grips (Bombardieri 2010, Type IIID.4) are known, all from the southern Aegean coasts and islands. Four samples are known to be compared to the Şarhöyük/Dorylaion sample: from Priene, Delos, Thera, and Rhodes. The finding from Thera, with its rectangular shape and striations on its lower surface, stands apart from the other two from Delos and Priene (Frankel 2003, 8), and the Rhodes sample is also rectangular in shape (Alanzo and Frankel 2017, 4). The Priene sample is comparable due to its size and dimensions, as well as its elliptical shape (Wiegand and Schrader 1904,

392-393, abb. 523); however, the hopper of this sample is circular, which slightly differs from the Şarhöyük sample. Interestingly, the closest parallel to the Şarhöyük sample appears to be the one from Delos, in terms of the shaping of the stone and the hopper, but it is only half preserved (Deonna 1938, 125-126, n. B5626, pl. XLIX: 368). The emergence of this type has been suggested to have occurred in the South Aegean based on the distribution of the finds. However, in light of the above-mentioned example from Şarhöyük/Dorylaion, a reconsideration is necessary. Even though the find was not *in situ*, having been found reused in a destroyed layer from the Late Hellenistic period, it serves as important information to include western central Anatolia in the discussion. It is plausible that it may have arrived here because of Dorylaion's significant role in the trade network between the east and west (Darga 2006; DeVries 2005; French 2013, A2, 3; Erpehlivan 2022). Numerous examples of high-quality imported pottery and rare metal artefacts are found in the Middle and Late Phrygian/Late Achaemenian levels of Dorylaion (Kaya 2019; Baştürk and Baştürk 2021), and the road upon which Dorylaion is situated may have been in use since the Early Bronze Age (Efe 2007; Massa 2016).

It is also not clear how the transition from the earlier standard Olynthus mills, which did not use a lever, to the Olynthus mills with a slot for the lever occurred. Despite the lack of certainty (Alanzo and Frankel 2017, 3), I am inclined to follow Bombardieri's hypothesis, which suggests that the development of the lever-operated Olynthus mill resulted from contacts between the Assyrian mill and the hand grip hopper saddle quern (Bombardieri 2005, 499). However, determining the origin of the Olynthus mills would be a challenge to the chronological and geographical framework of this article. Perhaps the only certain fact is that Olynthus millstones, which possess protrusions connecting the pivot and main body, came into existence somewhere in the eastern Mediterranean region.

Although 'Olynthus mills with vertical holes for pivot' are usually categorised under the same type (Frankel Type II.4 and Bombardieri Type IIID.3e), they can be analysed independently based on the shape of the projection. The initial set seems to have originated from the standard Olynthus millstone with slots for the lever or emerged simultaneously with the invention of slots: in these examples, the slot on the pivot side of the stone has been extended forward, resulting in a rectangular and simple longer slot. The hole is almost circular and is located towards the centre of the slot rather than at the front of the stone. This type has been found in Hama, Alişar, and Maşat Höyük (Fig. 11).

	Site	Period	Usage / Preservation	N. of finds	Total N.	Regional Total
Phrygian Group	Dorylaion	Early Hellenistic	in situ (lacking installations) / intact	1	44	56
	Dorylaion	Early Hellenistic	in situ (lacking installations) / intact	1		
	Dorylaion	Early Hellenistic	in situ (lacking installations) / intact	1		
	Dorylaion	Late Hellenistic	re-used / intact	1		
	Dorylaion	Late Hellenistic	re-used / fractured	28		
	Dorylaion	Late Roman / Bizantine	re-used / fractured	12		
	Seyitömer	Early Hellenistic	re-used(?) / intact	9	9	
	Gordion	Hellenistic	re-used(?) / intact	2	2	
Central Anatolia	Külteba	Late Hellenistic / Early Roman	? / intact	1	1	11
	Baklıkale	Early Hellenistic	re-used(?) / intact	1	3	
	Baklıkale	Early Hellenistic	re-used(?) / fractured	2		
	Alışar	Iron Age / Early Hellenistic	re-used(?) / intact	4	4	
	Maşat	Iron Age (?)	? / intact	1	1	
	Kınık	L.Achaemenid / Early Hellenistic	in situ (lacking installations) / intact	1	1	
	Ereğli Müzümü	?	? / intact	2	2	
Northern Syria	Hama	Iron Age / Early Hellenistic	? / intact	2	2	2

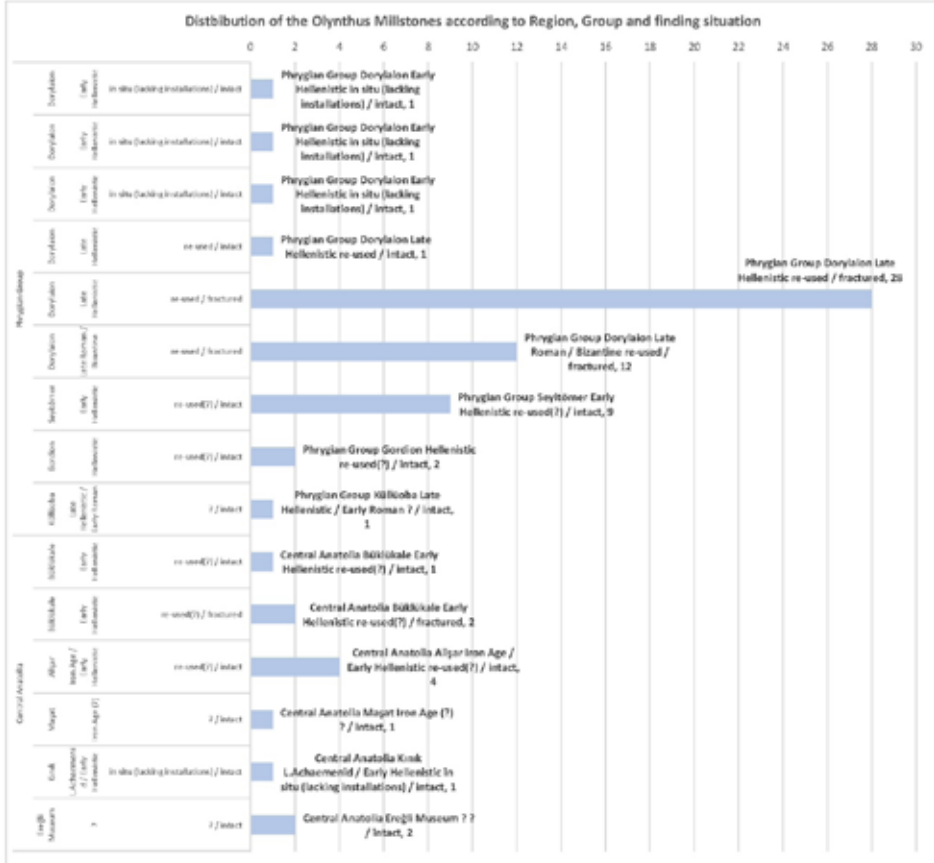


Figure 11: Comparison of Olynthus millstones according to region, group, and finding situation.

The dating of the two samples from Hama is problematic. The layer that was previously classified as Iron Age (Fugman 1958, 140, fig. 165: 4D17, 198, fig. 245: 8A98) underwent a later revision as the Iron Age – Hellenistic transition (Riis and Buhl 1990, 76-78, fig. 37: 112-113). At Alişar, there is one example of the same type with a similar dating problem (von der Osten 1937, fig. 93: M6). The ‘Alişar V’ layer, from which the find came, was initially dated to the Iron Age (Medo–Persian / Phrygian). However, ‘*we are not able to separate sharply the Hellenistic remains from the latest deposits of Stratum V*’ (Schmidt 1931, 141). Von der Osten groups Phrygian, Medo–Persian, and Hellenistic periods successively together, separating Hellenistic from Roman and Byzantine periods in his chronological table, where Hellenistic is presented as belonging to Alişar VI, but not Alişar V. Perhaps the most logical approach is to place Alisar Level V between the seventh century BC and the year 0, as the table indicates (von der Osten 1937, 463, fig. 289). Another exact match of this type has been discovered at Maşat Höyük. It was not unearthed by excavation, but rather found by chance on the surface (Bombardieri 2010, 90, tav. 106: 3-5). No evidence of a Hellenistic occupation at Maşat Höyük has been reported yet; thus, we must accept that the observed device belongs to the Iron Age or the ‘Phrygian period’ until further excavations are conducted.

At this point, perhaps there should be a brief mention of another type, the upper stones with two adjacent projections (Frankel’s Type II.5). Although the type is widespread from the Black Sea coasts (Zolotaia Balka, Kamensko Gorodishe and Neapolis) to the Aegean (Thasos and Ephesus), there is a strict distinction based on the shape of the hoppers: those on the maritime trade network appear to be very similar in appearance (Frankel 2003, 13), and the most distinctive feature is the butterfly hoppers they have (Bombardieri type IIID.31). However, there is a series of findings bearing two adjacent protrusions again, but with the traditional square hoppers (Bombardieri Type IIID.3d). These come from the eastern and southern parts of central Anatolia, located to the north and south of the Kızılırmak (Halys) River (Fig. 11). Alişar presents three of these (von der Osten and Schmidt 1930, figs. 106-107; Schmidt 1931, fig. 199; von der Osten 1937, fig. 93: M 2, 4, 5), with the same chronological problems mentioned above. New evidence suggests that Alişar is not the only place where this type was used. One more recent sample of Olynthus millstones with two protrusions, accompanied by a curved lower grinding stone, was obtained from Kınık Höyük (D’Alfonso *et al.* 2014, 569, 571-572; Highcock *et al.* 2015, 116-117, fig. 6–10). The context KH–P IIIA (lv. A1.2) is dated between the fourth and mid-second centuries BC, Late Achaemenid / Hellenistic period (D’Alfonso and Castellano 2018, 87-88; Trameri and D’Alfonso 2020, 67-68). Although they were not found in a systematic excavation, there are two other Olynthus millstones of the same type in the Konya Ereğli Museum, just to the south of Kınık Höyük (first mentioned in Matsumura 2017, 129, without a typological definition).

The similarities between the two aforementioned types indicates a correlation in their developmental stages. The millstones featuring two protrusions for the pivot appear to have resulted from a basic innovation: the elongated slot. The coexistence of the two types at Alişar Höyük and the rudimentary finish on them suggest that they may have developed simultaneously. Meanwhile, it is possible that the butterfly hopper type, which is unique to the Aegean coasts of Anatolia and the northern coasts of the Black Sea, originated from maritime interactions during Greek colonisation. Their connexion with central Anatolia remains unclear, but an interaction via the Anatolian coasts of the Black Sea would not be surprising. We need to await the detailed publications of the materials and chronology from the Anatolian Black Sea coast, for instance from Kurul Fortress, where Late Hellenistic domestic quarters are reported to have housed Olynthus mills (Akçay and Bulut 2022). Until then, this will remain speculation.

The types outlined above may have potentially been modified on the way to western central Anatolia. Büklükale, located on the Kızılırmak (Halys) River, offers a good example of an Olynthus mill with a vertical hole for the pivot on a square projection, and the same excavation has yielded several other fragments of Olynthus millstones. The instrument was found on the floor of a room dated to the Hellenistic period (Matsumura 2017). For the time being, this sample may be regarded as marking the shift from central Anatolian types to the northwestern central Anatolian cluster in terms of geography and typology.

North-western Central Anatolia: Dorylaion, Gordion, Seyitömer, and Küllioba

The Dorylaion typology has already been comprehensively described. In addition, similar types have been observed in the surrounding area of Dorylaion. Gordion, approximately 150 km to the east of Dorylaion, is one of the settlements where the same implements have been unearthed: the Körte brothers discovered two of them during their initial excavations. Young's team uncovered a minimum of three, one of which was identified as 'a wheat grinding stone – the slot and handle grinder channel type', while another was drawn (Wells 2012, 230). Two noteworthy examples from Gordion have been properly published thus far: one exhibits a semicircular projection (Wells 2012, 230, fig. 140), which serves as a good representation of ŞH–O 2.1.c; the protrusion on the other is a narrow semicircular variant (Körte and Körte 1904, 176, abb. 158), which corresponds to the characteristics of ŞH–O 2.2. Both examples can be attributed to the Hellenistic period. Probably many more samples are in the excavation archive for further study and publication (Wells 2012, 230, footnote 207), which hold significant importance in comprehending the eastern contacts of Dorylaion.

To the west of Dorylaion, Seyitömer is an additional important site where comparable findings were discovered. Following Dorylaion, this site has yielded the largest number of Olynthus mills with a vertical pivot hole. Unfortunately, we do not have the cross-sections of

all of them, but all those published so far show triangular or semi-circular projections parallel to the Dorylaion typology. There are additional instances at Seyitömer where the projection is on the longer side, which have yet to be discovered at Dorylaion. All samples come from the Early Hellenistic layers and lack any installations or implements to operate the devices properly. Thus, these were proposed to be utilised during the Achaemenid era, but discarded thereafter (Yıldırım 2022).

The excavations at Küllüoba, located approximately 35 km southeast of Dorylaion, have made a new contribution to this repertoire. The author was kindly informed by the director of the excavation that an unpublished Olynthus-type upper millstone was found on the surface, possibly in relation to faint traces of the IB (Late Hellenistic – Early Roman layer) (for the stratigraphical sequence at Küllüoba, see Türkteki *et al.* 2021, 108). The sample is a good match to ŞH–O 2.3 with its triangular projection.

The region where all four mounds are located is rich in volcanic eruptive rocks. For example, it is probable that the vast Karacaören Vulcanite located approximately 10 km to the south of Şarhöyük provided a boundless quantity of basalt raw material containing gas bubbles (Kandemir and Anar 2018, 22, pafta İ24) which was then utilised to produce all of the millstones at Dorylaion. Similar formations are commonly observed in northwestern central Anatolia.

Conclusion

The Olynthus millstones found at Şarhöyük/Dorylaion are undoubtedly a distinct subgroup of the ‘Olynthus mills with vertical holes for pivot’ (Frankel Type II.4, Bombardieri Type IIID.3e). Although there are some local variations, a regional unity can be observed in examples from Dorylaion, Gordion, Seyitömer, and Küllüoba (northwestern central Anatolia). At the moment, it appears that triangular or semicircular projections are peculiar to this region. The number of Olynthus millstones unearthed in this region is significantly higher than that in other areas, which alone is worthy of further attention (Fig. 10). For this regional unity between the Sakarya (Sangarios) river and the Porsuk (Tymbris) basin, I suggest using the term ‘Phrygian Group’. This suggestion is purely geographical and does not have any cultural connotations. It aims to outline a particular type of millstone, acknowledging that it is not the sole variant in the region. For example, Eskişehir Archaeological Museum houses an interesting collection of hopper-rubber samples of various types, including some without slots.

It is challenging to trace the origin or typological phases of the Olynthus mills. The type with the elongated slots seems to have appeared between the northeastern Mediterranean coasts and eastern central Anatolia, almost simultaneously. It is difficult to assert a geographical connexion between Hama (northern Syria) and the Alişar – Maşat samples;

however, the typological similarity is obvious. The type with two projections for the pivot (with square hoppers) are limited to central Anatolia. There may be a connexion between these and those with butterfly hoppers, but we are currently unable to bridge the geographical gap, especially in coastal regions. The ‘Phrygian group’ constitutes a unique cluster with its individual subtypes, differing from any other groups currently.

As previously discussed, almost all examples of ‘Olynthus mills with vertical holes for pivots’ are found in Hellenistic layers (for comparison, see Fig. 11). Although there are clues suggesting that this instrument was in use during the last quarter of the fourth century BC, none of the finds, even those that can be interpreted as *in situ*, have been uncovered in contexts showing the device in operation. Evidence from the layers succeeding the Early Hellenistic period is significantly deficient: most of the millstones seem to have been employed in secondary or tertiary functions, whether broken or intact, mostly embedded in walls. Thus, assertions like ‘Olynthus mills still in use in a Roman layer’ should be approached with caution, unless presented with detailed and definite archaeological contexts. This is, of course, related to the technological developments that arrive or emerge in each settlement, and for Dorylaion the archaeological evidence so far suggests that the Olynthus mills fell off with the introduction of the rotary mills in the Late Hellenistic period.

The emergence of the Phrygian Group in the Early Hellenistic layers raises the question of when they came into use. The advanced typological variations within the Phrygian Group indicate derivation from other types, potentially influenced by more eastern forms. It is plausible to propose that the Late Achaemenid era marked the inception of this technology. Three settlements within this group (Dorylaion, Gordion and Seyitömer) house Achaemenian layers, but none have yielded any samples of Olynthus millstones from 6th or 5th century. Furthermore, other Anatolian settlements with firm Achaemenian strata are reported to be lacking these archaeological findings. Therefore, it may be practical to suggest an early or mid-fourth century date for their appearance, but further evidence is needed.

The final and perhaps most important conclusion of the study is how much less value is attributed to these findings than it should be. The author is more than sure that many similar artefacts are housed in the storage facilities and gardens of the excavations and museums, waiting to be properly studied.

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References

- Akçay, A. & Bulut, A.E. (2022). Kurul Kalesi’nde Mekânsal Organizasyon, Mimari Malzeme ve Yapı Fonksiyonları Üzerine Bir Değerlendirme. *Anadolu Araştırmaları*, 7, 175-224.
- Alanzo, N. & Frankel, R. (2017). A Survey of Ancient Grain Milling Systems in the Mediterranean. In Buchsenschutz, O., Lepareux–Couturier S., Fronteau, G. (Eds.), *Les meules du Néolithique à l’époque médiévale : technique, culture, diffusion*. Suppléments à la Revue archéologique de l’Est 43 (pp. 461-478).
- Baştürk, M.B. (2019). Stratigraphic Sequence at Şarhöyük/Dorylaion: An Overview. In Tsetskhladze, G. R., Baştürk, M.B., Hargrave, J. (Eds.), *Phrygia in Antiquity: From the Bronze Age to the Byzantine Period*, (pp. 561-580), *Colloquia Antiqua* 24, Leuven: Peeters Publishers.
- Baştürk, M.B., & Baştürk, E. (2021). A Bronze Bowl with Swivelling Handle from Şarhöyük – Dorylaion. *OLBA*, 29, 25-46.
- Bombardieri, L. (2005). Mulini assiri a scanalatura e mulini a tramoggia. In Pecorella, P.E, Benoit, R.P. (Eds.), *Tell Barri / Kahat. La campagna del 2002. Relazione preliminare*, (pp. 156-179), Firenze University Press.
- Bombardieri, L. (2010). *Pietre da Macina, Macine per Mulini. Definizione e sviluppo delle tecniche per la macinazione nell’area del Vicino Oriente e del Mediterraneo orientale antico*. Oxford: BAR International Series.
- Childe, G.V. (1943). Rotary Querns on the Continent and in the Mediterranean Basin. *Antiquity*, 17, 19-26.
- Cox C.W.M. & Cameron, A. (1937). *Monuments from Dorylaeum and Nacolea* (Monumenta Asiae Minoris Antiqua 5), Manchester University Press.
- D’Alfonso, L. & Castellano, L. (2018). Kınık Höyük in South Cappadocia. *Altorientalische Forschungen*, 45(1), 84-93.
- D’Alfonso, L., Gorrini, M. E., Mora, C. (2014). Archaeological Excavations at Kınık Höyük. Preliminary Report of the Third Campaign (2013), *Athenaeum*, 102/2, 565-585.

- Darga, M. (2006). Şarhöyük–Dorylaion Kazılarında İki Buluntu: Dörtgen Kerpiç Odalar ve Damgalı Amphora Kulpları. In Erkanal–Öktü, A., Özgen, E., Günel, S., Ökse, A.T., Hüryılmaz, H., Tekin, T., Çınardalı–Karaaslan, N., Uysal, B., Karaduman, F.A., Engin, A., Spieß, R., Aykurt, A., Tuncel, R., Deniz, U., Rennie, A. (Eds.), *Hayat Erkanal'a Armağan: Kültürlerin Yansıması / Studies in Honor of Hayat Erkanal, Cultural Reflections* (pp. 241-248), İstanbul: Homer Kitabevi.
- Deonna, W. (1938). *Le Mobilier Delien* (Dèlos 18), Paris: E. de Boccard.
- Devries, K. (2005). Greek pottery and Gordion chronology. In Kealhofer, L. (Ed.), *The Archaeology of Midas and the Phrygians* (pp. 36-55), Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- Efe, T. (2007): The theories of the 'Great Caravan Route' between Cilicia and Troy: the Early Bronze Age III period in inland western Anatolia. *Anatolian Studies* 57, 47-64.
- Erpehlivan, H. (2022). A Trade Route from the Propontis to Phrygia: assessing the economic status of Kios between the Archaic and the Early Hellenistic Periods. *Oxford Journal of Archaeology*, 42, 71-88.
- Flinders Petrie, W.M. (1888). *Tanis II, Nebesheh, and Defennen (Tampanhes) (Memoir of the Egypt Exploration Society 4)*, London: Trubner & Co.
- Frankel, R. (2003). The Olynthus Mill, Its Origin, and Diffusion: Typology and Distribution, *American Journal of Archaeology*, 107/1, 1-21.
- French, D.H. (2013). *Roman Roads and Milestones of Asia Minor, Vol. 3 Milestones Fasc. 3.4: Pontus et Bithynia (with northern Galatia)*, Ankara: British Institute at Ankara.
- Fugmann, E. (1958). *Hama. Fouilles et recherches 1931–1938 II, L'architecture des périodes pré-hellénistiques*, Copenhagen: National Museum.
- Highcock, N., Crabtree, P., Campana, V.D., Capardoni, M., Lanaro, A., Matessi, A., Miller, N.F., Strosahal, P., Trameri, A., D'Alfonso, L. (2015). Kınık Höyük, Niğde: A New Archaeological Project in Southern Cappadocia. In Steadman, S.R., McMahon, G. (Eds.), *The Archaeology of Anatolia Recent Discoveries (2011–2014) Volume I* (pp. 98-127), Newcastle: Cambridge Scholars Publishing.
- Kandemir, Ö. & Anar, F. (2018). *Türkiye Jeoloji Haritaları Serisi. Eskişehir – İ 24 Paftası*. Maden Tetkik Arama Genel Müdürlüğü, Ankara: MTA.
- Kaya, Y. (2019). *İç Kuzeybatı Anadolu Bölgesi Demir Çağ Seramik Gelenekleri* (M.A. thesis, Bilecik University).
- Kourouniotis, K. (1917). Κίναδοι μολωθοί, *Αρχαιολογική Εφημερίς (Archaiologike Ephemeris)* 3-4, 151-157.
- Körte, G. & Körte, A. (1904). *Gordion Ergebnisse der Ausgrabung im Jahre 1900* (Berlin).
- Massa, M. (2016). *Networks before Empires: Cultural Transfers in West and Central Anatolia during the Early Bronze Age* (Ph.D. thesis, University College London).
- Matsumura, K. (2017). A Hopper–Rubber or Olynthus Mill from Büklükale: Its Stratigraphical Setting and Dating. In Adak–Adıbelli, I., Ilgezdi–Bertram, G., Matsumura, K., Baştürk, E., Koyuncu, C., Kızırlıslanoğlu, H.A., Yedidağ, T.Y., Topaloğlu–Uzunel, A. (Eds.), *Bariş Salman Anı Kitabı* (pp. 127-139), İstanbul: Ege Yayınları.
- Moritz, L.A. (1958). *Grain Mills and Flour in Classical Antiquity*, Oxford: The Clarendon Press.
- Ramsay, W.M. (1890). *The Historical Geography of Asia Minor*, London: John Murray.

- Riis, P.J. & Buhl, M.L. (1990). *Hama. Fouilles et Recherches 1931–1938 II, 2: Les Objets de la Période dite Syro–Hittite (Âge du Fer)*, Copenhagen: National Museum.
- Robinson, D.M. & Graham, J.W. (1938). *Excavations at Olynthus, Vol. 8. The Hellenic House* Baltimore: John Hopkins Press.
- Schmidt, E.F. (1931): *Anatolia through the Ages. Discoveries at the Alishar Mound 1927–29*, OIP 11. Chicago: The University of Chicago Press.
- Tüfekçi–Sivas, T. (2018). Excavations at Dorylaion/Şarhöyük in Phrygia Epiktetos. In Tsetschkladze, G.R. (Ed.) *Pessinus and its Regional Setting* (pp. 99-128) Leuven: Peeters Publishers.
- Türkteki, M., Sarı, D., Şahin, F., Türkteki, S., Tuna, Y. (2021). Anadolu’da Bir İlk Tunç Çağı Kenti: Küllüoba, Genel Değerlendirme ve 2020 Yılı Çalışmaları. *Lycus*, 3, 105-128.
- Trameri, A. & D’Alfonso, L. (2020). The “Sacred City” of Kınık Höyük: Continuity and Change in Cappadocia (Turkey) between the Late Achaemenid and Late Hellenistic Periods. In Held, W. (Ed.). *The Transition from the Achaemenid to the Hellenistic Period in the Levant, Cyprus, and Cilicia: Cultural Interruption or Continuity? Symposium at Philipps–Universität Marburg, October 12–15, 2017*, (pp. 65-81), Marburg: eigenverlag des Archäologischen Seminars der Philipps-Universität.
- von Der Osten, H.H. (1937): *The Alishar Hüyük. Seasons of 1930–32, Part 3*. OIP 30, Chicago: The University of Chicago Press.
- von Der Osten H.H. & Schmidt, E.F. (1930): *The Alishar Hüyük. Season of 1927, Part 1*. OIP 6, Chicago: The University of Chicago Press.
- Wells, M.G. (2012): *A cosmopolitan village: the Hellenistic settlement at Gordion* (Ph.D. thesis, University of Minnesota).
- Wiegand, T. & Schrader, H. (1934): *Priene: Ergebnisse der Ausgrabungen und Untersuchungen in den Jahren 1895–1898, Band I*, Berlin: Reimer.
- Yedidağ, T.Y. (2019): Şarhöyük (Dorylaion) during the Hellenistic Period. In Tsetschkladze, G. R., Baştürk, M.B., Hargrave, J. (Eds.), *Phrygia in Antiquity: From the Bronze Age to the Byzantine Period*, *Colloquia Antiqua* 24, (pp. 582-294), Leuven: Peeters Publishers.
- Yıldırım, Ö.C. (2022): Seyitömer Höyük Olynthus Değirmenleri. In: Ünan, S. (Ed.), *Seyitömer Höyük Kurtarma Kazısı 1989 – 2021* (pp. 745-753), Ankara: Bilgin Kültür Sanat Yayınları.



Late Roman Red Slip Ware found in Newly Excavated Buildings A and B in Anemurium: A Building Based Evaluation

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ABSTRACT

This article discussed the Late Roman Red Slip Ware which was found during the excavations of Buildings A and B in Anemurium (Rough Cilicia). The wares concern three groups: African Red Slip Ware (ARSW), Late Roman C (LRC) and Late Roman D (LRD). ARS forms that were identified are Hayes 50, 67, 73/76, 99, 104, 105 and 106. LRC forms that were identified are Hayes 1, 3 and 10. The last and major group is LRD of which the following forms were recognised: Hayes 1, 2, 6, 8, 9, 10 and 11, Meyza Type H12D and the so-called Well Form. The proportions of these three ware groups are: LRD 83.6 %, LRC 9.7% and ARS 6.6%. The inhabitants of these buildings, and Anemurium as a whole, definitely belonged to the LRD cultural region. Most of this pottery can be dated to the second half of the 6th century and the first half of the 7th century AD. Many of the ceramics evaluated in this article represent the last production phases of these three groups.

Keywords: Rough Cilicia, Anemurium, African Red Slip Ware, Late Roman D, Late Roman C



Introduction

Anemurium was one of the coastal cities located in the western part of the ancient region of Cilicia Tracheia, or Rough Cilicia as called by modern scholars (Fig. 1). The ruins of the city are located in the Ören/Batıkent quarter of the Anamur District, Mersin Province. Numismatic evidence indicates that the first settlement of the city of Anemurium began in the Hellenistic period. The city represents a territory that was culturally associated with the Roman Mediterranean (Tekocak & Aldemir, 2019). In the 2nd-3rd century AD, Anemurium experienced its first period of growth. The 4th century AD, however, was a period of crisis throughout the entire eastern Mediterranean (Lund, 1992, pp. 199-200; Lund, 1993, pp. 140-143). The city witnessed another period of growth during the first half of the 5th century AD. Then, from the late 5th until the 8th century AD, the city followed a course of gradual decline.

The city's topography extends 1.2 km in a north-south direction and covers an area of 6.5 hectares. The centre of this topography is a ridge which offers a stunning view of the Mediterranean. The ceramic material discussed in this article was discovered in Buildings A and B, which are situated at the southern end of this ridge, and excavated between 2018 and 2021 (Korkmaz & Tekocak, 2023). Both are situated north of the Central Bath, which the previous excavation team referred to as III 5 Bath (Alföldi-Rosenbaum, 1989) (Fig. 2).

The buildings cover an area of 298 m² in total and measure 28.20 x 10.60 m. Building A contains four rooms and has a narrow alleyway directly in front of it. Building B, which is located to the east of Building A, comprises five rooms, a connecting hallway, and another narrow alleyway in front of it.

A portion of the ceramic artifacts unearthed in these buildings can be classified into three distinct categories. These are as follows: African Red Slip Ware (hereafter ARS), Late Roman C (also known as Phocaeen Red Slip Ware) (LRC hereafter) and Late Roman D (Cypriot Red Slip Ware) (henceforth LRD). Late Roman Red Slip Wares can be considered as successors to Hellenistic, Early, and Middle Roman Imperial fine wares in terms of functionality, technique and appearance. This continuity has been demonstrated by the studies of, among others, John W. Hayes. In order to determine the various groups of the pottery discussed here, the standard work "Late Roman Pottery" by Hayes is used as a basis, while "Nea Paphos V-Cypriot Red Slip Ware" by H. Meyza is the other reference work.

As previously outlined in the initial paper on Buildings A and B, the primary object during the excavation of Building A was to determine the architectural characteristics of structures located north of the Central Bath (Korkmaz & Tekocak, 2023). The presence of a cistern and the northern atrium suggested the potential for the discovery of bath-related architectural features here.

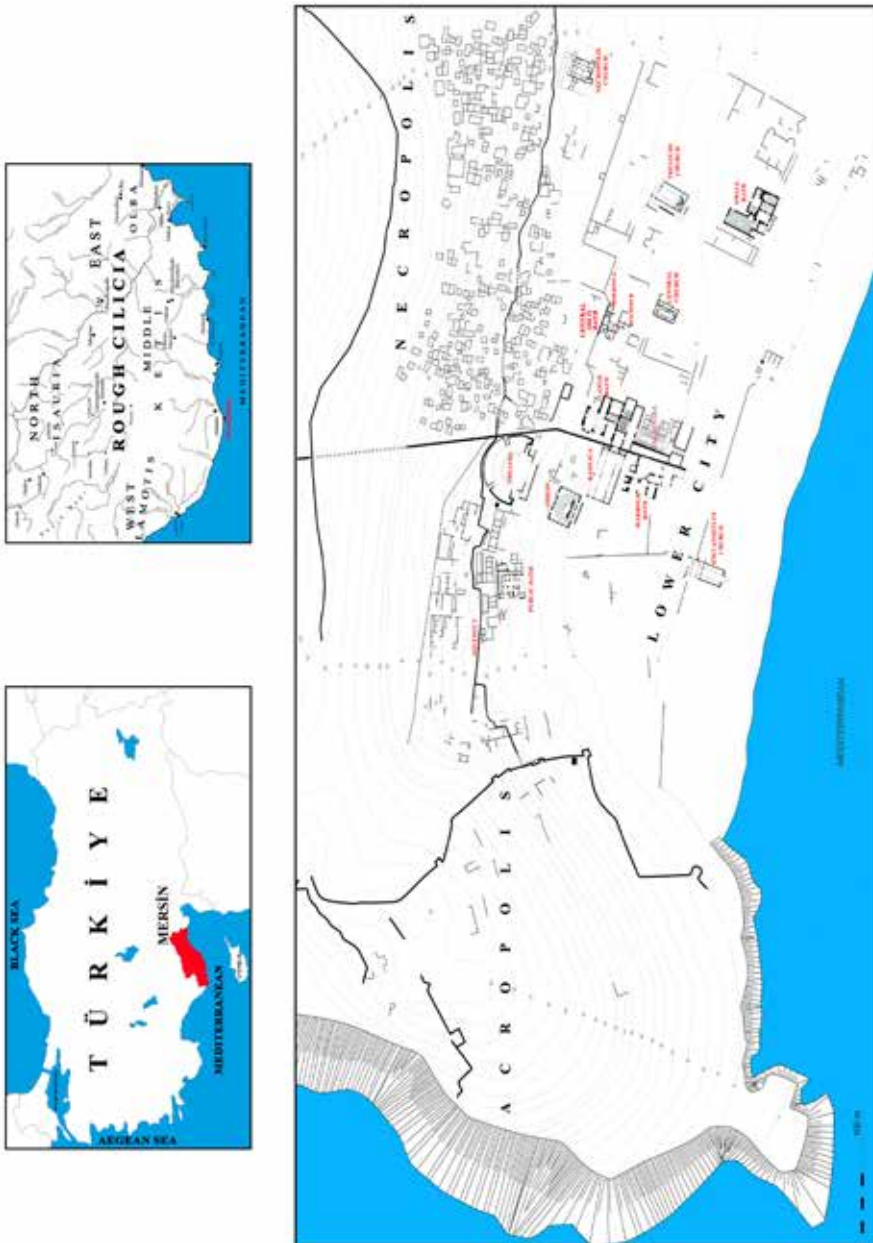


Figure 1. Map of Anemurium and the Location of various buildings.



Figure 2. Orthophoto of Buildings A and B.

However, the excavation revealed that Buildings A and B had been used as a single tabernae. Nevertheless, some indications were found that Building A may have had a previous usage (Korkmaz & Tekocak, 2023, p. 32). However, the available evidence is insufficient to permit the phasing of these buildings to be identified. The objective of this article is to discuss the red-slipped, fine ceramic material and determine the period of use of the buildings based on the date ranges of the ceramics and coins discovered on the premises.

Examples of similar ceramics were discovered during J. Russell's excavations, which were subsequently studied and published by C. Williams (Williams, 1989). In this publication, Williams analysed ceramics from a house and predominantly from various public buildings of the ancient city. The study identified five distinct "floors" were identified within the house, which contained ceramics dating from the first half of the 1st century BC to the early 6th century AD (Williams, 1989, p. 107). The stratigraphic characteristics of these floors were not documented in this book or in any other report of the excavation. In the light of this, we sought to ascertain whether the buildings we uncovered also exhibited subsequent stages of occupation. This paper presents the distribution of fine wares with percentage in the cities of Cilicia and in the major cities of other regions. Furthermore, the wares from Buildings A and B are compared with the data of Williams' study. The aim is to contribute to the expansion of the existing ceramic assemblage and cultural relations of Anemurium. The proportions presented in the publication were derived from calculations.

The article presents the ratios in question, which are based on the number of forms that belonging to three different fine ceramic groups. The ratios indicated in the article are based on the percentage calculation of the number of forms. Since it is not possible to evaluate the forms of amorphous pieces of fine ceramic groups, they have not been included in the percentage calculation. Furthermore, the amorphous pieces are insufficient for answering the question of the proportion of each form present. The provision of ratio information in the article represents an attempt to gain insight into the density of fine ceramic groups in Anamur. The ratios presented in the referenced literature are based on the information provided therein.

Ware Groups

African Red Slip Ware (ARSW) (Fig. 3)

One of the most comprehensive studies of ARSW is that by J.W. Hayes, (1972) who created a typology and provided a detailed account of the terminology, chronology, and form repertoire of ARSW. Moreover, two further works of significant merit are those by M. Mackensen (1993) and M. Bonifay (2004, pp. 155-207). Over the past few decades, chemical analyses have established that this group was manufactured in workshops located in the centre and north of Tunisia. ARSW began to be produced in the second half of the

1st century AD and continued throughout the 7th century AD (Hayes, 1972, pp. 296-299; Bonifay, 2004, pp. 480-482). Despite the general decline in the market share of ARSW after the 5th century AD, this was not due to the influence of large ceramic production centres such as those where LRC and LRD were made. Indeed, the ARSW continued to be important in the western Mediterranean (Bonifay, 2000, pp. 37-39), and surely late forms can be found at many sites in the east (Bonifay, 2004, pp. 446-447).

The examples are characterised by a light red fabric colour (10R 6/6, 10R 6/8, 10R 7/8), red fabric colour (10R 5/6), reddish yellow fabric colour (5YR 7/6) and light red fabric colour (2.5YR 6/8, 2.5YR 7/8). The fabric is composed of fine grained white or greyish-black lime mica and quartz as evidenced by the specimens from Tunisia workshop (Hasenzagl & Capelli 2019). The slip varies from red (2.5YR 5/8), to light red (2.5YR 6/8 and 10R 6/8) to red (10R 5/6, 10R 5/8). The following forms (50, 67, 73/76, 99, 104, 105, 106) were identified according to Hayes' typology.

Form 50B (Fig. 3, no. 1) is a large dish with a plain rim, a sloping wall and a very small, low foot ring. The applied slip is thin, and covers the interior and the outside of the rim. Its fabric is hard, fine-grained, and light orange-red in colour. These characteristics correspond to those described by ARSW C2 (Raynaud, 1993a: 185). The form is dated to the second half of the 4th century to beginning of the 5th century AD (Hayes, 1972, p. 72, Fig. 12, 60). At the Athenian Agora, the dating of form 50B is placed in the second half of the 4th century AD. Moreover, Hayes states that a well-preserved specimen can be dated to the period 375-400 AD (Hayes, 2008, pp. 74-75). This dating is confirmed by findings from Ephesus (Ladstätter, 2008, p. 111, cat. no. K 135). The form has been dated to the second half of the 4th century AD on the basis of coins discovered on the stylobate of the Basilica (Building II 12B) of Anemurium (Williams, 1989, p. 39, Fig. 18. 219-220). Examples of Form 50B have been identified at the following locations: Knidos (Sözel, 2023, p. 129, proportion 2%), Ephesus (Gassner, 1997, p. 149, taf. 49, 591; Ladstätter, 2008, p. 113, cat. no. K 135; Waldner & Ladstätter, 2014, Fig. 1, proportion 11%), Kelenderis (Tekocak, 2006, tablo 5, proportion 12%), Diokaisareia (Kramer, 2012, p. 18, Fig. 19, 138), Soli Pompeiopolis (Yıldız, 2022, p. 100, 116, Fig. 5, proportion 0.9%), Tarsus Cumhuriyet Alanı (Adak-Adıbelli, 2006, pp. 86-87, pl. 1. 12-13, proportion 3%; Tarsus Gözlükule Höyük (Jones, 1950, p. 205, Fig. 207, 812), Antioch (Waagé, 1948, p. 49, pl. IX, 836 u, as "the commonest of Late A shape"), Zeugma (Abadie-Reynal, 2005, pp. 526-527; Abadie-Reynal, Martz, Cador, 2005, p. 183, Fig. 1; Kenrick, 2013, p. 2; Erol & Tamer, 2020, p. 61, 66, proportion 22%), Apamea (Vokaer, 2015, p. 572, proportion 31.8%), Hama (Lund, 1995, p. 139, proportion 8%, Paphos (Hayes, 2003, p. 483, 485, Fig. 21, 211, 218; Rowe, 2004, p. 144, 146, very rare proportion and 10% proportion at "area three"), Panayia Ematousa (Lund, 2006, p. 222, Fig. 118, 239).

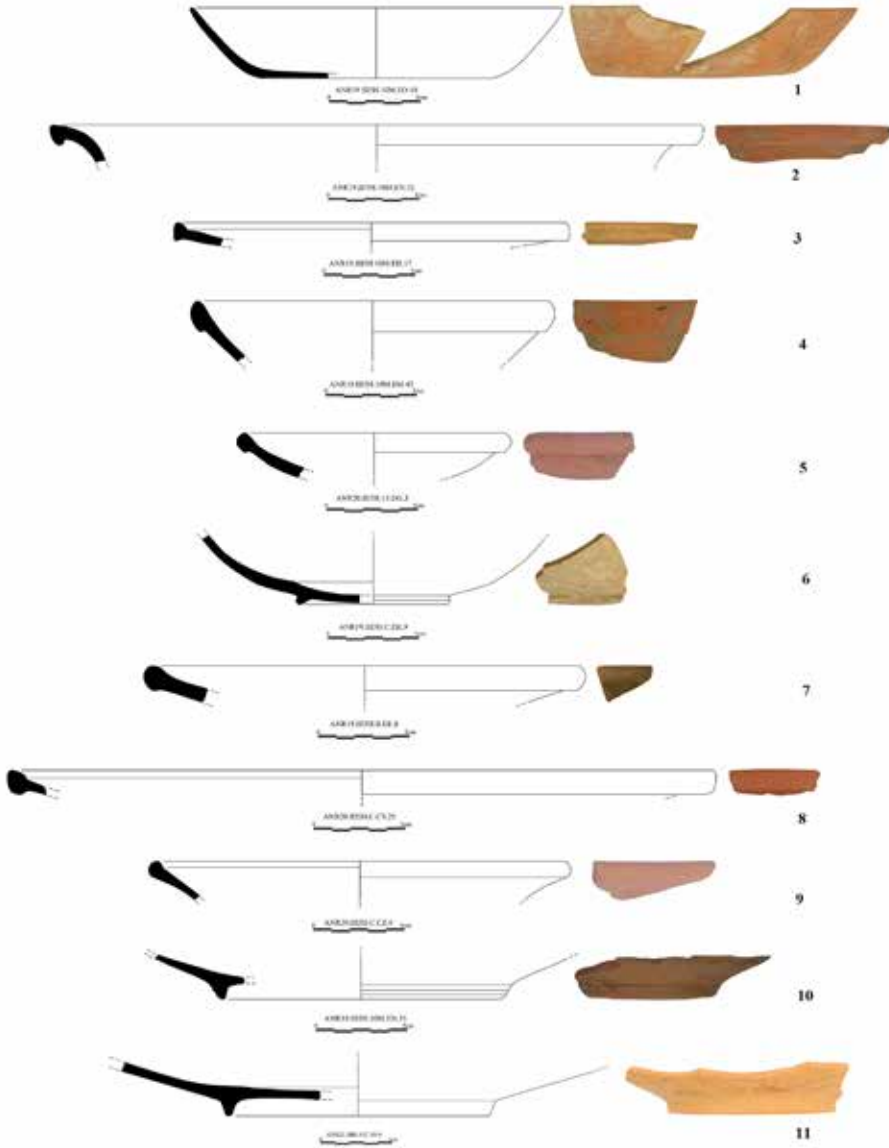


Figure 3. African Red Slip Ware (no.1-11).

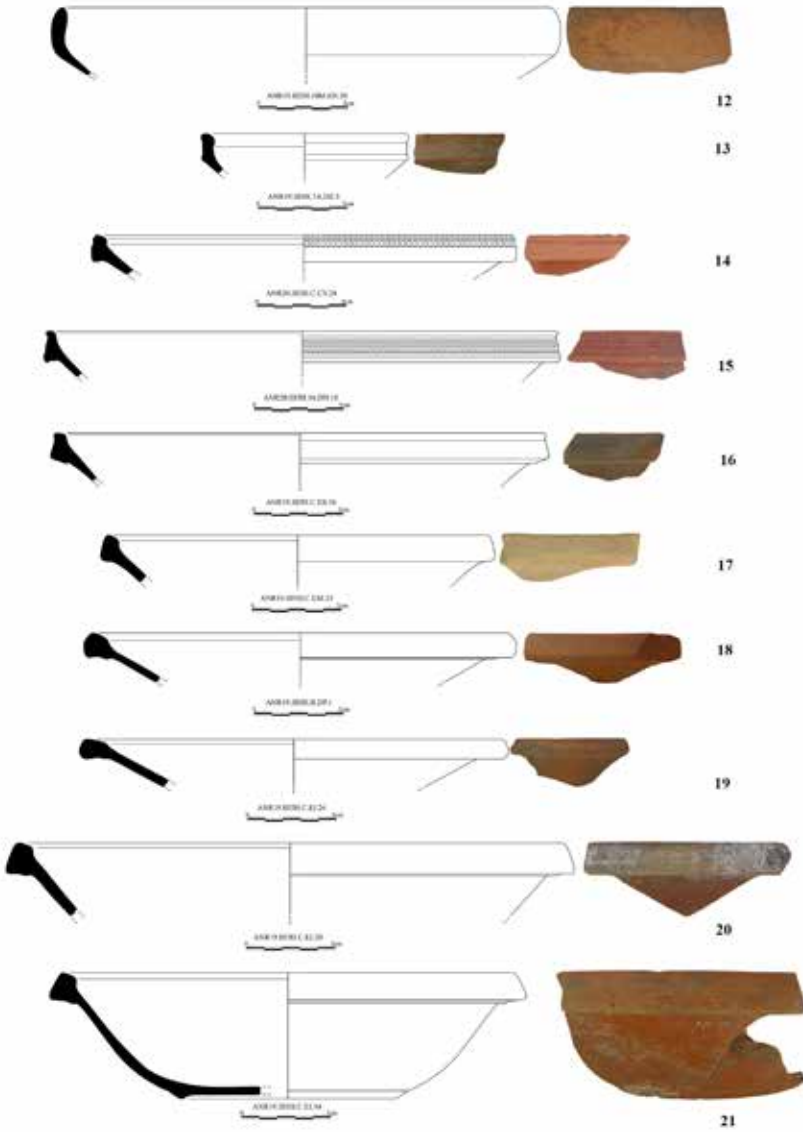


Figure 4. Late Roman C (Phocaean Red Slip) Ware (no. 12-21).

Form 67 (Fig. 3, no. 2) is a large bowl with a curved body in two segments. The rim presents a groove in close proximity to its sharp lip. The rims are predominantly slanted or rounded on the exterior and may exhibit a hook-shaped, hanging lip. The slip is thin, and covers the entire surface. The fabric is medium-hard, fine, and has an orange-red colour. The third group of this form is dated to the middle or third quarter of the 5th century AD (Hayes, 1972, p. 116, Fig. 19, 28). However, Mackensen suggests that the dating of both decorated and undecorated specimens of the “form 9.1” should be placed in the middle and late 4th century AD (1993, pp. 403-404, taf. 56, 7). Bonifay places the dating of the “Sigillée Type 41” “variant C” to the middle and the second half of the 5th century (2004, p. 173, Fig. 92, no. 7). The form is attributed to D2 ware and assigned to the workshops at Sidi Khalifa (Mackensen & Schneider 2002, p. 128, Fig. 2, 7). Examples of this form are present at Anemurium, albeit rarely in proportion (Williams, 1989, p. Fig. 18, 226; Building A, discussed here). Knidos (Sözel, 2023, p. 131, proportion 2%), Ilion (Heat & Tekkök 2006-2009, no. 11 Greek, Roman and Byzantine Pottery at Ilion (Troia): African Red-Slip (uc.edu)), Miletus (Berndt, 2003, p. 21, abb. 4-5, proportion 5,6%), Phocaea (Firat, 2011, 158, very rare proportion, Anemurium (Williams, 1989, p. 38, 40, Fig. 18, 226), Kelenderis (Tekocak, 2006, p. 53, tab. 5; Tekocak, 2009, p. 133, 140, Fig. 7,7-11, proportion 36%), Diokaisareia (Kramer, 2012, p. 18, taf. 19, 142), Soli Pompeiopolis (Yıldız, 2022, 107, pl. 9, 61, Fig. 5, proportion 10%), Tarsus Cumhuriyet Alanı (Zoroğlu, 2005, Fig. 3; Adak-Adıbelli, 2006: 54, 85, levha 3, 49, proportion 21%), Tarsus Gözlükule Höyük (Jones, 1950, pp. 205-206, Fig. 207, 818), Germanicia (Ok, 2023, pp. 362-364, Fig. 3, 5-6, rare proportion) Antioch (Waagé, 1948, p. 49, pl. IX, 871 p, rare proportion), Doliche (Strothenke-Koch, 2019, p. 141, Abb. 78, 87, tab. 1, rare proportion), Zeugma (Abadie-Reynal, 2005, p. 528, proportion 10%) Erol & Tamer, 2020, pp. 61-62, Fig. 1,4, proportion 17%), Gindaros (Kramer, 2004, p. 206, proportion 1,7%) and Apamea (Vokaer, 2015, p. 574, proportion 15%). The form has gained considerable popularity in Cilicia and in Roman Syria. The proportion exhibits similar properties to those observed in Roman Syria, with the overall assemblage of Beirut dating to the end of the 4th to the 5th century AD (Reynolds, 2010, p. 94; Reynolds, 2011, p. 227) and Paphos (Lichočka & Meyza, 2001, p. 160; Rowe, 2004, p. 146, Fig. 53, 7).

Form 73/76 (Fig. 3, no. 3) is a small bowl with a wide rim and small hooked lip that extends in both and upward and downward direction. There are no notches on the rim. The slip is relatively thin and dull. The fabric is compact and exhibits a tightly textured surface. This form has not previously been identified in Anemurium before. Hayes assigns a date of the second half of the 5th century AD to this form, which he refers to as Form 76 (Hayes, 1972, p. 123). This form bears resemblance to the one classified by Mackensen as 16.2, which he dated to as early as 390 AD (Mackensen, 1993, p. 407, taf. 61, 2-3). This form has been identified in other locations: Knidos (Sözel, 2023, p. 139, proportion 0.6 %), Ephesos (Waldner & Ladstätter, 2014, Fig. 1, proportion 0.7%), Miletus (Berndt, 2003, pp. 21-22,

abb. 5, proportion 1%), Tarsus Cumhuriyet Alanı (Zoroğlu, 2005, Fig. 3; Adak Adıbelli, 2006, p. 60, lev. 6, 83, rare proportion).

Form 99 (Fig. 3, no. 4, 5, 6) pertains to a bowl with a nearly hemispherical shape and a low foot. The rim is slightly everted and rolled from the outside and flattened. The interior is coated in a thick, orange-red to brick-red slip, which extends onto the exterior rim. The fabric is pale red in colour and contains coarse lime particles. The identified fragments can be classified as variants “B” (no. 4) (Hayes, 1972, Fig. 28, 13; Mackensen 1993, p. 345, taf. 67, 9) and “C” (no. 6) (Hayes, 1968, pp. 208-209, no. 44; Hayes, 1972, Fig. 28, 22, 23; Barraud et al., 1998, Fig. 8, 3). The particular characteristics of no. 5., (variation of Hayes form 99) including a sloping wall and thickened lip, it is typologically and chronologically related to Mackensen Form 29.2, which is dated to 530-580 AD (1993, taf. 67) and belongs to D ware (Raynaud, 1993b, p. 190; Mackensen & Schneider, 2002, p. 150, Fig. 4, 5; Mackensen, 2006, p. 222, Fig. 9, 5, 16). Hayes proposed that variants B and C were dated to 530-620 AD (1972, p. 155, Fig. 28, 22-23). Bonifay dates variants B and C to the second quarter of the 5th to the middle of the 6th century AD, and to the end of the 6th to 7th century AD, respectively (Bonifay, 2004, p. 181, Fig. 96, 4). In Anemurium, this form constitutes a 6% proportion and was originally dated rather broadly from the mid of the 4th to the 7th century AD (Williams, 1989, pp. 41-42, Fig. 19, 237). The proportion of new excavations indicates that this form is relatively uncommon at Anemurium. The pieces discovered in Buildings A and B can be to the reign of the emperors Phocas (602-610 AD) and Heraclius (610-640 AD) based on the coins found in the vicinity. The wares found nearby are as follows: with no. 4 LRD form 1 (Fig. 5, 23), with no. 5 LRD 8 (Fig. 6, 35) and with no. 6 LRD 9 (Fig. 7, 41-42). Both wares of LRD dated up to 6th-7th centuries AD. Examples of the form have been found for variant B; Alabanda (Soslu, 2020, Fig. 8, Fig. 10, 14, overall proportion 46%), Myndos (Mimaroglu, 2017, p. 347), Kelenderis (Tekocak, 2006, tab. 5, lev. 8, 55, 57, proportion 8%), Olba (Aydın, 2019, p. 97, pl. 2, 4, Fig. 3, 4, proportion 30%), Diokaisareia (Kramer, 2012, p. 18, taf. 20, 149-150, rare proportion), Soli Pompeiopolis (Yıldız, 2022, p. 111, pl. 83-84, Fig. 5, proportion 10%), Germanicia (Ok, 2023, p. 367, Fig. 10, rare proportion), Zeugma (Kenrick, 2013, p. 57, pl. 33, 512, proportion 1%) and Ephesos (Ladstätter, 2008, p. 121). Examples of the form have been found for variant C; Tarsus Cumhuriyet Alanı (Zoroğlu, 2005, Fig. 3; Adak-Adıbelli, 2006, p. 69, pl. 10, 127, 130, overall proportion 20%), Paphos (Hayes, 2003, Fig. 22, 241, rare proportion. The archaeological evidence indicates that the theatre of Paphos was constructed between the late 6th and early 7th century AD (Waddington, 2003, p. 196, 210, Fig. 27, 55, 1201). Beirut (Reynolds, 2011, p. 219, 229, Fig. 10, 145, 10% proportion), Antioch (Waagé, 1948, p. 50, pl. X, 878a, 878f, not common), Ephesos (Waldner & Ladstätter, 2014, Fig. 1, overall proportion 10.5%- for A and C variants) and Miletus (Berndt, 2003, p. 27, taf. 4, TS. 52, proportion 19%).

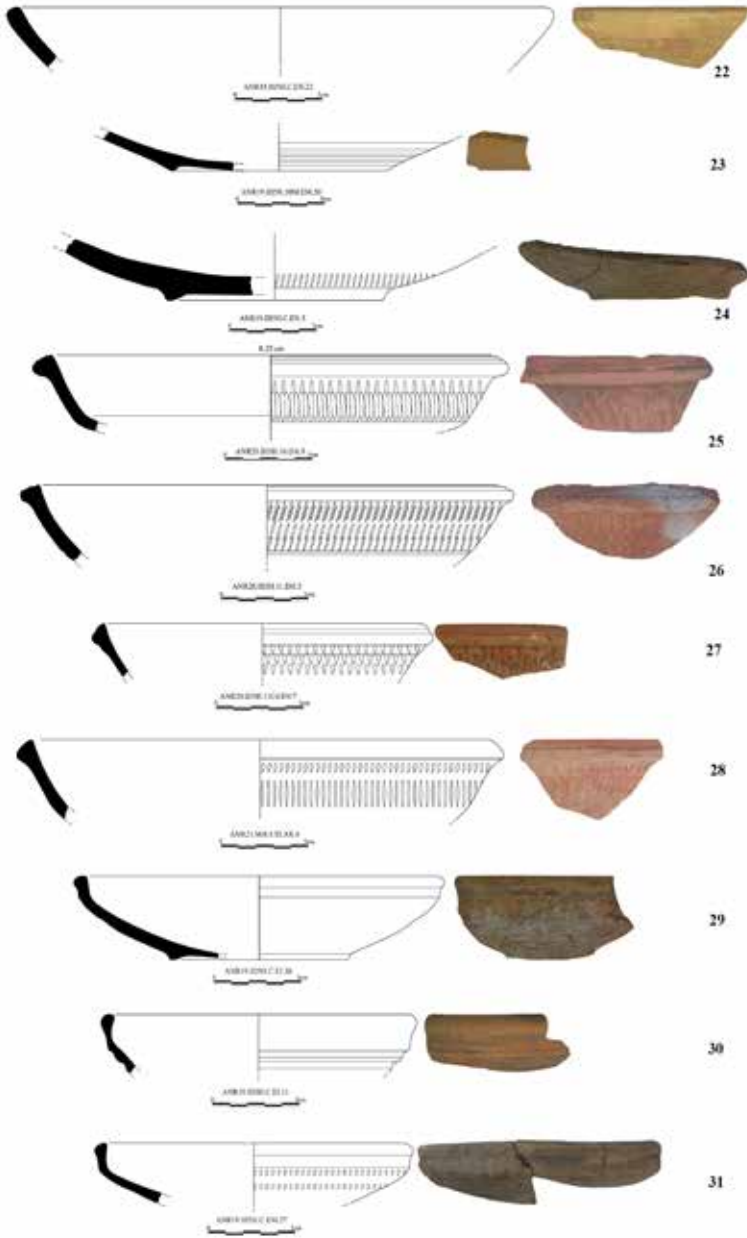


Figure 5. Late Roman D (Cypriot Red Slip) Ware (no. 22-31).

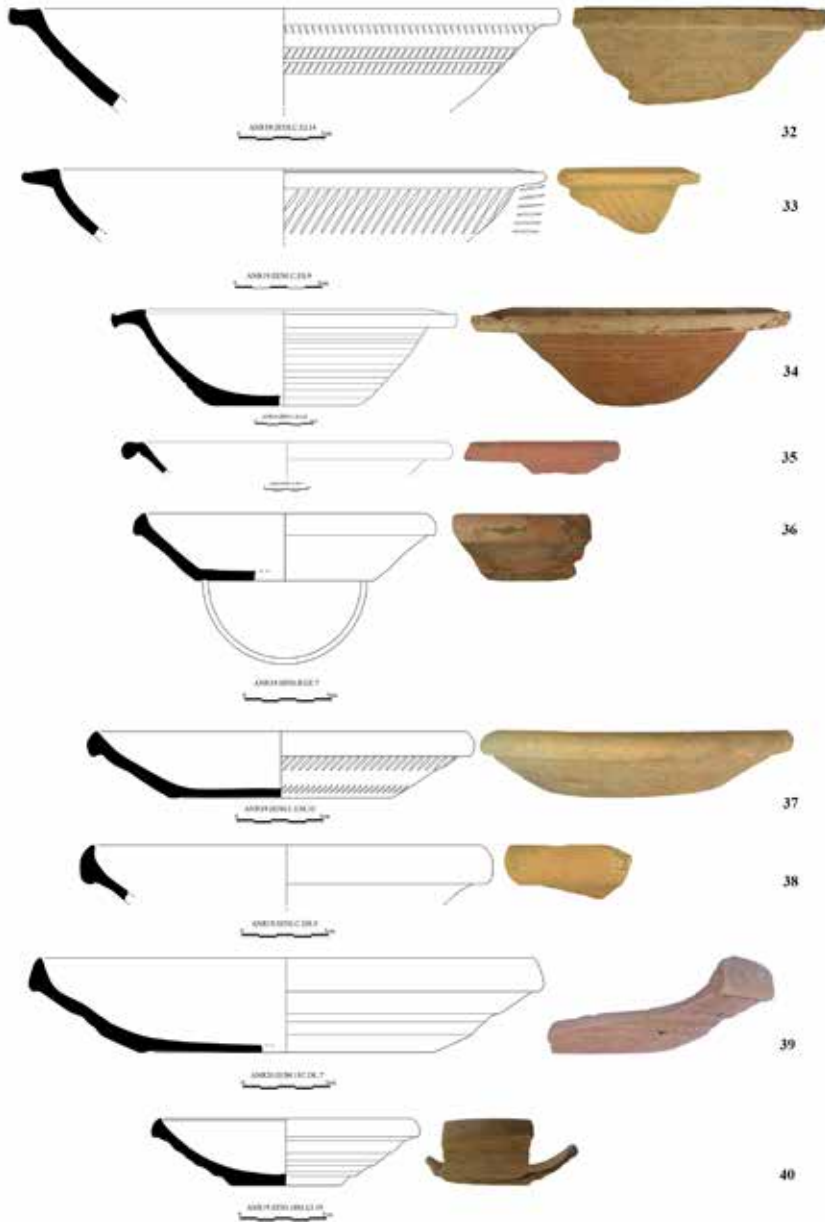


Figure 6. Late Roman D (Cypriot Red Slip) Ware (no. 32-40).

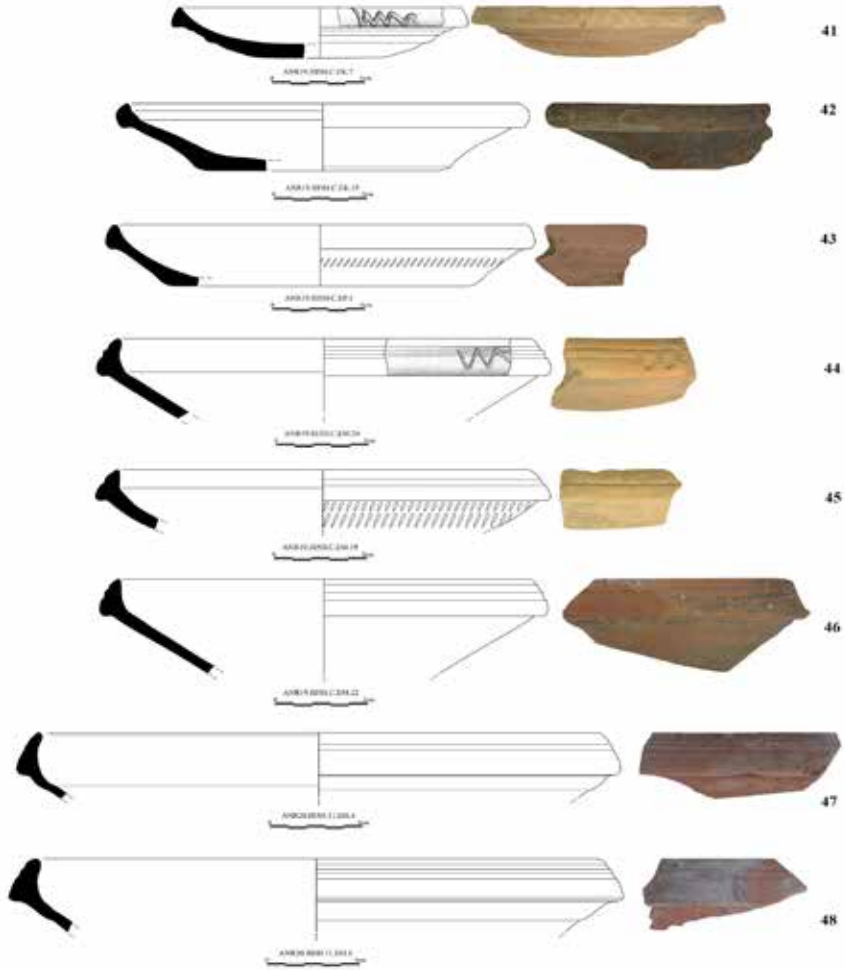


Figure 7. Late Roman D (Cypriot Red Slip) Ware (no. 41-48).

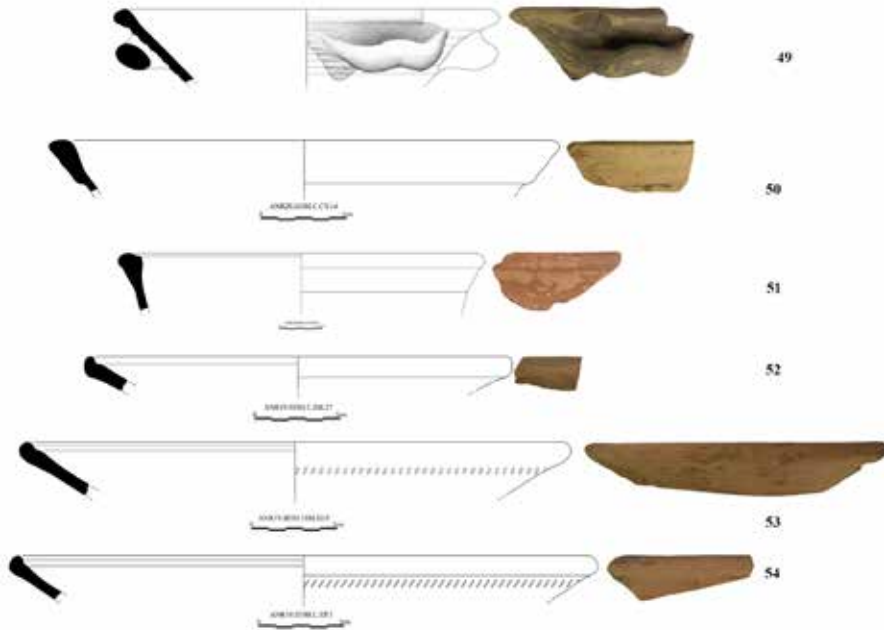


Figure 8. Late Roman D (Cypriot Red Slip) Ware (no. 49-54).

Form 104 (Fig. 3, no. 7, 8, 9) pertains to a substantial plate or dish with a knobbed, somewhat hammer-like rim and a shallow body. The slip is thick, burnished on the interior and around the rim, and exhibits a red to orange-red colouration. The fabric contains fine mica, sand and lime.

The imitation of forms 104, 105 and 106 of the ARS is a common occurrence in Anemurium (Williams, 1989, pp. 51-52). The colour range of the clay utilised in these ceramics is typically light red to red, while the slip is orange red. The clay is observed to contain white lime stone, red and dark grey to black sand, and mica. The texture of the slip is like “sandpaper” as described by Williams. The clay is coarser and less compact than the clay used in the main workshop’s clay of the ARS D group in Tunisia (Bonifay, 2004, p. 50). These fabrics and slips are comparable to those of no. 9 and no. 10.

Specimens classified as variants “B” (no. 7, 8) and “C” (no. 9) are in accordance with Hayes’ classification (Hayes, 1972, Fig. 30, 16, 23). The form also resembles to that which Mackensen designated as Form 40. Both Hayes and Mackensen suggest a dating of 580/600 AD to the first half of the 7th century AD (Hayes, 1972, p. 166; Mackensen, 1993, p. 429,

taf. 71, 4, 7). Bonifay proposed a date range of the mid-6th to the mid-7th century AD for it (Bonifay, 2004, p. 183, Fig. 97, 15, 18). In the recently discovered Buildings A and B in Anemurium, examples of Form 104 are found in conjunction with LRC Form 10C, which is dated to the latter 6th and earlier 7th century AD. Other examples of this form have been identified at Knidos (Doksanaltı, 2020, p. 384), Alabanda (Soslu, 2020, Fig. 8, proportion 18%), Myndos (Mimaroğlu, 2017, p. 347), Ephesos (Ladstätter, 2008, p. 115, cat. no. 233, 121, taf. 311, cat. no. 429; Waldner & Ladstätter, 2014, Fig. 1, proportion 4%; Gassner, 1997, p. 148, taf. 49, 60), Miletus (Berndt, 2003, p. 29, taf. 6, TS 90, taf. 7, TS 095, proportion 18%; Şahin, 2020, p. 232), Letoon (Mimaroğlu, 2020, p. 283, pl. 1, 3-4), Kelenderis (Tekocak, 2006, p. 54, Lev. 9, 58, proportion 8%), Olba (Aydın, 2019, p. 99, pl. 4, 7, Fig. 3. 3, 3. 4, proportion 5%), Diokaiseria (Kramer, 2012, p. 18, 52, taf. 20, 153-155, taf. 21, 156, 10% proportion), Tarsus Cumhuriyet Alanı (Zoroğlu, 2005, Fig. 3; Adak-Adıbelli, 2006, pl. 14, 162-165), Soli Pompeiopolis (Yıldız, 2022, p. 104, pl. 5, 32, proportion 20%) and Zeugma (Kenrick, 2013, p. 57, pl. 33. pt. 513).

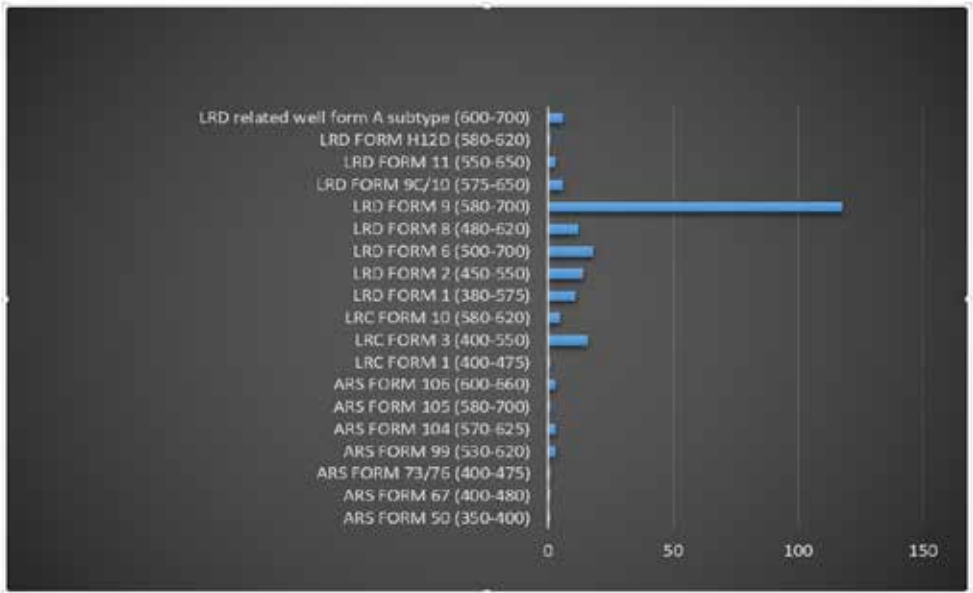


Figure 9a. Distribution of Late Roman Red Slip Ware of Buildings A and B in Anemurium: According to Ware Groups and Forms.

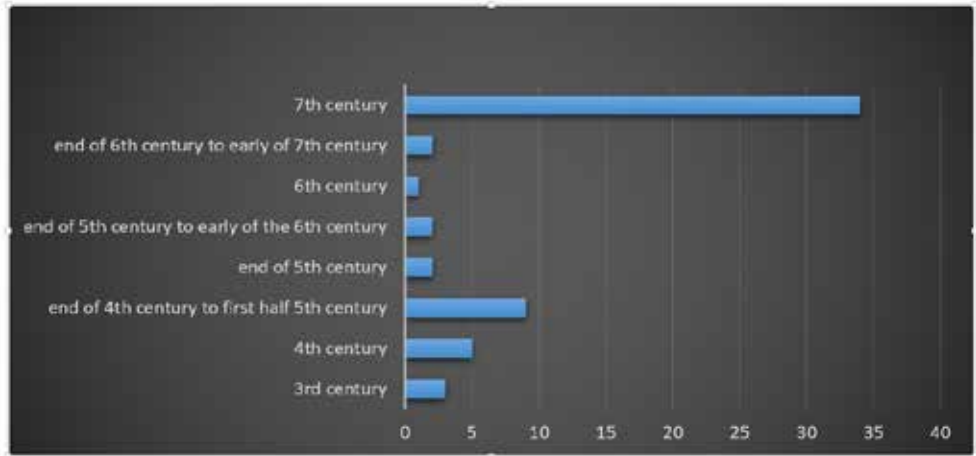


Figure 9b. Chronological Distribution of Coins Found in Buildings A and B in Anemurium.

Form 105 (Fig. 3, no. 10) is a large plate with an elongated triangular foot with a rounded resting surface. Hayes dates this form to the late 6th and 7th century AD (Hayes, 1972, p. 169, Fig. 31, 3). The form has been discovered at Knidos (Doksanaltı, 2020, p. 384), Myndos (Mimaroglu, 2017, p. 348), and Ephesos (Waldner & Ladstätter, 2014, Fig. 1, proportion 9%). It is also known from Miletus (Berndt, 2003, p. 29-30, proportion 4.5%), Tarsus Cumhuriyet Alanı (Adak-Adıbelli, 2006, p. 78-79, proportion 2%), previously at Anemurium (Williams, 1989, Fig. 20, 245), Olba (Aydın, 2019, Fig. 3, 3, 3. 4, proportion 45%), and Soli Pompeiopolis (Yıldız, 2022, Fig. 5, proportion 10%).

Form 106 (Fig. 3, no. 11) is a large plate with a high ring foot, which Hayes dated to 600-660 AD (1972, p. 171, Fig. 32). Bonifay examined such wares under the designation “Sigillée Type 89 and 95” (Bonifay, 2004, p. 210). Mackensen did not equate Hayes Form 106 with any forms in his classification. In contrast, Form 31.1 which is thought to date from the period 520/530 and 580/600 AD, was studied as a close resemblance but not as an exact match (Mackensen, 1993, p. 346, 427). Additionally, Hayes evaluated this form in conjunction with 105. In this regard, Mackensen’s methodology aligns with Hayes. Forms 106 with 104 and 105 appear to have been imported and imitated on Anemurium (Williams, 1989, Fig. 20, 246-247, Fig. 25, 296).

Late Roman C (Phocaeen Red Slip Ware) (Fig. 4)

LRC began to appear at the end of the 4th century AD when ARSW experienced a significant growth at the end of the same century. From the mid-5th to the early 6th century AD, there was a remarkable increase in the distribution of LRC. Researchers have noted a decline in the distribution of ARSW during the 5th century AD (Reynolds, 2016, p. 131).

LRC and LRD vessels probably filled the gap left by the decreasing distribution of ARSW. Between the end of the 5th century AD and the middle of the 6th century AD, the distribution of ARSW increased again (Bes, 2015, p. 91, 137, Fig. 58). The production of LRC continued until the middle of the 7th century AD (Bes, 2015, p. 90). These ceramics were in demand in many parts of the Mediterranean and even reached as far as England. These wares were mostly manufactured in Phocae and other regional workshops (Bes & Keweloh-Kaletta, 2023).

Ware group	Form	date	Piece number	Percentage rate of the form to the whole group of Tabernae	Percentage rate of the ware group to the whole fine ceramics of Tabernae	Percentage rate of the form to the ARS ware of the whole cite ¹⁷⁴
ARS	50B	350-400	1	6.66%		6.66%
ARS	67	400-480	1	6.66%		14.66%
ARS	73/76	400-475	1	6.66%		
ARS	99	530-620	3	20%		6.66%
ARS	104	570-625	3	20%		5.33%
ARS	105	580-700	1	6.66%		30%
ARS	106	600-660	3	33.33%		6.66%
ARS			15		6.63%	
						Percentage rate of the form to the LRC ware of the whole cite ¹⁷⁵
LRC	1	400-475	1	4.45%		6.61%
LRC	3	400-550	16	72.72%		90.57%
LRC	10	580-620	5	22.72%		1.04%
LRC			22		9.73%	
						Percentage rate of the form to the LRD ware of the whole cite ¹⁷⁶
LRD	1	380-575	11	5.82%		5.34%
LRD	2	450-550	14	7.40%		20.24%
LRD	6	500-700	18	9.52%		
LRD	8	480-620	12	6.34%		7.57%
LRD	9	580-700	118	62.43%		38.98%
LRD	9C/10	575-650	6	3.17%		2.20%
LRD	11	550-650	3	1.58%		13.77%
LRD	H12D	580-620	1	0.52%		
Well form	A subform	600-700	6	3.17%		1.51%
LRD			189		83.62%	
Total			226			

Figure 10. Table with the Number of Late Roman Red Slip Ware of Buildings A and B.

The examples are characterised by a light red (10R 6/6, 10R 6/8, 10R 7/8), light reddish brown (2.5YR6/4) and light red (2.5YR6/6, 2.5YR7/8) fabric colour. The fabric is generally fine-grained and contains white or grey lime, silver mica, light grey or white quartz, black, light grey and white sand inclusions. The slip varies from light red (2.5YR 6/6), red (2.5YR 5/6) to brownish light red (10R 6/8) and red (10R 4/6, 10R 5/6, 10R 5/8). The forms (1, 3, 10) are classified according to Hayes' typology.

Form 1 (Fig. 4, no. 12) is a dish with an incurved rim, a curved wall and shallow body. It is dated to the late 4th to the early of the 5th century AD (Hayes, 1972, Fig. 65. 1, 4). The pieces are characterised by a red (2.5YR 6/4 and 7/8) fabric colour. The fabric is fine-grained with white lime and silver mica inclusions. The slip is commonly red (10R 5/8-4/6). Examples of this form can be found at: Ilion (Heat & Tekkök 2006-2009, no. 4, Greek, Roman and Byzantine Pottery at Ilion (Troia): Phocaeen Red-Slip (uc.edu), Ephesos (Gassner, 1997, p. 138, Taf. 44, 535-536, Taf. 50, 609-610; Ladstätter, 2008, p. 115, cat. no. 234), Anemurium (Williams, 1989, p. 46), Knidos (Sözel, 2023, p. 150, proportion 9%), Myndos (Mimaroglu, 2017, p. 343), Miletus (Berndt, 2003, p. 34, proportion 4%) Phocaea (Firat, 2011, pp. 127-128, proportion 3%), Tarsus Cumhuriyet Alanı (Adak-Adıbelli, 2006, p. 120, Fig. 7, proportion 0.2%), Elaiussa Sebaste (Kızırlarlanoglu & Aktaş, 2023, p. 320, cat. no. 1, 2, graphic 1, proportion 14%), and Soli Pompeiopolis (Yıldız, 2022b, Fig. 4, 1, Fig. 2, proportion 0.77%).

Form 3 (Fig. 4, no. 13, 14, 15, 16, 17) is a dish/bowl with a square vertical rim and a slightly concave outer profile. The fabric is fine-grained and contains lime and sand. The fabric colour varies from light reddish brown to dark shades. The subforms of Form 3 identified in Buildings A and B. The “subform A”, dated to the first half of the 5th century AD (no. 13) (Hayes, 1972, p. 337; Gassner, 1997, p. 143, f. 46, no. 551–554; Hayes, 2008, p. 237, Fig. 38. 1250). A similar subform was found during previous excavations in Anemurium (Williams, 1989, p. 49, Fig. 23, 277). Some researchers have classified it as early form (Tekkök-Biçken, 1996, p. 138, Fig. 85 G 74) and while others have identified it as belonging to LRC form 10A due to its close resemblance (Kızırlarlanoglu & Aktaş, 2023, p. 325, Fig. 6, 52). Subform B/C has a groove on outward on the rim which carries rouletted decoration (no. 14) (Hayes, 2008, Fig. 38, 1264). This subform is dated to the second half of the 5th century AD (Hayes, 1985, Fig. 63, no. 8-10; Gassner, 1997, taf. 46, 555-557). Subform C has a tapering, tall and slightly concave rim (no. 15) (Hayes, 1972, Fig. 67. 7; Hayes, 2008, Fig. 39. 1270; Williams, 1989, Fig. 22, 269; Heat & Tekkök 2006-2009, no. 18, Greek, Roman and Byzantine Pottery at Ilion (Troia): Phocaeen Red-Slip (uc.edu)). Subform E, (No. 16) is characterised by a lower, concave rim that is broad and flat beneath. It is dated to 475-525 AD (Waagé, 1948, p. 53, pl. XI, 946k; Williams, 1989, Fig. 22, 274; Gassner, 1997, p. 139, taf. 46, no. 563; Hayes, 2008, p. 242, Fig. 40, 1285-1286). The LRC ware was similar to no. 16 were discovered in the deposit, dated to the late of the 6th century at Ephesos (Ladstätter, 2008, p. 121, taf. 309, K404). The form Subform G (No. 17) is characterized by a squarish knobbed rim that is flattened on its interior and exterior. Its date is similar to that of subform F (Hayes, 1992, Fig. 37, 27/2). LRC Hayes form 3G was discovered in the deposits of Beirut and is dated to pre and post AD 551 earthquake. Upon examination of the deposits, it was determined that they contained two distinct layers. The pre 551 was identified as “containing a coin from the period AD 539-40” while the post 551 “appear to be post-551 deposition of AD 551 material” (Reynolds 2011a, p. 215, 218). The Ephesos specimen was found in the

deposits, dated to the end of the 6th century (Ladstätter, 2008, p. 121, taf. 311, K432, 122, taf. 318, K501). The hard-fired fabric is predominantly buff in colour with a dull-red hue (Hayes, 2008, p. 242, Fig. 40, 1292).

The LRC Hayes form 3 is the most dominant ware of Tarsus (Zoroğlu, 2005, p. 247, Fig. 4). The overall proportion is 42% at Cumhuriyet Alanı (Adak-Adıbelli, 2006, p. 106, grafik 5) and the most dominant subform is 3F (Adak-Adıbelli, 2006, p. 108, lev. 24, 240) and the second being 3G (Adak-Adıbelli, 2006, p. 108, lev. 25, 268) and Gözlükule (Jones, 1950, Fig. 208, o, p). Furthermore, subform 3C have been identified at Tarsus (Adak-Adıbelli, 2006, p. 107, lev. 23, 234). The subforms Form 3C and form 3 E/F can be found at Diokaiseria (Kramer, 2012, p. 19, taf. 21, 163, taf. 22, 165). Form 3 is the most dominant (Kızırlarslanoğlu & Aktaş, 2023, graphic 1, proportion 51%) with the subforms; 3A (Kızırlarslanoğlu & Aktaş, 2023, p. 322, Fig. 3, 22), 3C (Kızırlarslanoğlu & Aktaş, 2023, p. 322, Fig. 4, 29) and 3G (Kızırlarslanoğlu & Aktaş, 2023, p. 323, Fig. 5, 34) were identified at Elaiussa Sebaste. Form 3 is the most dominant at Olba (Aydın, 2019, Fig.3, 7, proportion 51%) and is accompanied by 3C and 3F subforms at Olba (Aydın, 2019, lev. 9, 18, lev. 10, 19). The proportion of Forms 3A (Yıldız, 2022b, Fig. 4, 9), 3B/C (Yıldız, 2022b, Fig. 4, 17) and 3C (Yıldız, 2022b, Fig. 5, 20) found at Soli Pompeiopolis is 72.8%. The Form 3B/C at Deli Halil Survey (Tülek, 2015, Fig. 7) and 3C at Misis (Francis, 2015, Fig. 3a,15) are also found. Forms 3A (Sözel, 2023, lev. 65, 205), 3C (Sözel, 2023, lev. 50, 157), 3D (Sözel, 2023, p. 52, 164) and 3F (Sözel, 2023, lev. 62, 195-197) have been identified at Knidos. Subforms; 3A (Ladstätter & Sauer, 2005, 150, taf. 2, 19;), 3B/C (Ladstätter & Sauer, 2005, taf. 3, 29, taf. 9, 120), 3C (Ladstätter & Sauer, 2005, taf. 2, 22, taf. 3, 32), 3F (Ladstätter & Sauer, 2005, p. 150, taf. 4, 48), 3G (Ladstätter & Sauer, 2005, taf. 5, 63, taf. 6, 74) were discovered at Ephesos. Other cities where ceramics have been discovered include Miletus (Berndt, 2003, abb. 6, proportion 54%), Phocaea (Fırat, 2011, p. 143, proportion 41%), Cyprus (Rowe, 2006, p. 147-148) and Doliche (Strothenke-Koch, 2019, p. 139, abb. 75, 76).

Form 10 (Fig. 4, no. 18, 19, 20, 21) is a dish/bowl with a rounded rim on the exterior and has an offset underneath, and with a straight, sloping wall (Hayes, 1972, form 10, no. 4). Form 10 can be considered as a successor of Hayes Form 3 wares (Ladstätter & Sauer, 2005, p. 151). Waagé posits that the production of 10A commenced in the mid-6th century AD (1948, p. 57, Pl. XI, 949 a-k). Hayes, on the other hand, based on the additional find complexes dated the beginning of Form 10A to around 570 AD until the early 7th century AD (Hayes, 1972, p. 345). The dating is valid for the B subtype. The proposed dating for subtype C is the late 6th century to the early of 7th century AD (Berndt, 2003, p. 38).

The rim of subform A no. 18 and subform C no. 19 has a rounded profile. The thin offset is positioned at a lower elevation relative to the body. The rim gained a slightly longer and stretched shape (Hayes, 1972, p. 346, Fig. 71, 2, 4, 7). Similar specimens of no. 19 were

discovered in the deposits at Ephesos, dated to middle of the 6th century to the end of the 6th/beginning of the 7th century (Ladstätter, 2008, p. 122, Taf. 318 k 503) and 580-600 AD (Gassner, 1997, p. 140, taf. 48, 585; Ladstätter, 2008, p. 120-121, Taf. 308 k 391). The findings at Ilion (Heat & Tekkök 2006-2009, no. 32 Greek, Roman and Byzantine Pottery at Ilion (Troia): Phocaeen Red-Slip (uc.edu)) are dated to 7th century AD. The dating of No. 20 and no. 21 to the 580s in the Athenian Agora has led to their classification as an “*immediate predecessor*” of form 10 or “*transitional to form 10*” (Hayes, 2008, p. 88, Fig. 40, pl. 63, 1298, Fig. 42, 1328, 1329). The form regarded as “form 3/10” is dated to the second half of the 6th century AD in Ephesos (Ladstätter & Sauer, 2005, p. 150, taf. 6, 74). The findings from Ilion (Heat & Tekkök 2006-2009, no. 31 Greek, Roman and Byzantine Pottery at Ilion (Troia): Phocaeen Red-Slip (uc.edu)) and Parion (Ergürer, 2018: 106, no. 105) were evaluated as in Ephesos. The rim of no. 21 is unslipped. This subform evaluated in Kelenderis as “Kelenderis Variant 1” (Tekocak, 2006, p. 59, pl. 13, 88). The proportions of Form 10 in Cilicia are as follows: 20% at Tarsus (Zoroğlu, 2005, Fig. 4; Adak-Adıbelli, 2006, Fig. 7), 21% at E. Sebaste, 49% at Olba (Aydın, 2019, Fig. 3, 7) and 18% at Soli Pompeiopolis (Yıldız 2022b, Fig. 2). The specimens of A subform were discovered at Tarsus Cumhuriyet Alanı (Adak-Adıbelli, 2006, lev. 30, 341, lev. 31, 364, 373), Diokaiseria (Kramer, 2012, p. 19, taf. 22, 23 nr. 173-174), Adramytteion (Şahin, 2021, p. 227, abb. 13, no. 48), Elaiussa Sebaste (Kızırlanslanoglu & Aktaş, 2023, p. 325, cat. no. 51), Soli Pompeiopolis (Yıldız, 2022b, Fig. 6, 47-49), Knidos (Doksanaltı, 2020, pp. 385-386; Sözel, 2023, pp. 162-164, proportion 13%), Myndos (Mimaroglu, 2017, p. 343), Klazomenai (Gürbüz, 2018, Fig. 6), Miletus (Berndt, 2003, taf. 18, TS 564), Phocaea (Firat, 2011, p. 151), and in Cyprus (Rowe, 2006, pp. 148-149).

Late Roman D (Cypriot Red Slip Ware) (Fig. 5)

Another group of Late Roman pottery is Late Roman D, which is mainly found in the eastern Mediterranean. Waagé introduced the term Late Roman D alongside Late Roman A-B and C (Waagé, 1948, p. 52, 56, pl. X-XI, 916, 926, 930, 931, 932, 960, 970). Subsequently, in his book, Hayes termed this category Cypriot Red Slip Ware due to resemblance to Cypriot Sigillata (ESD) (Hayes, 1972, p. 341). This assumption of a Cypriot origin was made on the basis of these similarities. Recent studies have demonstrated that LRD-style tableware was produced in various centres in Pamphylia, Lycia and Pisidia in southern Anatolia (Poblome & Firat, 2011, pp. 49-54; Jackson et al., 2012). It is generally accepted that LRD was produced from the end of the 4th century to the end of the 7th century AD.

The examples are characterised by a red fabric (10R 4/6, 10R 5/8, 10R 5/6), light red fabric (2.5YR 6/6, 2.5YR 6/8, 2.5YR 7/6, 2.5YR 7/8, 10R 6/8), pale red (10R 7/4), reddish yellow (5YR 6/6, 5YR 7/6, 5YR 7/8), light brown (7.5YR 6/4) and pink (7.5YR 7/4) fabric and slip colour. The fabric is compatible with fine-grained white or grey lime, silver mica,

light grey, black or white quartz, black, light grey and white sand inclusions. The following forms (1, 2, 6, 8, 9, 10, 11, H12D and Well Form) are classified according to Hayes', Meyza's and Williams' typologies.

Form 1 (Fig. 5, no. 22, 23) is characterised by a thickened and rounded rim, a low ring foot, a flaring curved wall and roulette ornaments (Meyza, 2007, Pl. 2, H1 var 1, 2). Hayes and Meyza (as forms H1 and H1 var) propose a date range for the form of roughly to the late 4th century to the early 6th century AD (Hayes, 1972, p. 373; Meyza, 2007, p. 44, 45, 48). The discoloured rim of (Fig. 5, no. 22) is a typical feature of Form 1, as described by Hayes (1972, p. 371). Meyza classified a transitional form H1A/B which he dated to the 4th-5th centuries AD (2007, p. 46). The dish in (Fig. 5, no. 23) has a flat bottom that is comparable to the Meyza form H1A or H1/3, which he dated to the second half of the 4th to 5th century AD (Meyza, 2001, p. 172, Fig. 3, 10; 2007: 45. pl. 18, 4). This form was also produced in Well Form wares (Williams, 1977, p. 176, Fig. 1, 2; Meyza, 2007, p. 79, pl. 17, Well Form 2). The proportion of this form at Anemurium is 5% (Williams, 1989, p. 29, Fig. 20, 153), although the form is more common in other centres such as Tarsus Cumhuriyet Alanı (Adak-Adıbelli, 2006, chart 9, proportion 17%), Kelenderis (Zoroğlu, 2005, Fig. 5; Tekocak, 2007, p. 18, cat. no. 2, proportion 27.5%), Soli Pompeiopolis (Yıldız, 2022c, p. 1138), Limyra (Marksteiner & Yener-Marksteiner, 2009, taf. 2, 12, Diagram 2, proportion 20%; Bes, 2020, Fig. 4, c) and Cyprus (Rowe, 2006, pp. 108-110) than western Anatolian centres such as Knidos (Sözöl, 2023, p. 168, proportion 1.6) and Miletus (Berndt, 2003, p. 40, proportion 0.2%).

Form 2 (Fig. 5, no. 24, 25, 26, 27, 28) is a dish with a thickened and grooved rim, a flat base and a sloping wall. The form is characterized by grooves on the rim and rouletting on the exterior wall. The diameter of the foot ranges from 14 to 20 cm while that of the rim spans from 22 to 26 cm. The fabric is characterised by its fine, smooth texture and well-fired quality, and has a brown to red-brown colouration. The slip is thinner and darker than the fabric. Hayes proposes a date range for the form between the second half of the 5th century and the early 6th century AD (Hayes, 1972, p. 375, Fig. 80, 1, 2, 10, Fig. 81, form 2.1). Meyza regarded this form in the context of ARSW forms 83-84, as Hayes originally suggested (Hayes, 1972, p. 373). This motivation prompted Meyza to propose a date for Form 2 in the 5th and 6th centuries AD (2007, p. 52). The archaeological evidence from Anemurium dates to the late 5th century and 6th centuries AD (Williams, 1989, pp. 30-31, Fig. 11, 160-162). A very similar form from Pednelisos is regarded as a derivative of Cypriot Red Slip Ware (Kenkel, 2007, p. 136: Fig. 5, 7). The low foot of a dish (Fig. 5, no. 24) in a fine brown fabric and brown to dark brown slip has distinctive features of Dark Brown Ware as described by Williams (1989, p. 58, no. 338, 339). It is possible that Anemurium may have had its own tradition of LRD ware, as did Pednelissos. Other centres where similar pieces were discovered include: Limyra (Marksteiner & Yener-Marksteiner, 2009, taf. 2, 15, Diagram 2, proportion 12%),

Kepez/Sillyon (Bilgin, 2021, p. 190, no. 11), Tarsus Cumhuriyet Alanı (Adak-Adıbelli, 2006, chart 9, proportion 24%), Kelenderis (Zoroğlu, 2005, Fig. 5; Tekocak, 2007, p. 18, cat. no. 8, proportion 15%), Syedra (Özden Gerçeker, 2020, Fig. 7, 5-6), Soli Pompeiopolis (Yıldız, 2022c, p. 1141, cat. no. 12), Knidos (Sözel, 2023, p. 169, proportion 3.6%), Ephesos (Ladstätter, 2008, p. 122, very rare), Miletus (Berndt, 2003, p. 41, proportion 0.4%), Zeugma (Kenrick, 2013, pl. 30, 475-477), Beirut (Hayes, 2005, p. 25, Fig. 18a, including examples found in deposits associated with the earthquake of 497 or 502 (Reynolds, 2011b, Fig. 1), and Cyprus (Rowe, 2006, p. 111).

The Hayes Form 6 (Fig. 5, no. 29, 30, 31) is a bowl which is characterised by a sharp turned rim, a sloping wall and a low foot. The rim is may be rounded on the exterior (Fig. 5, no. 29), interior (Fig. 5, no. 30) or on both sides. Another distinctive feature of this form is the sharp, narrow (Fig. 5, no. 30) and shallow grooves (Fig. 5, no. 29, 31) underneath the lip on the outside. Some findings have rouletted and roulette-like decoration (Fig. 5, no. 31). The rim diameter of the bowls varies from 21 to 31 cm while the base diameter is 10 to 12 cm. The fabric is characterised by a loose texture and a coarse weave with lime, silver mica and red to dark red sand temper. The colour of the fabric is brown or dull brown. The slip is thin and varies in colour from buff to dark brown and has a sandpaper-like texture. Hayes assigns a date of the the 6th century AD to the form while Meyza dates to the 6th and 7th centuries AD (Hayes, 1972, p. 377; Meyza, 2007, p. 15). Significant findspots include Kömbeçi Mevkii in the territory of Pednelisos (Jackson et al., 2012, Fig. 11.2), Syedra (Özden -Gerçeker, 2020, Fig. 8, 1) and Perge (Firat, 1999, lev. 55, 212, lev. 58, 228, lev. 62, 247, 63, 259).

Form 8 (Fig. 6, no. 32, 33, 34, 35) comprises bowls with a horizontal everted and slightly thickened or grooved rim, a flaring wall, and a low or flat base. The only decoration on these bowls is a flat or diagonal roulette (Fig. 6, no. 32, 33). A few of material have ridges on the exterior of the all (no. 34). The diameter of the bowls' rims varies from 17 to 32 cm while the base diameter is 10 to 12 cm. The fabric is well fired, sharp break, and a very fine textured surface which may be either powdery or contain lime, silver mica and sand temper. The colour of the fabric varies from buff, red to reddish brown and dark red or dark greyish brown. The slip is of a thin and fine consistency. Hayes assigns a dating the form to the 6th century (1972, p. 379). However, Rowe (2004, pp. 115-117) and Meyza (2007, pp. 60-61) are dated to the end of the 5th century to the beginning of 7th century under two subforms. The form is identified at Syedra (Özden Gerçeker, 2020, Fig. 8, 5-7), Kelenderis (Zoroğlu, 2005, Fig. 5; Tekocak, 2007, p. 18, kat no. 13, proportion 6%), Olba (Aydm, 2019, şekil 3, 9, proportion 11%), Soli Pompeiopolis (Yıldız, 2022c, p. 1142, kat no. 14) and Anemurium. However, the dating does not rely on clear contexts (Williams, 1989, p. 34, Fig. 14, 187-190), therefore, Williams and Fırat (Firat, 1999, Lev. 71, 288, Lev. 72, 289, 293) followed the dating of Hayes. Building on the ideas of Hayes for CRSW Form 2, Rowe suggested that

Form 8 may have been influenced by both Cypriot Sigillata and African Red Slip, and that it was developed and used for a long time in the 5th century (Rowe, 2004, p. 116). LRD ware of the Kadırgürü is a key reference point in terms of the form (Fig. 6, no. 32, 34) (Jackson et al., 2012, Fig. 13., 1-3). The bowl is characterised by a wide everted rim and a slight upward hook on the upper side (Fig. 6, no. 35). The bowl is coated with a thin, matte light red slip and a fine textured, hard light orange fabric. Hayes described that this shape was uncommon, suggesting a date to the 6th century (Hayes, 1972, p. 379). Meyza's form 8B is a shallow and large bowl with wide everted rims with a slight hook on the exterior. He dates form 8 from the late 4th century through to the 7th century AD (Meyza, 2000, p. 5, Fig. 5, 10). A close form of the rim is identified in the contexts of Limyra (Marksteiner & Yener-Marksteiner, 2009, p. 229, taf. 2, 16) (as a variation of form 8), Nea Paphos (Rowe, 2004, Fig. 36, 1) and Polis on Cyprus which dates to the second half of the 6th and first half of the 7th century AD (Caraher, Moore, Papalexandrou, 2019, Fig. 14, 2).

Form 9 (Fig. 6, no. 36, 37, 38, 39, 40; Fig. 7, no. 41, 42, 43, 44) comprises bowls with a flat base, a rounded-incurved rim and an everted wall. The most notable feature of this form is the roulette with one or two rows. A few have incised wavy line or zig-zag patterns. The form is dated between 580/600 AD and 7th century AD (Hayes, 1972, pp. 379-382). The colour of the fabric varies from buff, red-brown, dark brown with lime and mica temper. Some of the wares have a buff colour band on the exterior of the rim. The colours of the slip vary from light or dark hues of reddish brown (proportion 64%), buff (proportion 17%), dark brown and a nearly maroon shade of dark brown (proportion 19%). Wares with a reddish brown slip, comprising 40% of the total, display a buff-cream band on the exterior of the rim. The incidence of the subforms of the ware according to Hayes' classification is as follows: "A" with 70% proportion, "B" with 14% proportion and "C" with 16% proportion. The surface has a fine sandpaper-like texture, a common feature of this form. Meyza suggests a more detailed classification for this form. Meyza's classification form K2A, defined by a flat base, a shallow, wide body with thickened and slightly incurved rim dates it to the 7th century (Fig. 6, no. 36, 37) (Meyza, 2007, pl. 20). Form K1/K3 (Fig. 6, no. 38) which was evaluated as B subform by Hayes is a transitional form (Hayes, 1972, Fig. 82, 11; Meyza 2007, pl. 20). It differs from the other forms in the group in that it has a thickened and triangular shaped rim and deep body. Meyza assigns a date of the 5th and 6th centuries to the form (Meyza, 2007, p. 65). A similar form for (no. 38) has been identified at Kadırgürü Mevkii (Jackson et al. 2012, Fig. 16, 1-3). The other form K2A/3 is a dish (Fig. 6, no. 39) with thickened and incurved triangular-shaped rim which was dated to the period between 530/540 and 670/680 (Meyza, 2007, p. 64). The basin has a shallower body than the Kadırgürü Mevkii (Jackson et al. 2012, Fig. 17, 4). Form K3 (Fig. 6, no. 40), (Fig. 7, no. 41, 42, 43) with zigzag decoration is another dish of the ware group (Meyza, 2007, pl. 9, 1). Reynolds evaluated the ware as LRD 5 as a rare form with the Form 9 material at Beirut (Reynolds, 2011b, 65, no. 62). A similar piece

was also published in Williams' book (1989, Fig. 13, 175). Another parallel of (Fig. 7, no. 42) can be found in a 7th century AD deposit from Saraçhane in Istanbul (Hayes, 1968, p. 212, Fig. 81, p. 378), and occurred in a context dated to the 6th century AD at the theatre site of Paphos (Waddington, 2003, p. 225, Fig. 57, form 9 B9). The form was a popular one in Tarsus (Adak-Adibelli, 2006, graph 7, proportion 19%), Syedra (Özden-Gerçek, 2020, Fig. 9, 1, 5-6), Kelenderis (Zoroğlu, 2005, Fig. 5; Tekocak, 2007, p. 19, kat no. 15-17, proportion 26%), Olba (Aydın, 2019, Fig. 3, 9, proportion 89%), Soli Pompeiopolis (Yıldız, 2022c, p. 1144, kat no. 18, p. 1146, kat. no. 22) and Limyra (Marksteiner & Yener-Marksteiner, 2009, taf. 1, 9, diagram 2, proportion 13%; Bes, 2020, Fig. 4, b). The examples of Beirut are dated to the period following 551 earthquake (Hayes, 2005, p. 23, Fig. 17; Reynolds, 2011b, Fig. 5). In Cyprus the form is the most prevalent group of LRD in various cities (Diederichs, 1980, pl. 24, 294-295; Waddington, 2003, p. 214; Rowe, 2006, pp. 117-128). In addition, the form has been identified in the cities of Knidos (Doksanaltı, 2020, p. 387; Sözel, 2023, pp. 170-172, proportion 4.2%) and Milet (Brendt, 2003, p. 41, proportion 0.5%).

Form 9C/10 (Fig. 7, no. 45, 46, 47, 48) is a deep basin with a sharply incurved (as a quarter of a circle) and exterior grooved rim accompanied by a deep and wide groove/arc underneath the rim. The pieces are crafted from an orange-brown fabric with a maroon tinge and a slip. They are relatively heavy and convex in profile, with either an upright or inward sloping orientation. The lower edge of the piece tends to thicken, with a knife-edged and undercut join where it meets the body. The walls are curved inwards with a bevelled running around the inside of the top of the body and thickening slightly underneath. LRD Form 10 shows similarities to the characteristics of Form 7 and Form 9C. Hayes dates the to the middle of the 7th century AD (1972, p. 383). Meyza dates the form to the last of the quarter of the 6th century to the end of the 7th century AD (2007, p. 70). In Kadirgürü (Jackson et al. 2012, Fig. 12, 4-5) and Beirut, the pieces date to the late of 6th and the early of 7th century AD, and they also provided a reference for this dating (Reynolds, 2011b, Fig. 6, 61).

Form 11 (Fig. 8, no. 49, 50, 51) are deep and large basins. The exterior of the flaring wall is characterised by ridges. The slip is present on the interior and exterior of the rim. These have wide mouths with thickened or folded rims. The shape has a flaring outer profile and is either slightly in-curved or straight-walled interior. The rim is thickened and flat on the upper surface. A cut line is evident on the majority of pieces, situated just below the rim. The body generally was finished with a wet-polished surface and has slightly irregular ridges. They have horizontal handles, yet the frequency cannot be calculated from the samples alone. The slip is coloured in a manner similar to the body clay. Hayes dates the form to the period between 550-650 AD while Meyza suggests a date range of the mid of the 5th century to 7th century AD (Hayes, 1972, p. 383, Fig. 84, 1-2; Meyza, 2007, p. 72, Pl. 22, 1-2). The form is the second most common of the LRD in Cyprus (Rowe, 2006, pp. 117-128). H 11B of

the Meyza classification (Fig. 8, no. 51) is considered a variant of the aforementioned form and is dated to the 7th century AD as observed in other sites in Cyprus (Rowe, 2004, p. 132) and Anemurium which presents a more extensive series of the form (Williams, 1989, pp. 15-16, 35-36; Meyza, 2007, p. 74). The form is popular in Syedra (Özden-Gerçeker, 2020, Fig. 10, 5), Kelenderis (Zoroğlu, 2005, Fig. 5; Tekocak, 2007, p. 19, kat no. 27, proportion 13%) and Limyra (Marksteiner et al. 2007, p. 255, Taf. 18, C 17, C19; Marksteiner & Yener-Marksteiner, 2009, taf. 1, 1-2, Diagram 2, proportion 42%).

The ware Fig. 8, no. 52 (Type H12D) is a deep dish or bowl with a vertical rim. The rim is grooved both on and outside. Meyza evaluated variant H12 D as a small pithos typical of the form with a grooved, flat and heavy rim. The form is a derivative of Form 12 (Hayes 1972, p. 384, Fig. 83, 1; Bilgin, 2021, p. 184). In Paphos, range of diameter is 22-30 cm. Paphos material dates from the third quarter of 4th century to the late 6th/7th century AD, as evidenced by the different contexts of Paphos and Kourion in Cyprus. The suggestion of this late date is related to the presence of H11D by Meyza (2007, p. 77). The diameter of the Building B piece (40 cm) is considerably larger than that of the Cyprus centres, which were found with the LRD form in 8 examples in the same level. The fabric and slip of the Anemurium one are similar to the material that Meyza points out, which suggests that Anemurium finding may be a member of this form with a wider diameter. Additionally, the similar form of LRD (Meyza form H11D) from Limyra which has been evaluated as products of a local workshop with matt brownish slip (Yener-Marksteiner, 2007, p. 255, Taf. 18, C 27) is dated to 6th and 7th century AD (Marksteiner & Yener-Marksteiner, 2009, taf. 2, 20).

The term Anemurium “Well Form” was proposed by Williams in reference to the wares discovered in a well deposit in Anemurium (1977, p. 175). Meyza extends the definition of Well Form depending on the different finding spots (2007, p. 79). The form is dated to the years 600-700 AD. No. 53, 54 are large plates/dishes with rounded and knobbed rims. The plate form is characterised by a low base or flat bottom. The mouth is very slightly incurved and rounded. The body is flat with a slight inclination towards the bottom, and is largely undecorated or with very shallow grooves. The characteristic rim features of these findings also shared by the CRS, ARS and Gold Mica Ware at Anemurium. Ware has yellowish buff and gritty fabric with small fine grained lime particles and silver mica as the whole of this ceramic material of Building A. The slip is very thin, in matte red-brown colour and mostly worn away. The form may be evaluated as a form based on ARS Forms 104 and 105 (Hayes, 1972, Fig. 30, 29, Fig. 31,10). In addition, the form shows similarities to the Gold Mica Ware of Anemurium, as discussed by Williams (1989, pp. 57-58, Fig. 30, 332). However, the distinguishing features of this ware group are not evident in the findings from Buildings A and B. But the ware is quite different in terms of its slip and fabric characteristics, which are more akin to those observed in ARS or the other ware groups previously discussed. The rim

with the groove on the inside and thickened on the outside, along with the roulette decoration, are the defining characteristics of the Well Form A subform which is rooted in LRD (CRS) wares (Meyza, 2007, p. 79). Williams evaluation supports this conclusion (Williams, 1977, p. 176). The dating of this form is the late 6th to 7th centuries AD (Meyza, 2007, p. 80).

Discussion

As mentioned in the introduction, an examination of the distribution of dating of the ceramics and coins can be employed in order to determine whether there are building phases of these buildings (A and B) that are similar to those observed at the house uncovered during the previous excavation period.

In Building A of area C (between +16.95 and +16.68 m. code), 19 of the coins found belong to the period of Heraclius (610-641), 2 to the period of Anastasius (491-518), 1 to the period of Arcadius or Honorius (395-401), and 4 to the periods of Constantius II (337-361) and Iulian II (355-363). In Room A.3.1 (between +16.80 and +16.31 m. code), two coins were found that date to the end of the 4th century and the first half of the 5th century. Additionally, one coin was found that dates to the reign of Volusian (251-253) or Valerian (253-260). The alley A/S1 (code +16.68 to +16.09) yielded nine coins of Heraclius (610-641), 2 coins of Zeno (476-491) and one coin of Constantius II (327-329). Room A4 yielded two coins of Constans II (641-668), six of Heraclius (610-641), one of Phocas (602-610), two of Maurice Tiberius (582-602), one of Justinian I (527-565), two of Valens (364-378) and one of Constantius II (348-351).

In Room B3 of Building B (between +16.40 and +14.48 m.-end of sounding- code), one coin is attributed to the reign of Heraclius (610-641) and one to the 3rd century AD. The sounding in this room (between +14.40 and +14.13 m. code) yielded one coin dated to Constans II (641-668), This was accompanied by four coins dated to the second half of the 4th century and the first half of the 5th century. Additionally a single coin was discovered dated to 395-401. In Room B4 (between +16.40 and +15.76 m. code), one coin is attributed to Constans II (641-668), one to Heraclius (610-641) and one to Arcadius (395-408). One coin of Heraclius (610-641) was found in Room B5 (starting code between +15.68 m. and +15.48 m.). In Alley B/S1, one coin of the Heraclian period (610 - 641) was found. In the other rooms of the building, in B4 (+15.59 m. code), B2 (+15.45 m. code), BH1 (+15.29 m. code), B5 (+15.19 m. code) and B1 (+15.29 m. code), no coins were discovered.

Distribution of the coins (Korkmaz & Tekocak, 2023, pl. III, 6) indicates that the coins of Heraclius, dating from 610-641 AD, represents half of all the coins found here (Fig. 9b). The second highest concentration of coins dates from the late 4th century to the first half of the 5th century AD, which aligns with the construction and usage date of the Central Bath (Alföldi-Rosenbaum, 1989, pp. 1658-1659). The date ranges in which the coins are concentrated

permit the suggestion that these buildings underwent two distinct phases. The first phase, which occurred during the second half of the 6th to the 7th century, and the second phase, which took place at the end of the 4th century. However, the coins in question were found in the same fill and in a completely mixed state, which does not suggest the presence of a phase or stratification. It is important to note that there is no data to support this hypothesis regarding architectural features with the exception of a few minor indications. These coins can be deduced as evidence of the former use of Building A, which is situated on the same axis as the Central Bath. On the other hand, it cannot be discounted that older coins in fact were still in use in the 7th century, given the period of their circulation.

The floor of Room B3 of Building B is paved with floor tiles. The earliest coin found in this room at the level of the foundation of the building dates to the period between 364 and 378 AD. A coin of Constantine II (AD 641-668) was also discovered at the same level and location (Korkmaz & Tekocak, 2023, p. 25). During the course of the excavations in these areas and rooms, no evidence was uncovered that could be interpreted as “floor” comparable to the one described by Williams in her book.

A similar pattern of dates are also observed in the upper layers (B and C areas) of the buildings. Accordingly, the buildings are dated to the period between 580-582 AD and the first half of 7th century. The dates of the ceramics are consistent with the chronological distribution of the coins found in these buildings. The majority of the ceramic material presented in this article belongs to the period after the earthquake (580/582 AD), which also caused the destruction of Anemurium (Fig. 9a). Therefore, it can be concluded that the deposit represents as an accumulation or destruction deposit.

Conclusions

The excavation of debris in the Buildings revealed no architectural remains. The depth of this layer varies between 20 cm and 75 cm depending on the slope of the excavation area (Korkmaz & Tekocak, 2023, p. 25). This upper fill/accumulation or destruction deposit of the buildings is named as “Area B” and “Area C”. In these areas 67.3% of the fine wares were found. The remaining 32.7% was discovered in the fills of the rooms. The quantity of coins decreases as the ceramics in the room fills. This may be indicative of construction activities after the 580/582 AD earthquake. This also explains the increase in the emission volume of Heraclius’ coins (Mitchell, 2020, p. 617; Korkmaz & Tekocak, 2023, p. 32).

The ceramic material of these buildings, including diagnostic and undiagnostic sherds of fine and coarse wares comprises nearly 2200 fragments. The catalogue of the assemblage includes 548 fragments. The fine wares account for 226 of total. ARS is comparable in density to LRC wares from Buildings A and B. In the study, a total of 37 pieces were evaluated representing 10 different forms (Fig. 10) in ARS and LRC. Form 106 is the most common

form of ARS. LRC is the second-most common group among the fine wares of Building A. A total of 22 pieces were evaluated in the study, representing three different forms (Fig. 10) in LRC. Among these, Form 3 and its the subform A are the most dominant group. Subform G (Fig. 3, no. 17) exhibits distinctive characteristics that differentiate it from the imitation and original wares of the LRC at Anemurium, as previously evaluated by Williams. This ware is characterised by an orange fabric and a darker slip (Williams, 1989, p. 52). This fabric is also observed on LRD, specifically in Forms 8 (Fig. 5, no. 34, 39) and 9C/10 (Fig. 6, no. 46). This may be indicative of another imitation product.

LRD is the most common group among both Building A and B fine wares. A total of 189 pieces were evaluated in nine different forms (Fig. 10) in this study. Among these, Form 9 and its the subform C are the most prevalent. Other forms are 1, 2, 6, 8, 10, 11, H12D and the Well Form. Pamphylian and Lycian cities such as Limyra (Yener-Marksteiner, 2007, p. 255; Marksteiner & Yener-Marksteiner, 2009, diagram 2) and Arykanda (Yaman, 2018, graph 1) are among the major consumers of LRD. The group produced at the workshops of Pamphylia (Kenkel, 2007, pp. 131-146; Jackson et al. 2012, pp. 89-114) and Cyprus established close commercial relations. The dominance of LRD in Rough Cilicia and other regions testifies to the existence of close maritime trade routes.

It can be reasonably assumed that the port city of Anemurium derived considerable benefit from the blessings of maritime trade. Maritime transportation constituted a central element of the Roman network. This demonstrates that an analysis of Anemurium's cultural and commercial relations during the Roman period must take into account maritime transport. The ancient sea routes demonstrate a connection commencing at Cape Anamur and extending along the coast to the Lycia (Arnaud, 2005, pp. 250-252). Another sea route was known to have connected eastern Lycia and northwestern Cyprus, and may have been responsible for the spread of the idea of LRD. According to the analysis of the Mediterranean sea routes from Cyprus; Laphetos to Anemurium took almost 0.6-0.7 days, Paphos to Anemurium took almost 1.2-1.4 days and Salamis to Anemurium took almost 3 days. Anemurium to Perge and Anemurium to Myra took almost 3 to 3.4 days in winter and summer (calculation: <https://orbis.stanford.edu/>). This explains the dominance of LRD in Anemurium. Due to the close geography, this may be the result of an economic rationale of production rather than the individual choice.

Research in Cyprus revealed that these ceramics were produced in many workshops (Gomez et al., 1996, pp. 77-78). On the other hand, the cites which are known as LRD production or candidates for production are located inland from the Mediterranean coast in southern Anatolia (Kenkel, 2007; Jackson et al., 2012; Hürmüzlü & Sönmez, 2021, p. 356; Özden Gerçeker, 2021, pp. 305-319). The geographical location of these cities may have paved the way for the start of local production rather than sea and overland transport.

In addition, the unique ceramics of Sagalassos should undoubtedly have had an innovative effect on the local production of LRD.

The decline in the use of table wares, whether locally produced or imported, is a phenomenon that occurs in the 6th and 7th centuries AD in the eastern Mediterranean. Suggestions that have been put forward to explain this phenomenon include a change in dietary habits (Kenrick, 2013, p. 36, 76), a general economic recession that led to the closure of the major fine ware workshops, their replacement by vessels made of other materials such as metal and glass as in Late Roman Syria (Lund, 1995, pp. 145-146) and southern Anatolia (Lund, 1996, pp. 105-125). In Anemurium, the earthquake of 580/582 caused a severe decline of the city, which is a plausible explanation for the end of large and major ware groups here. In the same period, locally produced wares may have appeared as favoured cheap productions such as the Well Form, which belongs to the latest phase of the LRD (Williams, 1989, p. 34). The problems in the economic and political situation of the eastern Mediterranean in the 6th and 7th centuries may have disrupted the distribution system of producers. Problems in the distribution may have led to a decline in their use over time. The example of “ancient entrepreneurship” in the interior regions of Anatolia, such as at Sagalassos should also not be underestimated.

There is no doubt that the widespread distribution of the common Late Roman fine ware groups throughout the Mediterranean resulted in locally produced ceramics that have contacts with the original productions. Consequently, the Late Roman fine wares retrieved from Western Anatolia, Southern Anatolia, and Syria have mostly provided insights into the preferences and living habits that can be assessed from a wholesale perspective (Bes 2015, 105). The low percentages of the other pottery groups suggest that the inhabitants of these buildings led an introverted lifestyle in terms of fine pottery.

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References

Abadie-Reynal, C.- S (2005). Les sigillées africaines a Zeugma. *Mélanges Jean-Pierre Sodini (Travaux et Mémoires 15)*, 523–546.

- Abadie-Reynal, C.–S., Martz, A., Cador, A. (2005). Late Roman and Byzantine Pottery in Zeugma: Groups of the beginning of the 5th century. In B. Böhlendorf-Arslan, A. O. Uysal, J. Witte-Orr (Eds.), *ÇANAK: Late Antique and Medieval Pottery and Tiles in Mediterranean Archaeological Contexts* (pp. 181-194). Ege Yayınları.
- Adak-Adıbelli, I. (2006). *Tarsus Geç Roma Seramiği* [Unpublished doctoral dissertation]. Ankara Üniversitesi.
- Alföldi-Rosenbaum, E. (1989). Anemurium: A bath building of the early Christian-early byzantine period. In Noël Duval (Eds.), *Actes du XIe congrès international d'archéologie chrétienne. Lyon, Vienne, Grenoble, Genève, Aoste, 21-28 septembre 1986* (pp. 1647-1659). École Française de Rome.
- Arnaud, P. (2005). *Les routes de la navigation antique: itinéraires en Méditerranée*. Paris.
- Aydın, S. (2019) Olba Geç Roma Seramik Buluntuları [Unpublished doctoral dissertation]. Gazi Üniversitesi.
- Barraud, D., Bonifay, M., Dridi, F., Pichonneau, J.P. (1998). L'industrie céramique de l'antiquité tardive. In H. B. Hassen, L. Maurin (Eds.), *OUDHNA (Uthina), La redécouverte d'un ville antique de Tunisie* (pp. 139-167). Ausonius éditions.
- Berndt, M. (2003). *Funde aus dem Survey auf der Halbinsel von Milet (1992-1999), Kaiserzeitliche und frühbyzantinische Keramik*. Verlag Maire Leidorf.
- Bes, P. (2015). The Mid-and Late Roman Periods: Discussion and Chronological Phasing. In *Once upon a Time in the East: The Chronological and Geographical Distribution of Terra Sigillata and Red Slip Ware in the Roman East* (pp. 90–132). Archaeopress. <https://doi.org/10.2307/j.ctvr43kch.10>
- Bes, P. (2020). Early Byzantine Pottery from Limyra's West and East Gate Excavations. *Adalya* 23, 377-409.
- Bes, P. Keweloh & Kaletta, A. (2023). Pergamon: Patterns of diversification in the pottery production of Pergamon and its microregion. In M. Bentz & M. Heinzelmann (Eds.), *Sessions 6 – 8, Single Contributions. Archaeology and Economy in the Ancient World 55 (Heidelberg, Propylaeum 2023)* (pp. 343–348). DOI: <https://doi.org/10.11588/propylaeum.1035.c14091>
- Bilgin, M. (2021). "Sillyon Territoryumu'nda Bulunan Kepez Yerleşiminin Kırmızı Astarlı Seramikleri Üzerine Ön Değerlendirmeler" *Arkhaia Anatolika* 4, 174-214. <https://doi.org/10.32949/Arkhaia.2021.32>
- Bonifay, M. (1998). Chantier du théâtre Diana. Note préliminaire sur les sigillées tardives (IVe-VIIe siècles) In J.-Y. Empereur (Eds.), *Alexandrina I. Etudes alexandrines; I.* (pp. 141-147). Institut Français d'Archéologie Orientale.
- Bonifay, M. (2000). La fin du grand commerce méditerranéen en royaume franc ?. *Rome de Constantin à Charlemagne, Les Dossiers d'Archéologie* 255, 36-39.
- Bonifay, M. (2004). *Etudes sur la céramique romaine tardive d'Afrique*. BAR Publishing.
- Bonifay, M. (2005). "Observations sur la diffusion des céramiques africaines en Méditerranée orientale durant l'antiquité tardive", *Mélanges Jean-Pierre Sodini (Travaux et Memoires 15)*, 565–581.
- Caraher, W., Moore, R.S., Papalexandrou, A. (2019). The South Basilica at Polis on Cyprus. *Hesperia* 88(2), 319-364. <https://doi.org/10.2972/hesperia.88.2.0319>.
- Diederichs, C. (1980). *Salamine de Chypre IX. Céramiques hellénistiques, romaines et byzantines*. Maison de l'Orient et de la Méditerranée.
- Doksanaltı, E. M. (2020). Knidos Liman Caddesi Geç Antik Çağ Atölye-Dükkan ve Buluntuları. *Olba XXVIII*, 377-420.
- Ergürer, H. E. (2018) "Sigillata, Late Roman Red Slip Pottery and Others", In C. Başaran, H. E. Ergürer (Eds.) *Parion Studies Roman Theater of Parion* (pp. 91-127). İÇDAŞ Yayınları.

- Erol, A. F., Tamer, D. (2020). Zeugma'dan Ele Geçen Geç Roma Kırmızı Astarlı Seramikleri. *Anadolu* 46, 49-121.
- Francis, J. E. (2015). Late Roman C Ware/Phocaean Red Slip Pottery from the Cilicia Survey Project (Misis), Turkey. In R. G. Gürtekin & Demir, H. Cevizoğlu, Y. Polat, G. Polat (ed.) *Keramos Proceedings of the First International Conference at Ege University* May 9-13 2011 (pp. 73-82). Bilgin Kültür Sanat.
- Ferrazzoli, A. F. – Ricci, M. (2010), "La ceramica", In E. E. Schneider (ed.) *Elaiussa Sebaste III L'Agora romana* (pp. 186-225). Ege Yayınları.
- Firat, M. (2011). *Phokaia Geç Roma Dönemi Mutfak Kapları* [Unpublished doctoral dissertation]. Ege Üniversitesi.
- Firat, N. (1999). *Perge Konut Alanı Keramiği*, unpublished [Unpublished doctoral dissertation]. İstanbul Üniversitesi.
- Gassner, V. (1997). *Das Südtor der Tetragonos-Agora, Keramik und Kleinfunde, Forschungen in Ephesos XIII/1/1*. Verlag der ÖAW.
- Gürbüzer, M. (2018). Late Roman Pottery from a Building in Klazomenai. *Olba XXVI*, 135-176.
- Gomez, B., Rautman, M. L., Hector, N., Glascock M. D., (1996). Clays used in the manufacture of Cypriot Red Slip Pottery and related ceramics. *Report of the Department of Antiquities*, 69-82.
- Hayes, J. W. (1968). A Seventh-Century Pottery Group. *DOP* 22, 195-216.
- Hayes, J. W. (1972). *Late Roman Pottery*, London.
- Hayes, J. W. (1985). Hellenistic to Byzantine Fine Wares and Derivatives in the Jerusalem Corpus In A.D. Tushingham (Eds.) *Excavations in Jerusalem 1961-1967* (pp. 181-196). Brill.
- Hayes, J. W. (2003). Hellenistic and Roman Pottery Deposits from the 'Saranda Kolones' Castle Site at Paphos. *The Annual of the British School at Athens Vol. 98*, 447-516.
- Hayes, J. W. (2005). Late Hellenistic and Roman Pottery in the Eastern Mediterranean-an overview of recent developments In M. B. Briese–L. E. Vaag. (ed.) *Trade relations in the Eastern Mediterranean from the late Hellenistic period to late antiquity. The Ceramic evidence. Acts from a Ph. D. seminar for young scholars, Sandbjerg Manorhouse (Denmark), 12 - 15 February 1998* (pp. 11-27). University Press of Southern Denmark.
- Hayes, J. W. (2008). *The Roman Pottery, Fine Ware Imports, The Athenian Agora XXXII*. Princeton.
- Hasenzagl, C., Capelli, C. (2019). Petrographic characterisation of Late Roman African Pottery from J.W. Salomonson's surveys: The workshop of Sidi Khalifa. *Antiquités africaines* 55, 229-336.
- Heath, S., B. Tekkök, eds. (2006-2009). Greek, Roman and Byzantine Pottery at Ilion (Troia). Retrieved <date> from <http://classics.uc.edu/troy/grbpottery/>.
- Hürmüzlü, B., Sönmez, B. (2021). A New Member of the Late Roman D Koiné? A New Red-Slipped Pottery Group Found at Seleukeia Sidera. *OLBA XXIX*, 349-362.
- Jackson, M., Zelle, M., Vandeput, L., Köse, V., (2012). Primary evidence for Late Roman D Ware production in southern Asia Minor: a challenge to 'Cypriot Red Slip Ware. *Anatolian Studies Vol. 62*, 89-114.
- Jones, F. F. (1950). The Pottery, Excavations at Gözlükule Tarsus. In H. Goldman (Eds.), *The Hellenistic and Roman Periods* (pp. 149-297). Princeton University Press.
- Kenrick, P. A. (2013). Pottery other than transport amphorae, Excavations at Zeugma. In W. Aylward (Eds.), *Conducted by Oxford Archaeology vol. II* (pp. 1-81). The Packard Humanities Institute.

- Kızırlarslanoğlu, H. A., Aktaş, R. (2023). Elaiussa Sebaste'den Phokaia Kırmızı Astarlı Seramiklerin Ön Değerlendirmesi. *OANNES – Uluslararası Eskiçağ Tarihi Araştırmaları Dergisi* 5/1, 315 – 364.
- Korkmaz, Z., Tekocak, M. (2023). Anemurium Son Dönem Kazılarında Ortaya Çıkarılan A ve B Yapıları Üzerine Bir Değerlendirme. *Seleucia XIII*, 21-42.
- Kramer, N. (2004). *Gindaros; Geschichte und Archäologie einer Siedlung im nordwestlichen Syrien von hellenistischer bis in frühbyzantinische Zeit*. VML.
- Kramer, N. (2012). *Keramik und Kleinfunde aus Diokaisareia. Diokaisareia in Kilikien. Ergebnisse Des Surveys 2001-2006*. Walter de Gruyter.
- Ladstätter, S. (2008). “Römische, spätantike und byzantinische Keramik”, In M. Steskal , M. La Torre (Eds.), *Das Vediovgymnasium in Ephesos, Forschungen in Ephesos Band XIV/1* (pp. 97-123). Verlag der ÖAW.
- Ladstätter, S., Sauer, R. (2005). “Late Roman C-Ware und Lokale Spätantike Feinware aus Ephesos”, In F. Krinzinger (Eds.) *Spätantike und mittelalterliche Keramik aus Ephesos* (pp. 143-201). Verlag der ÖAW.
- Lichočka, B., Meyza, H. (2001). Seismic Events and the Evidence of Coins and Pottery. The Case of Destruction of the House of Aion in Paphos. *Études et Travaux XIX*, 145-208.
- Lund, J. (1992). Centuries of darkness? A ceramic sidelight on Cyprus and the Eastern Mediterranean between about A.D. 200 and A.D. 350 In P. Astrom (Eds.), *Acta Cypria 2 Acts of an International Congress on Cypriote Archaeology Held in Göteborg on 22-24 August, 1991* (pp. 193-213). Paul Astörm.
- Lund, J. (1993). Pottery of the Classical, Hellenistic and Roman periods, in L. W. Sørensen and D. W. Rupp (Eds), *The Land of the Paphian Aphrodite 2. The Canadian Palaipaphos Survey Project. Artifact and Ecofactual Studies SIMA 104:2* (pp. 79—156). Åströms förlag.
- Lund, J. (1995). A Fresh Look at the Roman and Late Roman Fine Wares from the Danish Excavations Hama, Syria. In H. Meyza, J. Mlynarczyk (Eds.) *Hellenistic and Roman Pottery in the Eastern Mediterranean Advances: in Scientific Studies* (pp. 135-161). Polish academy of science.
- Lund, J. (1996). From Archaeology to History? Reflections on the Chronological Distribution of Ceramic Finewares in South Western and Southern Asia Minor from the 1st to the 7th c. A.D. In M. Herfort Koch, U. Mandel, U. Schadler (Eds.) *Hellenistischer und kaiserzeitliche Keramik des östlichen Mittelmeergebietes, Kolloquium Frankfurt 24–25 April 1995* (pp. 105-125). Archäologisches Institut der Johann Wolfgang Goethe-Universität.
- Lund, J. (2006). Ceramic fine wares from the 4th century BC to the 7th century AD. In L. Wriedt Sørensen, K. Winther Jacobsen (Eds.) *Panayia Ematousa I, A rural site in south-eastern Cyprus, Monographs of the Danish Institute at Athens 6-1* (pp. 182-230). Aarhus University Press.
- Mackensen, M. (1993). *Die spätantiken Sigillata und Lampentöpfereien von El Mahrine (Nordtunesien)*. CH Beck.
- Mackensen, M. (2006), “Late Roman African Red Slip Ware from the frontier region in the Province of Thebaïs (Upper Egypt)”, In R. J. A. Wilson (ed.) *Romanitas, Essays on roman Archaeology in honour of Sheppard Frere on the occasion of his ninetieth birthday* (pp. 211-229). Oxbow Books.
- Mackensen, M., Schneider, G. (2002). Production centers of African red slip ware (3rd-7th c.) in northern and central Tunisia: archaeological provenance and reference groups based on chemical analysis. *Journal of Roman Archaeology* 15, 121-158.
- Marksteiner, T., Yener-Marksteiner, B. (2009). Die Grabungen in Sondage 30/36/37 in der Weststadt von Limyra: Der archäologische Befund und die Keramik. *ÖJh* 78, 221-252.

- Marksteiner T., Lemaître, S., Yener-Marksteiner, B. (2007). Keramik aus der Sondage 5 in der Weststadt von Limyra. *Öjh* 76, 236-276.
- Meyza, H. (2000). Cypriot Red Slip: development of the ware (an attempt at refinement)' in G.K. Ioannides, S.A. Hadjistyllis (Eds.), Third International Congress of Cypriot Studies 16–20 April 1996 (507–529). Society of Cyprus Studies.
- Meyza, H. (2007). *Nea Paphos V Cypriot Red Slip ware: Studies on a late Roman Levantine fine ware*. Centre d'archéologie méditerranéenne de l'Académie polonaise des sciences.
- Mimaroglu, S. (2017). Myndos (Asar Adası) Geç Antik Dönem Seramikleri", *Sanat Tarihi Dergisi XXVI/2*, 333-361.
- Mimaroglu, S. (2020). Letoon Geç Roma-Erken Doğu Roma Dönemi Kırmızı Astarlı Seramikleri'nin Ön Değerlendirmesi. *Cedrus VIII*, 279-297.
- Monchamp, J. (2014). Céramiques de Smouha, Alexandrie, Égypte" In J. Y. Empereur (ed.) *Époques romaine et romaine tardive Alexandrina 4* (pp. 35-101). Centre d'Études Alexandrines.
- Özden-Gerçekler, G. S. (2020). 2019 Yılı Syedra-Büyük Hamam Kazı Çalışmalarında Bulunan Geç Roma D Seramikleri. *SRMKA 2*, 103-135.
- Özden Gerçekler, S., (2021). A Typological Assessment on the Examples of Eastern Sigillata D and Late Roma D Koinai from Perge-Lot 159. A. Mörel, G. Kaşka, H. Köker (Eds.), *Pisidia Araştırmaları II: Pisidia ve Yakın Çevresinde Üretim, Ticaret ve Ekonomi 31 Ekim- 03 Kasım 2018* (pp. 305-319). Süleyman Demirel Üniversitesi Yayınları.
- Poblome, J., Firat, N. (2011). Late Roman D. A matter of open(ing) or closed horizons?. In M.A. Cau, P. Reynolds, M. Bonifay (Eds.) *Late Roman Fine Wares: Solving problems of Typology and Chronology. A review of the evidence, debate and new contexts, LRFW 1*, Roman and Late Antique Mediterranean Pottery 1 (pp. 49-55). Archeopress.
- Raynaud, C. (1993a). Céramique africaine Claire C. In M. Py (ed.) *Dictionnaire des céramiques antiques* (VIIème s. av. n. è. - VIIème s. de. n. è.) en Méditerranée Nord-Occidentale) Provence, Languedoc, Ampurdan. Lattara 6 (pp. 185-190). Edition de l'Association pour la Recherche Archéologique en Languedoc Oriental.
- Raynaud, C. (1993b), "Céramique africaine Claire D", In M. Py (ed.) *Dictionnaire des céramiques antiques* (VIIème s. av. n. è. - VIIème s. de. n. è.) en Méditerranée Nord-Occidentale) Provence, Languedoc, Ampurdan. Lattara 6 (pp. 190-198). Edition de l'Association pour la Recherche Archéologique en Languedoc Oriental.
- Reynolds, P. (2010). Trade networks of the East, 3rd to 7th centuries: the view from Beirut (Lebanon) and Butrint (Albania) (fine wares, amphorae and kitchen wares). In S. Menchelli, S. Santoro, M. Pasquinucci, G. Guiducci (Eds.) *LRCW 3: Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean Archaeology and archaeometry*, Comparison between western and eastern Mediterranean (pp. 89-114). Archeopress.
- Reynolds, P. (2011a). Fine wares from Beirut contexts, c. 450 to c. 600", In M.A. Cau, P. Reynolds, M. Bonifay (Eds.) *Late Roman Fine Wares: Solving problems of Typology and Chronology. A review of the evidence, debate and new contexts, LRFW 1*, Roman and Late Antique Mediterranean Pottery 1 (pp. 207–230). Archeopress.

- Reynolds, P. (2011b). A note on the development of Cypriot Late Roman D forms 2 and 9. In M. A. Cau, P. Reynolds, M. Bonifay (Eds.) *Late Roman Fine Wares: Solving problems of Typology and Chronology. A review of the evidence, debate and new contexts, LRFW 1*, Roman and Late Antique Mediterranean Pottery 1 (pp. 57–66). Archeopress.
- Reynolds, P. (2016). From Vandal Africa to Arab Africa: Tracing Ceramic and Economic Trends Through the 5th to the 11th Centuries. In S. T. Stevens, J. P. Conant (Eds.) *North Africa Under Byzantium and Islam* (pp. 120-171). Dumbarton Oaks.
- Rowe, A. H. (2006). *Reconsidering Late Roman Cyprus: Using new material from Nea Paphos to review current artefact typologies* [Unpublished doctoral dissertation]. University of Sydney.
- Soslu, A. (2020), “Alabanda Payandalı Sarnıç Afrika Kırmızı Astarlı Seramikleri”, *Uluslararası Sosyal Araştırmalar Dergisi* 72, 486-504.
- Sözel, S. (2023), *Knidos'un Geç Antik Dönem Seramikleri*[Unpublished doctoral dissertation]. Selçuk Üniversitesi.
- Strothenke-Koch, E. (2019). Keramik, Die Stadtgrabung in Doliche, Zu den Ergebnissen der Feldarbeiten 2015–2018. *Istanbul Mitteilungen* 69, 126-141.
- Şahin, R. (2020). Pottery from a Roman House to the west of the Bouleuterion at Miletus (Ionia)”, *Cedrus* VIII, 223-264.
- Şahin, R. (2021). Spätantike Sigillaten aus Adramytteion (Ören/Balıkesir): Eine Überregionale Materialanalyse. *Anadolu Araştırmaları* 23, 215-259.
- Tekkök-Biçken, B., (1996). The Hellenistic and Roman Pottery from Troia: Second century B.C. to sixth century A.D. [Unpublished doctoral dissertation]. University of Missouri-Columbia.
- Tekocak, M. (2006). *Kelenderis Roma Çağı Seramiği* [Unpublished doctoral dissertation]. Selçuk Üniversitesi.
- Tekocak, M. (2007). “Kelenderis Aşağı Şehir Sondajında Bulunan Kıbrıs Kırmızı Astarlı (Geç Roma D) Kapları”, *İDOL* 33, 16-25.
- Tekocak, M. (2009). “African and Cypriot Red Slip Wares from Kelenderis”, In H. Öniz (ed.) *SOMA 2008, Proceedings of the XII Symposium on Mediterranean Archaeology. Eastern Mediterranean University. Famagusta. North Cyprus 5-8 March 2008* (pp. 132-142). Archeopress.
- Tekocak, M., Aldemir, C. (2019), *Anemurion: Anadolu'nun Güneyinde Bir Liman Kenti, Anemurion Çalışmaları I*, SAGE.
- Tülek, F. (2015). Late Roman Ceramics of the Deli Halil Settlement in the East Cilicia Plain. In R. G. Gürtekin-Demir, H. Cevizoğlu, Y. Polat and G. Polat (ed.) *Keramos Proceedings of the First International Conference at Ege University May 9-13, 2011 İzmir* (pp. 238-243). Bilgin Kültür Sanat.
- Vokaer, A. (2015). Pottery Production and Exchange in Late Antique Syria (Fourth-Eighth Century A.D.), A Study of Some Imported and Local Wares. In L. Lavan (ed.) *Local Economies? Production and Exchange of Inland Regions in Late Antiquity*. Brill.
- Waddington, C. J. (2003), *The Paphos Theatre Excavations and the Late Roman Pottery of Cyprus* [Unpublished doctoral dissertation]. The University of Sydney.
- Waagé, F. O. (1948), *Hellenistic and Roman tableware of North Syria. Antioch on the Orontes IV. 1. Ceramic and Islamic Coins*. Princeton University Press.
- Waldner, A., Ladstätter, S. (2014). Ephesus–local vs import: The Early Byzantine fine ware. In H. Meyza (ed.) *Late Hellenistic to Mediaeval Fine Wares of The Aegean Coast of Anatolia Their Production, imitation*

and use (pp. 49-59). Editions Neriton.

Williams, C. (1977). A Byzantine Well-Deposit from Anemurium (Rough Cilicia). *Anatolian Studies* 27, 175-190.

Williams, C. (1989). *Anemurium The Roman and Early Byzantine Pottery*. Pontifical Institute of Medieval Studies.

Yaman A. (2018), *Arykanda Geç Antik Dönem Mahallesi Seramikleri*. [Unpublished doctoral dissertation]. Muğla Sıtkı Koçman Üniversitesi.

Yıldız, V. (2022). Soli Pompeiopolis Afrika Kırmızı Astarlı Seramikleri. *Arkhaia Anatolika* 5, 94-153.

Yıldız, V. (2022b). Soli Pompeiopolis Geç Roma C Seramikleri. *Arkeoloji Dergisi* 2, 117-142

Yıldız, V. (2022c). Soli Pompeiopolis Geç Roma D Seramikleri”, In A. Çaycı-A. Yavuzylmaz (ed.) 25. *Uluslararası Ortaçağ ve Türk Dönemi Kazıları ve Sanat Tarihi Araştırmaları* (pp. 1123-1189). Necmettin Erbakan Üniversitesi Yayınları.

Zoroğlu, K. L. (2005). Roman Fine Wares in Cilicia In S. Ladstätter (Eds.) *RCRF Acta* 39 (pp. 243-248). Abington.

Catalogue (Abbreviations: Fig.: Figure, Dia: Diameter) (All measurements are in centimeters)

Fig.	Cat. No.	Room and row	Group	Form	Fabric	Slip	Dia.	Temper ¹
Fig. 3	1 ²	A2.EO.19	ARS	50B	2.5YR6/8	2.5YR5/8	40	Lime and mica
Fig. 3	2 ³	A2.EN.32	ARS	67	10R6/8	2.5YR6/8	35	Lime and mica
Fig. 3	3	A2.EH.17	ARS	73/76	10R7/8	10R6/8	21	Mica and lime
Fig. 3	4 ⁴	A2.EM.42	ARS	99	10R7/8	10R6/8	35	Lime and mica
Fig. 3	5	A3.1.DG.3	ARS	99 (29.2)	2.5YR6/8	10R6/8	14	Mica
Fig. 3	6	C.EK.9	ARS	99	10R5/6	10R6/8	8	Mica
Fig. 3	7	B.EE.8	ARS	104	2.5YR6/8	10R6/8	23	Mica, sand, lime
Fig. 3	8	C.CV.25	ARS	104	2.5YR7/8	10R6/8	38	Sand, lime and mica
Fig. 3	9	C.CZ.6	ARS	104	5YR7/6	10R5/6	22	Mica and lime
Fig. 3	10	A2.EN.35	ARS	105	2.5YR6/8	10R5/6	15	Lime
Fig. 3	11	B.AV.6	ARS	106	10R6/6	10R5/8	12	Lime and mica
Fig. 4	12	A2.EN.30	LRC	1	2.5YR6/8	10R5/8	27	Sand and quartz
Fig. 4	13	B.DZ.3	LRC	3	2.5YR6/8	10R5/6	11	Mica
Fig. 4	14	C.CV.24	LRC	3	10R6/8	10R6/8	23	Lime and mica
Fig. 4	15	A/S1.DN.10	LRC	3	2.5YR6/8	10R5/8	28	Mica, lime and sand
Fig. 4	16	C.ES.10	LRC	3	10R6/8	10R4/6	27	Quartz and lime
Fig. 4	17	C.EM.23	LRC	3	2.5YR6/6	10R5/8	21	Quartz and lime
Fig. 4	18	B.DP.1	LRC	10	2.5YR6/4	2.5YR6/6	23	Lime
Fig. 4	19	C.EI.26	LRC	10	2.5YR7/8	2.5YR5/6	23	Sand, mica and lime
Fig. 4	20	C.EJ.20	LRC	10	2.5YR6/6	10R5/6	30	Mica, lime and sand
Fig. 4	21	C.EJ.54	LRC	10	10R6/8	10R5/6	25	Lime and mica
Fig. 5	22	C.EN.22	LRD	1	2.5YR6/6	10R5/6	30	Lime and quartz
Fig. 5	23	A2.EM.50	LRD	1	2.5YR6/6	10R5/6	12	Sand and lime
Fig. 5	24	C.EN.5	LRD	2	2.5YR6/6	10R5/6	12	Mica and lime
Fig. 5	25	A/S1.DA.9	LRD	2	5YR7/8	10R5/8	25	Lime

1 All tempers are fine grained (1-3 mm diameter). Mica is silver. Sand colour is black, gray or white. Lime mostly in white. Quartz is in a very light grey and white.

2 Published in Korkmaz – Tekocak 2023, Lev. V. 9.

3 Published in Korkmaz – Tekocak 2023, Lev. V. 11.

4 Published in Korkmaz – Tekocak 2023, Lev. V. 12.

Fig. 5	26	B.DH.5	LRD	2	2.5YR7/8	10R5/6	26	Mica
Fig. 5	27	B1.DV.7	LRD	2	7.5YR6/4	10R5/8	18	Sand
Fig. 5	28	B/S1.AR.8	LRD	2	2.5YR6/6	10R5/8	26	Lime
Fig. 5	29	C.EJ.26	LRD	6	2.5YR6/6	10R5/6	20	Mica, lime and sand
Fig. 5	30	C.EI.11	LRD	6	2.5YR6/6	10R5/6	17	Lime and sand
Fig. 5	31	C.EM.27	LRD	6	7.5YR7/4	5YR5/4	17	Mica, lime and sand
Fig. 6	32	C.EJ.14	LRD	8	5YR7/6	2.5YR6/8	31	Mica, lime and sand
Fig. 6	33	C.ES.9	LRD	8	5YR6/6	2.5YR4/8	26	Lime and mica
Fig. 6	34	C.EJ.52	LRD	8	2.5YR7/6	10R6/8	24	Lime and mica
Fig. 6	35	A.3.1.DF.5	LRD	8	2.5YR7/6	10R5/4	36	Lime and mica
Fig. 6	36	B.EE.7	LRD	9	2.5YR6/6	2.5YR5/6	16	Lime
Fig. 6	37	C.EM.10	LRD	9	2.5YR7/6	10R5/6	21	Lime
Fig. 6	38	C.EH.9	LRD	9	10R6/8	10R5/6	22	Lime
Fig. 6	39	B.DL.7	LRD	9	10R4/6	10R5/4	28	Sand
Fig. 6	40	A2.EJ.19	LRD	9	5YR7/6	10R5/6	14,2	Mica
Fig. 7	41 ⁵	C.EK.7	LRD	9	2.5YR6/6	10R5/6	15	Lime
Fig. 7	42	C.EK.15	LRD	9	2.5YR6/6	10R5/4	21	Lime and mica
Fig. 7	43	C.EP.1	LRD	9	2.5YR6/6	10R4/6	22	Lime and mica
Fig. 7	44	C.EM.24	LRD	9	2.5YR6/6	10R5/8	22	Lime
Fig. 7	45	C.EM.19	LRD	9C/10	5YR6/6	10R5/6	22	Lime
Fig. 7	46	C.EM.22	LRD	9C/10	2.5YR6/6	10R5/6	22	Lime
Fig. 7	47	B.DH.4	LRD	9C/10	2.5YR6/6	10R5/4	30	Mica
Fig. 7	48	B.DH.6	LRD	9C/10	2.5YR6/6	10R5/6	30	Lime and mica
Fig. 8	49	C.EM.9	LRD	11	2.5YR6/8	10R5/6	42	Mica, lime and sand
Fig. 8	50	C.CY.14	LRD	11	10R7/4	10R5/6	28	Mica
Fig. 8	51	B.DT.1	LRD	11(H12D)	2.5YR6/8	10R5/6	40	Sand and mica
Fig. 8	52	C.EH.27	Well Form	A	5YR7/6	10R5/8	24	Mica,lime,sand
Fig. 8	53	A2.EI.9	Well Form	A	5YR7/6	10R5/8	31	Lime
Fig. 8	54	C.EP.3	Well Form	A	2.5YR6/6	10R5/8	33	Lime and sand



“Armed” with Modern History. The Statue of the River God Meander at Miletus, 1909-2023.

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ABSTRACT

In 2023 during preparatory work for moving old objects into new storage at Miletus, the authors noted a large arm in a blue marble with broad white veins in the stone storeroom, the “Steindepot” (Fig.1a-c). Almost immediately we recognized it as belonging to the statue of the River God, the Meander, which is currently on display in the Miletus Museum and is carved in the same distinctive marble. The stone conservators and museum staff tried the arm against statue and the observation became a fact. The find compelled the authors to investigate how and when the arm had become disassociated from the statue. That history, not the ancient history of statue, is the focus of this article because it importantly reflects on the positive evolution of cultural heritage protection and equally demonstrates the mutability of the connection between nationalism and cultural heritage. Safeguarding art objects through time has become a national duty but peoples and interests are constantly in flux.

Keywords: Miletus, River God, Modern History, Object History, Sculpture



Introduction

In December of 1909 a German excavation team discovered a statue of a River God in a late-antique context in the Baths of Faustina at Miletus. The over-life-size statue was made in the Roman period from a blue-grey marble that had been quarried in the region. In July of 2023 the authors found this statue's right arm in a storeroom. This was not a striking new piece but the recovery of a lost fragment of the original find. The statue's most eventful and most difficult period of life was the twentieth century. It moved multiple times, and its value ranged from a complete but worthless fountain head to a loathsome antiquity to be destroyed to the centrepiece of a modern Turkish museum. This paper explores the reasons for this, reflecting on the difficulties of cultural heritage management in changing political and academic worlds.

The early excavations of Miletus in context

At the end of the nineteenth century interest in Mediterranean sites had reached a peak, culminating in the establishment of a new academic discipline, classical archaeology, and new museums. World politics at the time, which we now describe with terms such as globalization, imperialism, and colonialism, intersected with significant archaeological finds; for example, the palace of Nineveh, the sculptures of the Temple of Zeus at Olympia and the reliefs of the Altar of Zeus at Pergamon. This dynamic led to well-funded and competitive exploration and a desire to preserve ancient objects and sites in Greece, the eastern Mediterranean, and the Near East. In Ottoman Istanbul the Imperial Museum was founded in 1869 and began to collect antiquities from all parts of its Empire (Shaw 2003; Çelik 2016). While Osman Hamdi Bey was the director of the Museum between 1881 and 1910, the museum grew in content and in form. By 1891 a new building had been built, mainly for the sarcophagi from Sidon, and two key laws, one in 1884 and a second in 1906, were passed. The laws established an administrative system, the beginnings of a ministry, to control archaeological excavations and heritage objects. Importantly the laws prohibited exportation of and deliberate damage to archaeological objects which they deemed state property (Shaw 2003, 110-130).

At Miletus, the French scholar and archaeologist Oliver Rayet was the first to explore the site and remove museum-worthy marble finds. In 1872 he took statues to the Louvre (Panteleon 2015, 109, <https://collections.louvre.fr/en/recherche?limit=100&q=milet>). The Berlin Museum, which had established agreements with the Ottoman empire in 1878 in conjunction with exploration at Pergamon, began its scientific excavations at Miletus in 1899. Reinhold Kekule and Theodor Wiegand negotiated a special agreement between the Emperor Wilhelm II and Sultan Abdul Hamid in October-November of 1899. The agreement gave the Berlin Museum the rights to half of the findings, assigning the other half to the Empire. This pact effectively circumvented the new heritage laws of 1884. (Panteleon 2015,

61; Shaw 2003, 120). Theodor Wiegand served as the Berlin Museum's field director on site and attaché in Constantinople. He oversaw significant publications and the two most high-profile museum entries concerning Miletus. In 1909 he sent the architectural fragments of the Miletus Market Gate to Berlin (where he was later responsible for their reconstruction) and in the same year the statues of Apollo and the Muses arrived at the museum in Constantinople. This paper is about an object that neither went to Berlin nor to Istanbul, the blue marble River God from the Frigidarium of the Baths of Faustina.



Figure 1a-c: River God with its arm, 2023 (Miletus Archive)

Finding the River God and moving objects, 1903-1909

On 10 December of 1909, the German archaeological team at Miletus, under the direction of Wiegand, excavated a statue in blue-grey marble of a reclining river god in the Frigidarium of the Baths of Faustina. The statue had fallen from its original location on the north edge of a basin. It lay face forward in the basin, directly on top of its base which was broken into two pieces (**Fig. 2**). In the excavation diary Wiegand immediately identified the statue,

„[...] der Flußgott, - der sehr gut erhalten, aber leider eine geringwertige spätrömische Arbeit ist -, wird wieder auf seine Basis gehoben.“

“The River god - which is very well preserved, but unfortunately a late Roman work of little value - is set back onto its base.” (Wiegand, Grabungstagebuch, 10.12.1911)

Wiegand published the find in 1911.

“Der Raum empfing Wasser aus seiner Zisterne, die durch Umbau eines ehemaligen quadratischen Thermensaales im Norden gewonnen worden war; das Wasser entströmte einem Marmorsockel (2,50 m breit, 0.50 m hoch), der mit dem überlebensgroßen Marmorbild eines ruhenden Flußgottes geschmückt war, natürlich des Maiandros, mit Füllhorn und

Fruchtkranz; vgl. z. B. Münzen von Antiochia am Mäander Cat. Br. M. Caria, S. 16 ff., pl. III. Als zweiter Wasserspender kam später auf der Ostseite ein etwa lebensgroßer Marmorlöwe hellenistischer Zeit hinzu, der früher für diesen Zweck nicht bestimmt war.“

“The room received water from a cistern that had been obtained by converting a former square thermal hall in the north; the water flowed from a marble plinth decorated with a larger-than-life marble image of a resting river god, Maiandros of course, with cornucopia and fruit wreath: cf. e.g. coins of Antioch on the Meander Cat. Br. M. Caria, p. 16ff., pl. III. A second water dispenser was later added on the east side in the form of a life-size marble lion from the Hellenistic period, which was not previously intended for this purpose.” (Wiegand 1911, 33-34, fig. 13) (Fig. 3).



Figure 2: River God found in the basin in 1909 (Arachne, DAI İstanbul)

The over-life-size statue stretches out in a semi-recumbent pose with his left side resting against an amphora through which water flowed into the basin in front. Although Wiegand does not note damage, the photograph of the statue in the first publication seems to show a crack at the base of the raised right arm pit and that several fragments combine to form the lower part of the cornucopia. One hundred years later, in 2011 Renate Bol republished the statue. Assessing the carving and deep drillwork and comparing it to a similar statue from the Baths of Vedius in Ephesus, she dated the statue to the mid-second century AD, a date which well coincided with the Baths themselves named after Faustina the Younger (Bol 2011, 109-110, no. VI.22). She commented, in keeping with Wiegand’s late Roman assessment, that its position on the north edge of the basin was secondary. Neither of the two scholars were interested in the exciting use of coloured marble which now makes it of great interest to scholars of Roman sculpture and economy. The white-veined grey-blue marble might come from the Herakleia quarries to the east of Miletus (see Toma 2023, 1-19), but also closely

resembles the marble of the statue of the horse of Troilos at Aphrodisias which isotopic analysis indicates comes from the city quarries there (Smith & Hallett 2015, 132-133).



Figure 3: 1911, placed on its base (after Wiegand 1911, fig. 13)

In 1911 Wiegand also published the other sculpture from the Frigidarium, which he identified as a Hellenistic lion (Wiegand 1911, 33). Its hindquarters are in the basin in the 1909 photograph showing the find situation (Fig. 2), and Armin von Gerkan and Fritz Krischen write some part of it was found “ohne Sockel auf dem Pflaster» (“without a base on the pavement”, von Gerkan & Krischen 1928, 65). In 1977 Volker Michael Strocka studied the lion carefully, noting that it dated to the second quarter of the sixth century BC but that it had been reworked in the Roman period (Strocka 1977, 481-512). In 2011, Felicia Meynersen introduced a third period of use to Strocka’s interpretation (Bol 2011, 110-113). Thus, in the Archaic period, the lion had functioned as a guardian of a grave in a necropolis near the Baths of Faustina. Then, according to Meynersen in the Hellenistic period, the mane and some facial details of the lion were reworked. In its final and, for Meynersen, third installation, probably the Severan period, the lion became a waterspout in the Frigidarium.

More than a year before the German team found these two sculptures in the Frigidarium of the Baths, probably in May of 1908, Wiegand had shipped the architectural elements of the imposing three-storey facade of the city’s market gate, excavated in 1903, as well as inscriptions and ceramics for study to Berlin by boat. This was a difficult logistical feat of packing into crates; finding a secure, large boat with a sufficiently strong lifting mechanism; and waiting for the appropriate weather (Wiegand 1970, 101-102). The impressive statuary

program of six Muses and an Apollo, found in the Hall of the Muses in the same Baths of Faustina, some years earlier, reached the Imperial Museum of Constantinople in 1909. What, if any, intention there had been to move the River God and the lion, we cannot know. World politics suspended the Berlin Museum’s excavations after the 1911 season. These two statues thus remained on site, at the basin in the Frigidarium in their last place of use. Wiegand’s negative initial assessment of the River God, clearly recorded in the excavation notebook and which may have derived from the statue’s dark marble and supposed late date, correspond to the disinterest in it during the period between the wars.



Figure 4: 1938, in the basin, by A. Eckstein (Arachne, DAI İstanbul)

1914-1938. The River God between the wars

After World War I (1914-1917) and the Greco-Turkish War (1919-1922), in March of 1924, Wiegand expressed his hope that work at Miletus and Didyma could be concluded. He noted that a visit of the Swiss architect Paul Schazmann, undertaken in the interest of the German team, in the summer of 1923 showed essentially no damage despite battles between the Greeks and Turks in the Meander valley (Wiegand 1924, 3). He cites only the deplorable carelessness of the “foreign” troops who permitted a fire in the dig house at Didyma. In 1924 Wiegand himself visited and notes that the excavation house in Akköy was used as quarters for soldiers (Wiegand 1929, 18).

Yet in the fullness of time, the German team became better aware of the toll that the wars had taken on the archaeological interests in the area, both at Miletus and Didyma. *Armin von Gerkan* reveals that of the small finds “large parts have been destroyed, or at least simply thrown away” (von Gerkan 1925, 1ff). In his pithy one paragraph review of von Gerkan’s

opus, David George Hogarth highlights this detail, commenting that the “terracottas, bronzes and pottery” from the old excavations “have largely disappeared or been destroyed, presumably during the anarchical period succeeding the Greek landing at Smyrna (Hogarth 1926, 267).” Losses were primarily due to bombing in 1916 by the British, the housing of troops in the excavation quarters, and then a naturally-occurring fire which raged uncontrolled because the inhabitants had been expelled during the exchange of peoples. In 1928 and 1929, Walther Kolbe, the epigrapher, and Wiegand respectively published accounts of the situation (Kolbe 1928, 97-99, Wiegand 1929, 18).

That the small finds stored in boxes in buildings used by soldiers during a war were disturbed is unfortunate but unsurprising. That destructive fires consumed some finds and paper records is also a sad inevitability. These two events are slightly different from the willful destruction of the River God on the site of Miletus. When in 1928 von Gerkan and Fritz Krischen published the Baths and Palaestra, they record that,

“Die Statue war vor dem Weltkriege bis auf die Nase und den Vorderteil des rechten Fußes gut erhalten. Das Ende des *Füllhorns* ist wieder angesetzt. Während des Weltkrieges wurde das Gesicht mit Hammerschlägen fast gänzlich zerstört.”

“Before the World War, the statue was well preserved with its nose and the front part of the right foot. The end of the cornucopia was still inserted. During the World War, the face was almost completely destroyed by blows of a hammer.”

The footnote then reads, “Neuerdings heruntergestürzt, liegt die Statue jetzt im Bassin; in zwei Stücke zerbrochen ist die Vorderseite der Basis” („Newly fallen again, the statue now lies in the basin. The front part of the base is broken into two pieces”) (von Gerkan & Krischen 1928, 123-124, no. 18). All the scholars, even Kolbe who notes the English and Italian factors, recognize the repercussions of the political instability but avoid blame or even the mention of an ethnicity or nationality with the loss of data. Comparable instances of the deliberate defacement of antiquities in the region in the years around 1920 are not recorded.

This leaves us today, possibly as the foreign scholars at the time, with no factual knowledge about the River God’s losses. Nonetheless, we can be sure that the damage done to the statue was an act of anger taken against cultural property rather than an actual foe. The perpetrator in some way had suffered and associated the statue with a system of beliefs that he did not share and did not want. The political situation had left no one to protect the cultural property; no one was officially in charge and no one was invested enough in it to claim it. In Milet 2,2 (published in 1929) Wiegand, whose personal letters attest constant interaction with the local community during his excavations and who had used Greek workmen, commented on the situation after the population exchange. He reported that in 1914, the village of Akköy had about 1,500 residents, exclusively Greek, and Jeronda (Didim) had a similar number with a small Turkish population. In contrast, the Turkish village of Balat, which was situated on the

Theatre Hill of the city until the earthquake of 1955, had around 800 to 1,000 inhabitants. Whereas the residents of Balat fled momentarily to Mylasa (Milas) during the Greek invasion and then returned, the Greek villages were abandoned and in disrepair in 1924. Moreover, those who were imported into the area, mainly from Thrace, were entirely miserable and destitute (Wiegand 1929, 17). In this context it is notable that the perpetrator did not touch the lion in the same Frigidarium. A stone representation of an animal did not evoke the same anger as the anthropomorphic statue of the River God.

There are no further comments or photographs of the Frigidarium and its two statues until 1938 when Carl Weickert led another German excavation team on site. Wiegand had died two years earlier but von Gerkan, among others, participated. Although no mention is made of the River God, Albert Eckstein, a German Jewish doctor who had taken a medical chair in Ankara and remained there from 1935-1939, took a photograph in that year. His 1938 photograph intended to display the glory of the Baths of Faustina, focuses on the River God (Fig. 4). The photograph shows the statue damaged but sitting upright inside the basin, not fallen as reported by von Gerkan in 1928. An organized force of three men was probably needed to do this. In addition to the mutilated face, the statue has no right foot, and the right arm and cornucopia have broken along previous cracks (arachne.dainst.org/entity/1988053). The right arm has broken where the 1911 photograph (Fig. 3) suggests a crack, and the cornucopia, which the 1911 photograph suggests was reconstituted from three fragments, lacks a portion of the central fragment and its uppermost part. The base of the statue, on which it rested in 1911, lies in three pieces scattered to either side, east, southeast, and west of the statue. In contrast, the front part of the lion, not its hindquarters which are preserved in a separate piece (cf. Fig. 10b), remains on the side of the basin.

1955 – 1992. New sensibilities. A museum setting and a plaster cast.

In July of 1955 the area suffered a significant earthquake which badly damaged the town of Balat located on the site. It may also have caused the final destruction of Wiegand's two depots for small finds, the history of which Johannes Panteleon has carefully traced (Panteleon 2005, 27-39; Panteleon, 2015). Later in the year the excavations began again under the directorship of Carl Weickert who had previously directed one season in 1938. A certain amount of collecting and labelling small finds from the destroyed depots is attested.

It is possible that the arm of the River God had been picked up in 1938 when the damaged statue was put upright in the basin and that it had been stored in one of the two Wiegand depots for small finds which were still used in that year. Then during the early years of the new project, we might imagine that the arm was rescued from the debris of the earthquake-destroyed depots. While this cannot be totally excluded, the arm does lack any label that later excavators made when indicating Wiegand objects. The well-cleaned break surface (Fig. 1)

at the wrist of the arm currently bears the museum inventory number 539. The museum gave such numbers to finds that came from the Theatre depot in 1963. Thus, the arm was more probably a stray find — not necessarily even found in the Baths and in fact more possibly from old Balat—brought into the storage areas at the Theatre in some year between 1955 and 1963.



Figure 5a-c: 1982, by W. Schiele (Arachne, DAI İstanbul)

On 6 October 1973, the Miletus Museum officially opened. Its main rooms housed Archaic statuary and various small finds from Miletus, Priene and Didyma. It did not contain the River God which still stood in the Frigidarium. The object database Arachne (iDAI. objects Arachne, <https://arachne.dainst.org/>) has photographs of the River God there in situ in 1982 (Fig. 5a-c). In these images the statue is no longer in the basin (as in 1938 Fig. 4) but back again on the north edge of the basin, not however on the base that is pictured in the 1911 photograph (Fig. 3).

These detailed images show a defacement that seems deliberate, as von Gerkan had noted in 1928. The eyes, which belong to a recessed area of the face, are missing but the protruding cheekbones and the bulge beneath the lower left eyelid are preserved. Also missing are parts of the fruited wreath that the god wore in his hair and the locks framing the brow. Thus, the head, which remained attached to the body, shows breaks at different angles in different places. Therefore, while some damage to the statue, that in the locks of hair over the brow or even the right arm, might be construed as circumstantial, -- that is, as a result of being pushed forward off its base, --the missing eyes and areas around them (the bridge of the nose and upper moustache) read as intentional damage. Deliberate disfigurement of the eyes is a long-standing mode of extinguishing the spirit of a statue. Christians put crosses on the eyes of ancient statues (for example, the head of goddess from Sparta, see Kristensen 2013, fig. 1.20)

and the elimination of eyes in painted icons in orthodox churches in Cyprus, which is a similar to that of the River God, has been traditionally considered a Muslim intervention (Khokhlova 2023 at <https://sites.courtauld.ac.uk/digitalmedia/2023/07/10/defaced-byzantine-frescoes-in-cyprus/>). At Miletus this act indicates that the perpetrator’s anger focused on obliterating a connection to an alien concept and culture.



Figure 6: Moving the River God to the Museum, 1992 (Miletus Archive)

In the second half of the twentieth century, the developed world became concerned with pollution and acid rain, and those in archaeology and in museums saw that the objects left exposed to the elements were deteriorating or in danger of deteriorating. Thus, the directorship of the Miletus Museum, led by Ahmet Semih Tulay, and the German excavation team, under Volkmar von Graeve, decided that the statue of the River God should be brought to the main hall of the Museum (von Graeve 1994, 407); he arrived there in 1992. This constitutes the seventh move that we can document: the first being in Late Antiquity when it was brought to the basin, the second when it fell into the basin, the third when the excavators in 1909 pulled it out of the basin, the fourth when it was pushed back into the basin post-1914, the fifth when it was placed upright again in the basin in 1938, the sixth when it was put back on the edge of the basin. In the Museum, the statue’s unique marble, large size, and fine carving found a receptive audience, like that of Late Antiquity. The museum setting and excavation team had restored its value.

Motivated also by a desire to preserve a sense of context and wishing not to separate ruins from sculpture, the Museum and archaeological team considered it important to make

a 1:1 cast of the statue to leave on the north edge of the pool in the Frigidarium (Figs. 6-7-8). Mustafa Kukul, an archaeological conservator at the İzmir Museum, created a silicon mould of the River God (Fig. 7a-b) taken directly from the marble sculpture. He then cast a replica in artificial stone. This durable version was intended to survive the elements. It was placed in the Frigidarium in 1993 (von Graeve 1994, 407, fig. 7), and there joined the artificial stone lion which had been made the year before. The creation of a replica by casting was a protective measure foreseen and promoted already in the 1884 law on cultural heritage (Shaw 2003, 110-25). Then a replica was a suitable exportable commodity that ensured the original would remain in situ. Just over one hundred years later, in 1992-1993, the cultural heritage professionals could not even imagine the potential international dissemination of an exciting find; interest at that point was on contextualization rather than the individual object. So, they placed their new replica at the edge of the basin, allowing visitors to continue to appreciate the last context and functionality of the object (Shaw 2003, 136). The replica of the River God was not, however, placed on its original base pictured in the 1911 photograph (Fig. 3).



Figure 7a-b: Casting the River God, 1993 (Miletus Archive)



Figure 8: Cast, 1995, by S. Westphalen (Arachne, DAI İstanbul)

In the Museum, they created a low plinth in a black and white speckled marble, possibly intended to echo the marble of the statue. This plinth is an unusual choice because it makes no reference to the original base (Fig. 3) which, as an architectural element, remains in situ in the Baths but, as noted above, not connected to the statue. In the Museum they posted a large drawing of the reconstructed Frigidarium behind the River God on his new and shiny plinth. The other waterspout of the basin, the lion, is pictured in the reconstruction but, as the plinth, is not included in the Museum display (Fig. 9).



Figure 9: Photo of Museum Display of River God (Miletus Archive)

There are three important observations to be made about this process. These observations reflect a subconscious human reaction that inevitably shapes heritage decisions, a carefully-calculated choice about economic value, and the evolution of conservation. First, the Archaic statue of the lion in the same context again received differential treatment. The lion, which had been spared the wrath of the angry individual in the decade between 1914-1924 presumably because it was an animal, was still treated differently in the late twentieth century. It was cast a year prior to the River God, as if a test case, and its artificial-stone replica was positioned in its find site in the Baths. The original object, however, was left outside in the Museum courtyard. Officials seemed to fear, possibly considering the events of the 1911-1938, that were it left on site, it would be vulnerable to vandalism. For academics, the lion was a funerary marker that had been brought into the Baths in Late Antiquity. Thus, they understood it best in the context of other such funerary markers and were content to see it in a line of lions in the courtyard outside the Museum (Fig. 10b). For most visitors to Miletus,

the sculpture of the lion represents an animal and as such seems appropriate outdoors in the courtyard. However, this choice unconsciously represents a twentieth-century prioritization of the Roman or earlier contexts, moments which we have been taught to believe are of higher civilizations, over the late-antique use. In reality the lion, as the museum drawing shows, was part of the last functioning context (Fig. 10a) of the Baths and might justifiably be displayed with the River God.



Figure 10a-c: Drawing of Museum Display of River God. Photo of Museum Display of Lion (Christine Özgan, Miletus Archive)

Second, from the moulds of the Museum, more casts of various materials could be made and distributed, even sold for profit, to cast collections throughout the world, as the 1884 law indicated. Yet, the mould was destroyed and to date only one cast has been made. In this case, the decision reflects a new understanding of this object. Disparaged by its German excavator in 1909 and just over a decade later deliberately damaged by those then residing in the area, in the late twentieth century it was a special “one-of-a-kind” object owned exclusively by yet another party, the Turkish Ministry of Culture.

Third, the statue provokes considerations about the evolution of visual restorations. In the 1990s a cast of artificial stone enabled the original object to be brought into a museum setting and a second version of the object, a convincing substitute, to remain in context. Now, new technology potentially allows for a yet another version of the head, a 3D print from a

scan. The scan can be enhanced to create a version of what the statue looked like when it was found. That is, a 3D scan of the extant object can provide the form on to which the original photographs of the early twentieth century can be mapped. This would provide a 3D file that restores the object to its original find condition. This file could be printed and displayed next to the current object. It would be a 21st century update of the 20th century silicon mould-artificial stone replica.

2023

Reattaching the arm, which was destructively removed in a period of war, the current excavation team, Ministry of Culture, and conservators hope to restore the ancient glory of the statue. They also wish to use this as an opportunity to remind the viewer of its full modern history which reflects so importantly both the development of modern Turkey and the development of modern archaeology and cultural heritage practice. This modern history begins in the boom years of archaeology in the late 19th century and in the years of the Sultan Abdul Hamid II's (1896-1909) pacts with European excavators. Those agreements led to new excavations at Miletus which yielded visually-exciting finds that became focal points both in Berlin and in Istanbul. The ensuing world war and contest between Greece and Turkey for ownership of the Ionian coast led to the mutilation of this beautiful blue-marble statue of a river god. Current stability and tourism in turn have permitted for the study and the restoration of the object.

The story of the River God, which has evolved from archaeological find to museum object, significantly illustrates the developing science of cultural heritage protection and the growing international awareness about duties of tutelage. The statue once disregarded as a late Roman fountain head has become a centre piece in a museum. This evolution is a mainly positive process which here begins with reforms by Osman Hamdi Bey, and notably includes the construction of a museum, the attempt to recreate context for an object both on site and in the museum, and the desire to protect a vulnerable material from the elements and vandalism. It also shows how over the course of approximately a hundred and forty years, a territory has moved from permitting the export of archaeological objects to the rejection even of controlled replication of objects for exportation. Taking the responsibility for safe-guarding gives a new sense of ownership. Now this object belongs to the museum of Miletus and to the Turkish Ministry of Culture. But as its history, beginning with a reuse in a late Roman Bath complex, warns us, its future might evolve further, and that its current museum location is possibly an artificial pause in its long life.

Throughout out the modern story of the River God, a human aspect has dominated, perhaps because the statue represents a human figure. Wiegand had a prejudice against the statue, possibly because of its colour, assumed date, and practical use. Co-inhabitants

of the area struck the statue in anger, possibly because of its pertinence to other cultures and again its unusual colour. Museum experts and archaeologists decided to take care of it, mainly because of its age and its capacity to evoke a past era. In these three fundamental perspectives, the enduring but constantly fluctuating value of the ancient object emerges clearly. It evokes different responses in different contexts. Finding its arm in a storeroom in 2023 and reattaching it in 2024 has more than archaeological significance because it tells this long story, one not just about its original makers but also about its changing caretakers. Understanding this past, we recognize how difficult it is for us to ensure its future.

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References

- Bol, R. (2011). *Milet. Funde aus Milet / Marmorskulpturen der römischen Kaiserzeit aus Milet*. Berlin ; New York: W. de Gruyter.
- Çelik, Z. (2016). *About Antiquities: Politics of Archaeology in the Ottoman Empire*. Austin: University of Texas Press.
- Hogarth, D. G. (1926). [Review of *Milet. Bd. I. Pt. 8. Kalebaktepé, Athenatempel und Umgebung*, by T. Wiegand & A. von Gerkan]. *The Journal of Hellenic Studies*, 46, p. 267.
- Gerkan, A. v., & F. Krischen, (1928). *Thermen und Palaestren, Milet I, 9*. Berlin: H. Schoetz and Co..
- Gerkan, A. v. (1925). *Kalabaktepe, Athenatempel und Umgebung, Milet I, 8*. Berlin: Verlag von Schoetz und Parrhysius.
- Graeve, V. v. (1994). 1993 Milet Çalışmaları, XVI. Kazı Sonuçları Toplantısı I, 30 Mayıs – 3 Haziran 1994, Ankara, pp. 405-417.
- Khoklova, A. (2023). The Mystery of Missing Faces – Defaced Frescoes in Cyprus <https://sites.courtauld.ac.uk/digitalmedia/2023/07/10/defaced-byzantine-frescoes-in-cyprus/>
- Kolbe, W. (1928). Rezension zu: von Gerkan, Kalabaktepe, Athenatempel und Umgebung (Milet Bd. I Heft 8.), Berlin: H. Schoetz & Co. 1925, *GGA* 190, pp. 97-111.
- Kristensen, T. M. (2013). *Making and breaking the gods: Christian responses to pagan sculpture in late antiquity*. Aarhus: Aarhus University Press.
- Panteleon, I. A. (2005). Funde aus Milet, XVI. Zum Schicksal der am Ort verbliebenen Funde der Wiegandschen Grabung nach 1914, *AA* 2005/2, pp. 27-39.

- Panteleon, I. A. (2015). *Eine Archäologie der Direktoren: Die Erforschung Milets im Namen der Berliner Museen in den Jahren 1899 - 1914*. Paderborn: Fink; Schöningh.
- Shaw W. M. K. (2003). *Possessors and possessed: museums archaeology and the visualization of history in the late Ottoman Empire*. University of California Press.
- Smith, R.R.R., & C. Hallett (2015). Troilos and Achilles: A Monumental Statue Group from Aphrodisias, *Journal of Roman Studies* 105, pp. 124 – 182.
- Strocka, V. M. (1977). Neue archaische Löwen in Anatolien, *AA* 1977, pp. 481-512.
- Toma, N. (2023). Milet, Türkei. Marmor in Milet der Kaiserzeit. Bericht über die archäometrische Studie. Die Arbeiten der Jahre 2018 bis 2022, e-Forschungsberichte des DAI, S. 1–19 (§). doi: 10.34780/5cb1-3x71.
- Wiegand, T. (1911). *Siebenter vorläufiger Bericht über die von den Königlichen Museen in Milet und Didyma unternommenen Ausgrabungen*. Berlin: Verlag der Königlichen Akademie der Wissenschaften.
- Wiegand, T. (1924). *Achter vorläufiger Bericht über die von den Staatlichen Museen in Milet und Didyma unternommenen Ausgrabungen*. Berlin: Verlag der Akademie der Wissenschaften.
- Wiegand, T. (1929). *Milet: Ergebnisse der Ausgrabungen und Untersuchungen seit dem Jahre 1899 (Band 2, 2): Die Milesische Landschaft*. Berlin: Verlag von Hans Schoetz und Co.
- Wiegand, G. (ed.) (1970). *Halbmond im letzten Viertel: Briefe und Reiseberichte aus der alten Türkei von Theodor und Marie Wiegand, 1895 bis 1918*. München: Bruckmann



Review of the Early Bronze Age Book of Tepeköy Höyük Excavations in the Varto District of Muş Province

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Early Bronze Age, Eastern Anatolia, Tepeköy Höyük, Cultural Heritage, Rescue Excavations

The book, prepared with the contributions of Energo-Pro, consists of three presentations and 11 chapters; each chapter contains an English abstract. The book includes the results of rescue excavations carried out in 2014, 2017, and 2018 at Tepeköy Höyük in the Varto district of Muş province under the direction of the Ahlat Museum within the scope of the Alpaslan II Dam and Hydroelectric Power Plant project. Increasing population and energy needs with urbanisation necessitate the development of dams and similar projects. However, dam or Hydroelectric Power Plant projects have become the biggest cause of the disappearance or destruction of cultural heritage, especially ancient settlements in the areas where they are built (Özdoğan 2008). In the planning processes of dams or similar projects, it is important to identify the cultural and natural monuments that will remain within the impact areas and to develop these projects accordingly or to revise them at the project stage to protect or minimise the impacts of such projects on cultural heritage. Cultural heritage sites in the vicinity of dam projects should be systematically surveyed prior to construction, or if they have to be relocated, necessary measures should be taken to prevent their destruction and protection measures should be developed.

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The work undertaken for the Keban dam project on the Euphrates River is an important endeavour for the archaeology of Türkiye. Although the Keban project did not result in the recovery of all cultural assets within the dam's catchment area, the multidisciplinary and multinational nature of the project with various universities sets an example. Later, similar studies were conducted in the Karakaya, Atatürk, and Ilisu dam areas in east and southeastern Türkiye. With these projects, as many archaeological sites as possible were excavated to effectively document cultural assets. Similar projects in Türkiye are carried out in cooperation with the General Directorate of Cultural Heritage and Museums of the Ministry of Culture and Tourism and regional museums. Tepeköy excavations were carried out as a rescue project in this way, and the information obtained is of great importance for the archaeology of the region, particularly for the Muş province and the Early Bronze Age of the region in general.

Our knowledge of the Early Bronze Age in Eastern Anatolia is very limited and consists of excavations carried out in Elazığ-Malatya (Arslantepe, Norşuntepe etc.), Erzurum (Sos Höyük, Karaz, Pulur), Van Lake basin (Karagündüz and Dilkaya) and surface surveys conducted throughout the region (Marro 2011). Hence, the rescue excavation at Tepeköy has provided new data on this subject. In particular, the fact that the present work is dedicated to the Early Bronze Age layer recovered from this rescue excavation makes it even more special for the archaeology of the region.

The geographical features of Tepeköy and adjacent areas are given in the first part of the book. The second part of the book contains information on the ancient history of the Muş Plain and its surroundings. However, this chapter focuses more on the Middle Iron Age of the region, namely the Urartian Kingdom. It should be noted that many of the sources used in this chapter are not included in the bibliography given at the end of the text and that the bibliography is not arranged in alphabetical order. Although many images obtained by the author during the survey in the region are included at the end of the chapter, a map showing the location of the settlements mentioned in the study would have made it easier to understand these settlements in a broader context. It should also be noted that the single-roomed rock-cut tombs in the region are dated to the Urartian period. However, there are also different views on the dating of such rock-cut tombs (Köroğlu 2007).

The third chapter of the book narrates the rescue excavations at Tepeköy Höyük. In this section, the excavations of 2014, 2017, and 2018 are described under separate sub-headings. The 2014 excavations, conducted by the Ahlat Museum, were not aimed at determining the stratigraphy of the mound. Rather than being a scientific fieldwork, this excavation was carried out to collect artefacts, and unfortunately, even the locations of the unearthed artefacts were not properly recorded/documentated. Although the author attributes the poor excavation to the destruction of recent houses on the mound (p. 55), it is evident that the museum staff who carried out this excavation lacked the skills and experience to carry out this work.

In 2017, a topographical plan of Tepeköy was made and the trenching system was changed during the fieldwork carried out by the museum (p. 56). Although the author describes the 2017 excavations as “a relatively more systematic excavation compared to the previous excavation season” (p. 56); it seems that the excavators again were not aware or did not know the concept of stratigraphy. It is also obvious that the architectural elements showing the contexts of the stratum and excavation area were not documented properly. As of 2018, when the construction of the Alparslan II Dam was about to be completed, excavations were carried out for the first time under the direction of the museum but with the scientific supervision of S. Erdoğan from Van Yüzüncü Yıl University. For the first time, instead of the find-oriented excavations of the first two excavation seasons, this last field season was conducted to determine the stratigraphy of the mound. However, strangely, for each field season, a separate grid system seems to be utilised.

The excavations revealed the presence of Early and Middle Bronze Age, Early and Middle Iron Age, and Middle Age (Byzantine, Seljuk and Ottoman) layers. Although it is stated that the Middle Iron Age, which is described as having two phases, is rich in both architecture and artefacts, a complete architecture could not be identified, probably due to poor excavation records (p. 60). The Middle Bronze Age layer, which is labelled as “old and new” and “multi-phased”, is described as a very rich period in terms of architecture and finds (p. 61). The most important find of this period is a horseshoe-shaped hearth with geometric decorations on its façade, which is mostly known from the Early Bronze Age. The Early Bronze Age is mostly characterised by the sounding works carried out on the mound, which consists of “three building” levels and “multiple phases” (p. 62). However, in contrast, when the architecture of this period is described in the next chapter, the Early Bronze Age is discussed as three building levels and a “single phase” (p. 84).

The fourth chapter is devoted to the Early Bronze Age architecture of the Tepeköy mound and its chronological changes. This building level is mostly represented by the remains of round architectural structures and hearths of various sizes, both portable and non-portable. The fifth chapter is concerned with the analysis of Early Bronze Age ceramic forms.

The sixth chapter of the book introduces the bronze metal artefacts recovered from the Tepeköy excavation in the so-called “Warehouse”. In the northern part of the mound, the presence of two rectangular spaces is identified. However, although the article in question mentions two rooms, no architectural remains of these rooms are shown in the corresponding images presented in the study (p. 154 fig. 1). To the east of these two rooms, a fragment of an altered andesite stone with a perforated edge is found among the river stones, which are thought to have been randomly gathered near the remains of an identified hearth. A group of bronze artefacts (two axes, six sickle fragments, two spiral rings, a spearhead and two belt fragments) were unearthed in a cluster under these stones (p. 136). There are stone and terracotta weights and various bone tools in the same area.

The seventh chapter of the study analyses a “çeç” stamp seal recovered from the mound; the eighth chapter deals with terracotta and idols; and the ninth with stone tools. The tenth chapter analyzes the animal remains, and the last chapter evaluates the bone tools and objects.

Archaeological studies in and around the Muş Plain have been limited to surface surveys (except for Kayalidere; Burney 1966). In this respect, despite some shortcomings, especially the work carried out in the first two excavation seasons, the site of Tepeköy is important in terms of understanding the settlements and cultures of the region other than the Urartian (Middle Iron Age) period. The increase in archaeological excavations and surveys in the long term in Eastern Anatolia will facilitate the understanding of the ancient cultures of the region. Hence, Murat Höyük (Özdemir et al. 2021) in Bingöl province and Tepeköy excavations stand out as important settlements in this respect, especially in terms of providing information beyond the Middle Iron Age of the region (Çifçi 2020).

Overall, the chapters in the book are supported by numerous visuals such as drawings and photographs. However, only the first part of the book includes a map showing the topography of Muş province (p. 4, map 1), and the third chapter includes a map (p. 66, Map 1) that is not very well prepared. It would have been more useful for the reader to understand the book if maps and similar images showing both the topography of the Muş province and the settlements in the region, which are mentioned in different parts of the work, had been included. In addition, there are deficiencies in the bibliographies of the chapters, alphabetical errors, and incompatible writing styles. However, despite these deficiencies, the presentation of the excavation results to the scientific world without much delay will make significant contributions to the development of the archaeology of the region. Therefore, the editors and authors of the various chapters of the book should be congratulated for their work.

References

- Burney, C. A. (1966). A First Season of Excavations on the Urartian Citadel of Kayalidere, *Anatolian Studies* 16: 55-111.
- Çifçi, A. (2020). Urartian Studies During the Foundation of Modern Nation States: Archaeological Traditions, Ideologies and Perceptions, *Ancient West and East* 19: 1-42.
- Köroğlu, K. (2007). New Observations on the Origin of the Single-Roomed Rock-Cut Tombs of Eastern Anatolia, In M. Alparslan, M. Doğan-Alparslan & H. Peker (Ed.), *Belkıs Dinçol ve Ali Dinçol'a Armağan. VITA. Festschrift in Honor of Belkıs Dinçol and Ali Dinçol* (445-456). İstanbul: Ege Yayınları.
- Marro, C. (2011). Eastern Anatolia in the Early Bronze Age, In S. R. Steadman & G. McMahon (Ed.), *The Oxford Handbook of Ancient Anatolia 10,000-323 B.C.E.* (290-309). Oxford: Oxford University Press.
- Özdoğan, M. (2008). *Türk Arkeolojisinin Sorunları ve Koruma Politikaları*, İstanbul: Arkeoloji ve Sanat Yayınları.
- Özdemir, A., Kılınc, Z. & Demir, E. (2021). *Erken Tunç Çağı'nda Murat Höyük*, İstanbul: Ege Yayınları.



Mehmet İnsan Tunay (İhsan Hoca) 1941-2023

Ara Altun¹ 



Born on May 10, 1941 in Bakırköy, İstanbul, after graduating from Pertevniyal High School, he enrolled in İstanbul University, Faculty of Letters, Chair of Archaeology. He graduated as an Archaeologist in 1965 with certificates in Classical Archaeology, Prehistory, Ancient History, Byzantine Art, New Age History and a Bachelor's Thesis on the Temple of Sardis. He was interested in cycling and won degrees and championships in various stages. In Bilecik, where he did his military service as a gendarmerie officer, he had the opportunity to be interested in environmental archaeology. He started his professional life as an assistant at İzmit Museum and soon continued at İstanbul Archaeological Museums. In the coastal areas of İstanbul and Yalova, he prepared many reports and had the opportunity to benefit from the files of the Council of Antiquities. As the Government Representative in the Knidos

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Excavation, he performed his duty meticulously. He married his colleague İnci Gülsevil, an art historian working at the museum. He published numerous research and promotional articles in periodicals such as TTOK Belleteni, Arkitekt and İlgi. In 1973, he was appointed as an Assistant to the Chair of Byzantine Art History at Istanbul University, Faculty of Letters. His PhD Thesis on Byzantine Stone-Brick Wall Techniques and Dating in Turkey, which he completed in 1984, is the product of a long and meticulous work that is widely referenced. In 1987, Mehmet İnsan Tunay was appointed as an Assistant Professor and taught Ancient Art, Byzantine Architecture, Byzantine Art in the graduate and postgraduate programs of Art History, as well as in the Museum Practice and Seminar programs.

Mehmet İnsan Tunay has traveled extensively in Europe and the USA, mostly by his own means and with his wife, and has also conducted research in Washington Dumbarton Oaks, Metropolitan and Greece. His lectures at Galatasaray High School and the Ministry of Tourism's National Guidance Courses had a special place in his life, and he instilled in many students an awareness of the importance of the site and conservation. M.İ.Tunay, who also served as a member of the Board of Conservation of Cultural and Natural Assets, was known for his honest, calm and honest personality that adhered to ethical values and legislation. He has contributed to many excavations and surveys with his suggestions, and was a core team member in the researches on Rough Cilicia conducted by Istanbul University. As the Scientific Advisor of the Rescue Excavation carried out by the Bursa Museum Directorate for the restoration of the Kurşunlu Aberkios Monastery, he provided field experience to his students. He has participated in national and international congresses and scientific meetings, published scientific articles in journals such as TTK Belleten, Turkish Archaeology Journal, Zograf, Sterinar, as well as book chapters and a multilingual guide. Mehmet İnsan Tunay, who has a son named Can Tunay, who is very devoted to his family, who loves his professional field and who has made important contributions, dear İhsan Hoca of his students and friends, passed away on December 15, 2023.

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Other Sources

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