7/1
March
2025

OANNES

EISSN **2667-7059**
https://dergipark.org.tr/en/pub/oannes

OANNES

OANNES

Aims and Scope: OANNES is a scientific, open-access, online-only periodical published in accordance with independent, unbiased, and double-blinded peer-review principles. The journal is published twice a year, in March and September. From 2025 onwards, the publication language will be entirely English.
OANNES aims to contribute to the literature by publishing the best articles at the scientific level. The journal publishes original articles by ethical rules. Although the journal covers Ancient History and Archaeology, History of Art, and related fields, it also accepts articles from similar fields deemed appropriate by the editorial board. However, the journal's target audience is researchers and academicians working in Ancient History and related fields.

OANNES is covered in the following abstracting and indexing databases;
-TUBITAK ULAKBIM TR Index
-Erih Plus
To guarantee that all papers published in the journal are maintained and permanently accessible, articles are stored in Dergipark, which serves as a national archival website and permits LOCKSS to collect, preserve, and serve the content.

OANNES editorial and publication processes are carried out according to the following guidelines.
-Council of Science Editors (CSE)
-Committee on Publication Ethics (COPE)
-European Association of Science Editors (EASE)
-Asian Council of Science Editors (ACSE)
-National Information Standards Organization (NISO)

OANNES conforms with the DOAJ Principles of Transparency and Best Practice in Scholarly Publishing (doaj.org).

Disclaimer: Statements or opinions in the articles reflect the views of the author(s). The editorial board does not accept any responsibility or liability.
Open Access Statement: Oannes is an open-access publication whose publication model is based on the Budapest Access Initiative (BOAI) declaration.
All archives are available online, free of charge, at https://dergipark.org.tr/en/pub/oannes.

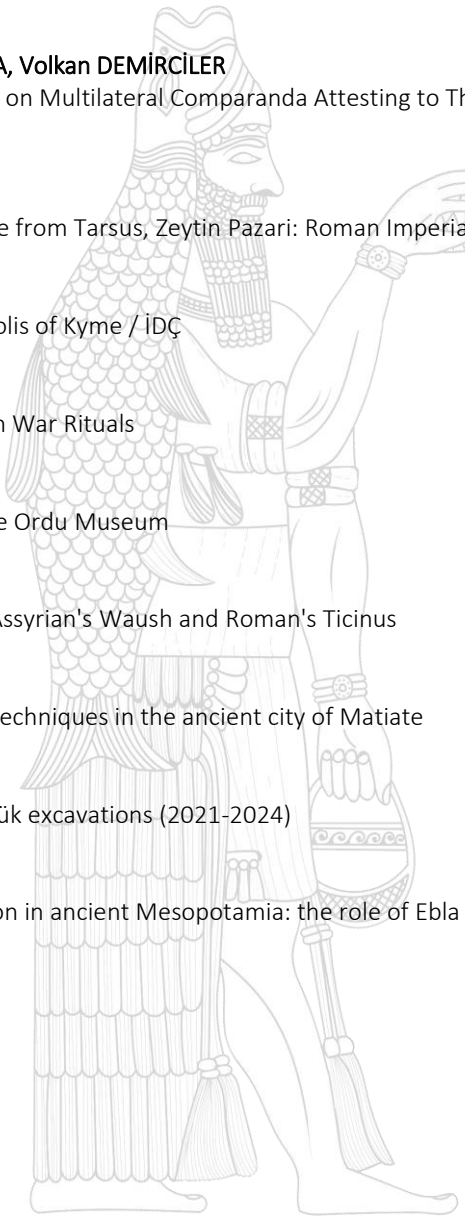
All information about the journal and author guidelines can be found at https://dergipark.org.tr/tr/pub/oannes.

Contact Publisher
Okay PEKŞEN, Ondokuz Mayıs University, Faculty of Humanities and Social Sciences, Department of History, Samsun-Türkiye
☎ +90 532 561 07 37 ✉ oannesjournal@gmail.com https://dergipark.org.tr/en/pub/oannes

OANNES

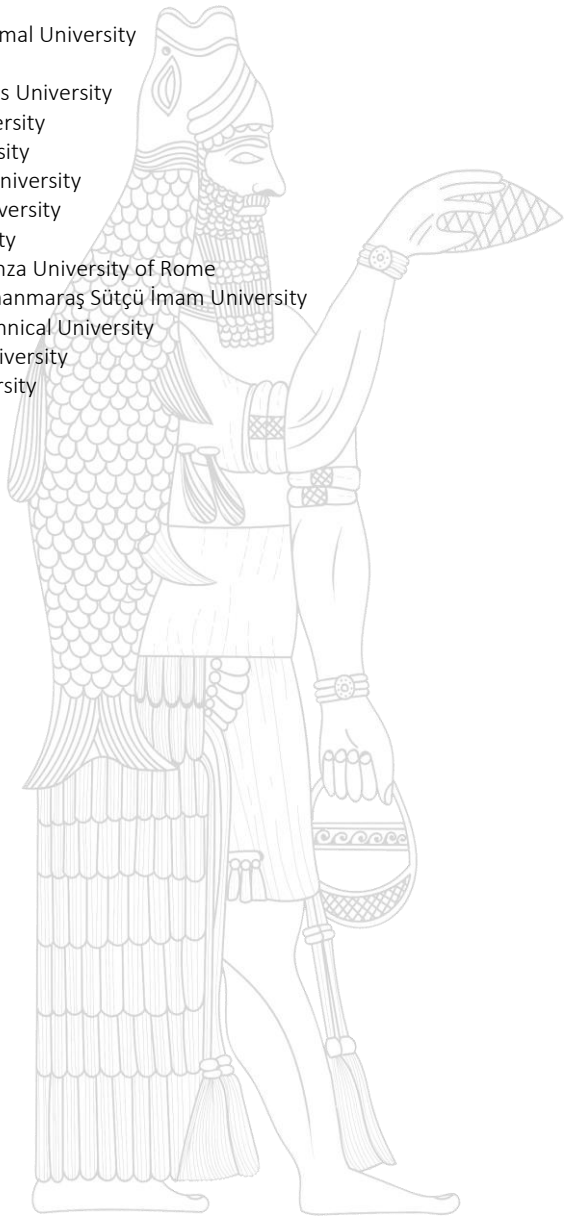
CONTENTS

Research Articles



Reviewer List 7 (1)

Prof. Ahmet Kaan ŞENOL – Ege University
Prof. Aynur ÖZFIRAT – Mardin Artuklu University
Prof. Ayşe Fatma EROL – Ankara Hacı Bayram Veli University
Prof. Ayşe Tuba ÖKSE – Kocaeli University
Prof. Aytaç COŞKUN – Dicle University
Prof. Billur TEKKÖK KARAÖZ – Başkent University
Prof. Cevat BAŞARAN – Atatürk University
Prof. Hüseyin METIN – Kafkas University
Prof. John WILKINS – University of Exeter
Prof. Nurgül YILDIRIM – Hatay Mustafa Kemal University
Prof. Yusuf KILIÇ – Pamukkale University
Assoc. Prof. Atila TÜRKER – Ondokuz Mayıs University
Assoc. Prof. Barış GÜR – Dokuz Eylül University
Assoc. Prof. Çağatay YÜCEL – Dicle University
Assoc. Prof. Ebru MANDACI – Bitlis Eren University
Assoc. Prof. Erkan DÜNDAR – Akdeniz University
Assoc. Prof. Koray TOPTAŞ – Gazi University
Assoc. Prof. Lorenzo VERDERAME – Sapienza University of Rome
Assoc. Prof. Oktay DUMANKAYA – Kahramanmaraş Sütçü İmam University
Assoc. Prof. Osman EMİR – Karadeniz Technical University
Assoc. Prof. Rabia AKTAŞ – Kastamonu University
Assist. Prof. Suhal SAĞLAN – Selçuk University
Dr. Emlyn DODD – University of London

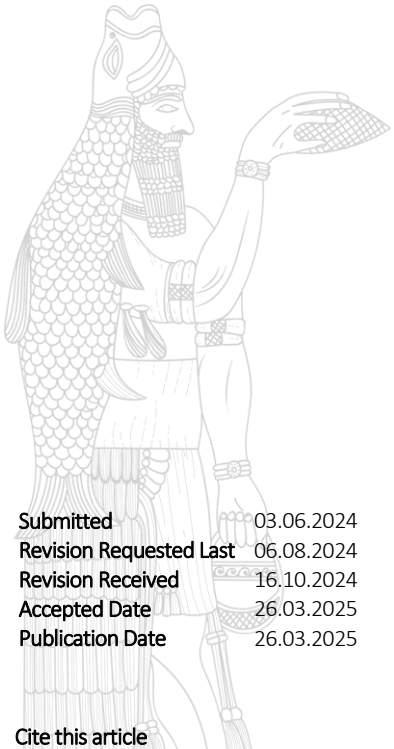


OANNES
2025, 7(1) March
Research Article DOI: 10.33469/oannes.1494964

A Suggestion on the Applicability of Micro Mimic Expressions and Character Analysis on Emperor Portraits

Özge ALTUN
Corresponding Author

Department of Archaeology, Yozgat Bozok University, Faculty of Arts and Sciences, Yozgat, Türkiye.
ozge.altun@bozok.edu.tr



Submitted	03.06.2024
Revision Requested Last	06.08.2024
Revision Received	16.10.2024
Accepted Date	26.03.2025
Publication Date	26.03.2025

Cite this article
Altun, Ö. (2025). A Suggestion on the Applicability of Micro Mimic Expressions and Character Analysis on Emperor Portraits, *Oannes*, 7(1), March, pp. 1–18.

Abstract

In the history of Roman, political and social events are very interesting and similar enough to be compared with the present day. In addition, the lives of people, senators, etc., especially emperors who shape Roman history, continue to be a subject of curiosity. The recording of almost every incident in the Roman period has enabled us to learn not only the situations of these people but also their reactions in the face of these events. As a result of this, the accuracy of the information transferred to us and the psychological framework of the reactions given it has aroused curiosity. In Roman sculpture, emperor portraits are the most defined and categorized works. The typology of the emperors' portraits is based on the critical events that took place during their reign, as well as the details of their hair and beard. However, the expression of emotion and state of mind in the emperors' facial expressions has not been adequately analyzed. In this study, four Roman emperors were selected, and the meanings conveyed by the facial expressions and gestures in their portraits were interpreted with the help of psychology science. In the evaluations, it was tried to determine whether the character traits transferred in ancient texts are reflected in the portraits of Emperor. As a result, the accuracy of the information transferred in ancient manuscripts was analyzed with the data obtained. In addition, an attempt has been tried to be given an additional perspective to the identification of the emperors's portraits.

Keywords: *Roman Empire, Roman Portraiture, Ancient Texts, Psychology, Universal expressions.*

Genişletilmiş Özet

Antik Dönem heykel sanatında Roma Dönemi heykeltraşlığı gerek mimari heykeltıraşlık eserleri gerekse portre sanatı açısından önemli bir yere sahiptir. Sanat insanın doğası gibi sürekli gelişen ve değişen bir olgu olduğu için her zaman değişeceği gerçeği yanında Roma Döneminde, heykel sanatında anatomi, hareket, duygunun yansıtılması gibi özelliklerin birçoğunun tamamlandığı söylenebilir. Roma İmparator portreleri de bu gelişimin yansımasıdır, ister bir komutan isterse tanrısal bir kişileştirme ile yansıtılsın heykelin başı her zaman gerçek bir karakteri imparatorun kendisini yansıtmıştır. Bu durum Roma portre sanatının detaylı çalışılmasına olanak sağlamış, imparator portreleri en küçük detaylarına kadar kategorize edilip sınıflandırmaları yapılmıştır. İmparator portrelerini çalışan araştırmacılar imparatorların karakterleri hakkında yorumlar yaparken antik metinlerden faydalanarak açıklama yapmışlardır. Antik metinlerin doğruluğu kesin olarak kabul edilemeyeceği için imparatorların karakterleri olasılıklar üzerine tanımlanmıştır. Bununla birlikte "İmparatorların Kişilikleri" hâlâ araştırılan, tartışılmaya devam eden bir konu olarak güncelliğini korumaktadır. Gelişen teknoloji, bilimsel kazılar ve araştırmalar sonucu açığa çıkarılan yazıt, metin vb belgeler de Roma İmparatorları, imparatoriçeleri gibi karakterlerin daha iyi anlaşılmasına olanak sağlamaktadır.

Roma İmparatorları yukarıda da belirttiğimiz üzere her zaman ilgi çeken karakterler olmuştur. Günümüzde rekünstrüksyon ile yapılan canlandırmalarda imparatorların yaşadıkları dönemde nasıl bir görünüşe sahip olduklarına dair öneriler sunulmakta ve büyük ilgi görmektedir. Bunun yanında Roma İmparatorları hakkında antik metinlerin bize aktardığı bilgilerin doğruluğu tartışma konusu olmakla birlikte Roma Tarihi ile ilgili araştırma yapılırken göz ardı edilemeyecek önemli kaynaklar arasında yer almaktadır. Antik metinlerin doğruluğu, metinlerde bize aktarılan olaylar ve imparatorların bu olaylara karşı verdiği tepkilerin hangi psikolojik çerçevede verildikleri merak uyandıran ve araştırmaya değer bir konudur. Bu noktada nasıl bir araştırma yapılabilir düşüncesi psikoloji bilimine yönelmemizi sağlamıştır. Araştırmalar sonucunda Psikolog Paul Ekman'ın çalışmaları yol haritası oluşturulmasında en önemli yardımcı kaynak olmuştur. Paul Ekman'ın belirlediği günümüzde kabul edilen temel yüz ifadeleri: kızgınlık(öfke), tiksinme, korku, üzüntü, şaşırma ve mutluluk olmak üzere 6 ana başlıktan oluşmaktadır. Buna ek olarak küçümseme/aşağılama duygusu da mimik ifadesi zayıf olmasına rağmen evrensel kabul edilen ifadelerdendir. Yüzdeki bu duygusal ifadeler FACS (Face Action Coding System) adı verilen sistem üzerinden kodlanmaktadır. Bu sistem yüz anatomisine dayanır ve kas hareketlerini değerlendirir (Lidstrom, 2008, p. 87; Ekman-Rosenberg, 2005; Ekman et al. 1978).

Antik dönemin görsel tasvirleri arasında en önemli örnekler arasında yer alan portreler için bu sistem uygulanabilir mi sorusu ile başlanan çalışmada literatür taraması sırasında Torill Christine Lindstrom'un da bu fikirle bir çalışma yaptığını görmemiz araştırmaya devam etmemizde motive edici bir örnek olmuştur. Lindstrom'un "Facial Expressions (and Non-Expressions) in Roman Faces" isimli çalışmasında duygusal ifadelerin kadın-erkek figürlerine yansıması duvar resimleri, mozaik vb görsel tasvirler üzerinden ve Roma toplumu sosyal yargıları yorumlanarak değerlendirilmiştir. Ayrıca psikoikonografik çalışmaların gün geçtikçe arttığını ulaşılan çalışmalar sonucunda gördük. Bu bağlamda yapılan psikoikonografik çalışmalar da araştırmanın şekillenmesinde rol oynamıştır.

Bu çalışma için ilk olarak belirlenen dört imparatorun, iyi korunmuş portreleri ele alınarak mikro mimik ifadeler araştırılmıştır. İkinci aşamada mimikler ve antik metinlerde aktarılan bilgiler karşılaştırılarak değerlendirme yapılmıştır. Antik dönemin görsel betimlerinin en önemli örnekleri arasında yer alan imparator portrelerinde bu sistem üzerinden değerlendirmeler yaparak antik metinlerden bize aktarılan karakteristik özelliklerin portreler üzerinde ifadelerde okunabilirliğini saptamak ve Roma portre tanımlamalarında stil kritik yöntemine ek yorumlama önerileri getirmek amaçlanmıştır.

Çalışma için İmparator seçilirken Roma tarihinde psikolojik anlamda şiddete meyilli ve normal kavramı dışında değerlendirilen imparatorlar arasında yer alan Caligula- Caracalla ve bu iki imparatorun zıt karakteri olarak aktarılan Traianus ve Hadrianus bilinçli olarak tercih edildi. Portreleri çalışılan dört imparatorda ortak biçimde karşımıza çıkan mimik "Öfke" yansıması olarak tanımlanan, kaşların iç kısımlarının birbirine yaklaştırılması ağzın kapalı gergin yapısı ile desteklenen sert ifadededir. Bunun yanında Trainus, Hadrianus ve Caligula portrelerinde "öfke" yanında "küçümseme" ifadesi karşımıza çıkan bir diğer ifadedir. Caligula portreleri ve antik metinler karşılaştırıldığında bu iki ifadenin görülmesi şaşırtıcı değildir. Ancak Traianus ve Hadrianus gibi Roma İmparatorluk tarihinde önemli yere sahip, örnek gösterilen iki imparatorun portresinde karşılaşılan bu ifadeler ilginçtir. Antik metinler okunduğunda Traianus ve Hadrianus'un bazı durumlarda karşısındaki kişi ya da kişileri küçümser hatta aşağılar şekilde tavırlar sergiledikleri anlaşılmaktadır. Dönemin portre sanatçıları da bu durumu ustalıkla eserlerine yansıtmışlardır. Bir imparatorun portresinde otoritesi ile orantılı "öfke" duygusunun yansıması olağan kabul edilebilir. Bununla birlikte Hadrian portrelerinden birinde gördüğümüz "üzüntü" ifadesi imparatorun insani yönünü daha çok vurgulaması açısından güzel bir örnektir. Ek olarak Caracalla portrelerinde bize öğretilen "öfke"nin yanında "tiksinti" ifadesinin bulunması Caracalla portrelerine bakış açısını değiştirecek nitelikte bir özelliktir. Caracalla portrelerinde gördüğümüz "tiksinti" ifadesinin antik metinlerde hakkında yazılan karakter özellikleri ile uyuşması ayrıca önemlidir.

Çalışılan dört imparatorun mimikleri kolaylıkla okunabilmektedir. Evrensel duygu ifadelerinin imparator portrelerinde okunması, antik dönemde olduğu gibi günümüzde imparatorların insani yönlerini görmemize olanak sağlamıştır. Bu çalışmanın bir sonraki aşamasında yapay zekâ ile yüz rekonstrüksiyonu yapılan portrelerden saniyelik mimikler canlandırılarak Paul Ekman tarafından geliştirilen Facial Action Coding System (FACS) uygulaması ile yorumlar arttırılabilir. Bu araştırmanın yukarıda söz ettiğimiz şekilde geliştirilmesi, maddi kaynak ve bahsedilen teknolojik uygulamalara ulaşılması sonucunda gerçekleştirilebilecek çalışmalar olacağı unutulmamalıdır.

Bu çalışma ile Roma İmparator portrelerine farklı bir açıdan bakmayı amaçladım. Standart tanımlamalar her zaman geçerli olmakla birlikte günümüzde alternatif tanımlama ve yorumlamaların Roma portre sanatına yeni bakış açısı sağlayacağı düşüncesindeyim. Bu bağlamda başka çalışmalar ile Roma uygarlığı ve imparatorlar hakkında daha çok araştırma ve yorumlama yapılabilir. Görsel sanatlardaki figürler burada yaptığım gibi insani yönleri vurgulanarak yorumlandığında, dönemin yapısını daha iyi anlayabileceğimiz kanaatindeyim.

Introduction

Is it possible to understand a person's character at first glance? Even if you don't see it at first glance, if you're a good reader of expressions, you can pick up many ideas after a short conversation. Studies by the psychologist Paul Ekman have shown that facial expressions are not culturally determined and that all facial expressions and mimicry are universal (Ekman, 2014, pp. 23-71; Ekman-Cordaro, 2011, p. 364; Matsumoto, 2001; Metin, 2019). These universal facial expressions are involuntary and momentarily appear on a person's face in response to speech or an event. As mentioned above, a skilled observer might notice.

The currently accepted basic facial expressions identified by Paul Ekman consist of six primary categories: anger, disgust, fear, sadness, surprise, and happiness. In addition, the feeling of contempt/humiliation is a universally accepted expression, although its mimic representation is relatively weak. These emotional expressions are coded through a system called FACS (Facial Action Coding System). This system is based on facial anatomy and muscle movement analysis (Lidstrom, 2008, p. 87; Ekman-Rosenberg, 2005; Ekman, *et al*., 1978).

The starting point for this study was that this system might be applicable to portraits, which are among the most important examples of visual representation in antiquity. During the literature searches, we saw that Torill Christine Lindstrom had also done a study with this idea, which was a motivating example for us to continue our research. Lindstrom's study, "Facial Expressions (and Non-Expressions) in Roman Faces," evaluated the reflection of emotional expressions on male and female figures through visual representations such as murals, mosaics, etc., and by interpreting the social judgments of Roman society. Lindstrom's choice of characters for her work was usually civilians. In this study, Roman emperors, especially Caligula and Caracalla, who are among the few emperors in Roman history who are psychologically prone to violence and evaluated outside the concept of normal, were selected. In addition to these emperors, two emperors whose facial expressions can be interpreted were added to the study. Trajanus and Hadrian, portrayed as contrasting characters to Caligula and Caracalla, were deliberately chosen as the two emperors. Lindstrom noted that the relationship between expression and character in Roman art was largely based on personal tendencies, artistic movements, and cultural and regional factors (Lindstrom, 2008, pp. 93-94). However, most of the portraits Lindstrom worked on are civilian depictions and their details have been partially lost.

In addition to Lindstrom's work, the study Reading Roman Emotions, published in 2020 and edited by Hedvig von Ehrenheim & Marina Prusac-Lindhagen, gave us an insight into the psychoiconographic evaluation of portraits (Ehrenheim-Prusac, 2020) In her study Through the looking glass, Marina Prusac-Lindhagen has discussed three different theories of the treatment of emotions in Roman portraits: The history of emotions, psychoiconography, and the Strukturanalyse (Prusac-Lindhagen, 2020, pp. 177-191) Particularly in the field of psychoiconography, the transmission and interpretation of ancient texts have been handled with care. The point that distinguishes our study from this one is whether the universal gestures we find in the portraits correspond to the ancient texts. A kind of reverse engineering study has been attempted.

The portraits that are the subject of this study contain more detail and, therefore, clearer expressions, as they are depictions of emperors. This study aims to determine the legibility of the characteristics transmitted to us from ancient manuscripts in the expressions on the portraits and to provide additional interpretative suggestions to the method of style criticism in Roman portrait descriptions. The Roman emperors evaluated in this study were analyzed using the most intact surviving portraits, and the facial expressions identified by Ekman were attempted to be interpreted in accordance with those determined by the FACS system.

Reflection of Micro-Mimics on the Face

In this section, the areas of the face where facial expressions appear and the emotions they represent are explained under headings (Ekman-Friesen, 2003). The headings we have explained here will enable us to create a roadmap for clearly understanding and evaluating the expressions in the portrait examples we will look at in the next section.

*Anger (*Ekman & Friesen, 2003, pp. 78-98): The inner corners of the eyebrows move toward each other, almost as if they are merging. The mouth is stretched, with the lips pressed together, while the chin juts forward.

Disgust (Ekman & Friesen, 2003, pp. 66-77; Rozen et al., 1994): The eyebrows take on a shape characteristic of anger. The inner corners of the eyebrows approach each other, the nose is pulled upwards. Wrinkles form at the root of the nose towards the eyebrows. The upper lip lifts up.

Contempt (Ekman & Friesen, 2003, pp. 71-79-94; Ekman, 2007, pp. 198-206): The most obvious reflection is seen in the mouth. One side of the mouth lifts upwards. There may be wrinkles at the corner of the eye in the direction in which the corner of the mouth moves and shrinkage of the eye with upward movement of the lower eyelid. This emotional expression can also take the form of disgust and contempt or anger and contempt.

Surprise (Ekman & Friesen, 2003, pp. 34- 46; Ekman, 2007, pp.165-188)*:* It is one of the most well-known expressions. Eyebrows go up. The eyes enlarge and the eyelids open. Mouth opens slightly. It can be seen in combination with the expression of fear.

Fear (Ekman & Friesen, 2003, pp. 47-65): It is similar to surprise. The eyebrows lift up, and wrinkles appear on the forehead. Eyes enlarge. The mouth is opened tensely, and the lower jaw is pulled backward.

Sadness (Ekman & Friesen, 2003, pp. 114-128): The inner part of the eyebrows lifts upwards, the outer parts go down and wrinkles appear on the forehead. The edges of the mouth hang down.

Happiness (Ekman & Friesen, 2003, pp. 99-113): The edges of the mouth lifts upwards. The corners of the eyes wrinkle.

Emperors

Marcus Ulpius Traianus

In the history of the Roman Empire, he is one of the few emperors whose actions after Augustus are respected as exemplary. Although the exact date of his birth is unknown, it is thought that he was born in 53 CE according to the information we have obtained from ancient writers (Pliny the Younger) (Özgan, 2013b, p. 63). Trajan was born in the province of Hispania. He came from a noble family (Özgan, 2013b, p. 63; Kleiner, 1992, pp. 207-209). He received a good education. Although Traianus' military identity came to the fore, his political career was as successful as his military one (Bernoulli, 1891, pp. 73-74; Lightfoot, 1990; Goldsworthy, 2016, pp. 357-378). Trajan, who became emperor after Nerva's death, followed Augustus's policies (Özgan, 2013b, pp. 64-65). He had good relations with the Senate and the public. Early in his reign, however, he faced opposition from Domitian's supporters (Özgan, 2013b, p. 65; Kleiner, 1992, pp. 207-208, Bowman et. al., 2008). He removed the obstacles in front of him with his military intelligence and strategic moves. Considering his role and achievements in Roman history, it is understood that he was a person who could easily achieve this.

Cassius Dio gives information about Trajan's character (Dio Cassius, VIII-LXIII, 367-372). According to this, Trajan is a brave, simple, justice man. He does not pay attention to slander, he is not a prisoner of his anger. By nature he was not prone to hypocrisy, cunning and rudeness, he loved the good and ignored the bad. He was confident, honest and fair. One of the information given about him is that he ignored and ignored bad comments and arrogant behaviour.

Trajan's character traits emphasise his self-confidence and his indifferent attitude towards those who want to bother him. The fact that we find facial expressions that overlap with these features in the portraits analysed in the study is important in terms of confirming the character traits mentioned in the ancient manuscripts.

In this section, three portraits have been studied which have been clearly identified as belonging to Trajan. Although the artifacts are partially degraded and broken, they allow us to evaluate and interpret the gestures.

The first portrait is now in the Capitoline Museum in Rome (Fig. 1a-b). It has a flat combed form of hair on a broad skull. On the front of the head, the tufts of hair that fall down to the middle of the forehead are combed to the left. Forehead, especially the eyebrows are high, the eyes are deep. It has a nose that is arched and pointed. Nasal wings are prominent. The lips are thin and the mouth is closed. The naso labial lines extending from the wings of the nose to the edge of the mouth are deep. The chin is prominent and slightly protruding.

When the face is carefully examined, it is noticed that the left eye is made slightly smaller than the right eye and the wrinkles are deeper at the link up of the eyelids. If we look at the mouth, we can see that the left part is higher than the right, and the lips are tight. Looking at all these details, which we numbered on the portrait, we come to two conclusions. The tense and closed structure clearly visible in the mouth corresponds to the expression "*Anger*", and the slight upward shift of the mouth's rim corresponds to the expression "*Contempt*".

The second portrait of Trajan, which we have evaluated, is now in the Istanbul Archaeological Museum (Fig. 2a-b). The portrait is broken and missing from the neck down. There are facial fractures on the right side of the nose and chin. The distorted structure on the surface of the auricle (the helix) suggests that the artefact has been prepared for reworking (Prusac, 2011, pp. 86-87). As in the first portrait, it has a large skull and straight combed hair. There is a bulging eyebrow structure on the narrow forehead, prominent glabellar lines. Eyes are deep and almond in shape. Although there are fractures on the surface of the nose, it is understood to be arched and large. The lips are thin, the mouth is closed and tense. There are fractures on the surface of the slightly protruding jaw. We find facial expressions compatible with the previous portrait in the facial analysis of the portrait. In particular, the tension in the mouth and the slight upward shift are more pronounced. In addition to the expression of contempt, the drawing together of the eyebrows, the accentuation of the glabellar lines and the tense structure of the mouth are also consistent with the expression of anger. Given Trajan's military identity and disciplined character, we can assume that he tried not to show his anger and he contempt the incident he witnessed[1].

The third and final portrait of Trajan to be assessed is the bronze portrait in the Hanover Museum (Fig. 3a-b). Common features include a broad skull and straight combed hair. The hair down to the middle of the forehead is combed to the right in tufts. Forehead, especially the eyebrows are high. The eyes are almond in shape. The eye sockets (orbit) are empty. The nose is arched and large. Lips are thin, mouth closed and tight. The nasolabial lines extending from the wings of the nose to the edge of the mouth are deep.

The gestures we can read in this portrait are a tight mouth and a slight upward shift of the edge on the right (partial abrasions are also present). When we evaluate these gestures, we encounter "Anger" and "Contempt" expressions. In particular, the deep and pronounced naso-labial lines beautifully reflect the tension in the mouth.

In the three portraits of Trajan that we have handling here, we have been able to read (identify) the expressions “*Anger*” and “*Contempt*”. In the light of Trajan's military identity and the information provided by ancient writers, we can say that the expressions reflected in his portraits are consistent with his character. The fact that he is a person who can control his anger does not mean that he does not get angry, and we see that his frowning eyebrows and tense mouth structure are characteristic in other portraits in addition to the portraits we have discussed here. One of the corners of the mouth turned upwards is a feature that is frequently encountered, although not in all of his portraits.

[1] The situation defined by the expression "witnessed event" is the reaction of a person in any event as a character trait. They are micro mimic expressions that only an attentive person can recognise from the outside. The sculptors of antiquity were able to reflect this type of micro expressions in portraits as a result of the observation skills developed due to their work. By emphasising these characteristic expressions in a subtle and unobtrusive way, they conveyed a message about the character of the emperors. Otherwise, a prominent reflection of a negative characteristic of the emperor could have bad consequences for them.

Publius Aelius Hadrianus

Publius Aelius Hadrianus was born on 24 January 76. His place of birth is given as Rome in the Historia Augusta (Magie, 1991, p.5, footnote 6) and as Italica in Cassius Dio (Dio Cassius, p. 425). Although his place of birth is still disputed, it is known that his family of Roman origin served in Italica. He received a good education. He was interested in philosophy and literature. He is one of the emperors known as "Grecophile" in Roman history (Magie, 1991, p.5; Özgan, 2013b, p. 125; Kleiner, 1992, p. 237). In the Historia Augusta and the writings of Cassius Dio we learn much about the emperor's personality. After listing the features mentioned in the ancient texts below, the portraits of the emperor are evaluated.

Hadrian was a man of many personalities in one body. Among these are those that have been passed down to us: Plain, cheerful, joking, quick to act, stingy, generous, straightforward, cruel and merciful (Magie, 1991, p.47). These descriptions show that Hadrian acted according to the situation and events, although he sometimes acted inconsistently. We can say that he was a personality who knows strategic moves well and has a high self-esteem. Unlike Traianus, Hadrianus was taking rumors seriously. He had driven some to suicide by treating even his closest friends as enemies (Magie, 1991, p.47). Hadrian, who was known to be gifted in the fields of literature and philosophy, could subject the teachers of these subjects to contempt and humiliation, as if he were more knowledgeable than they were (Magie, 1991, p. 49). When he became emperor, he ignored those who had been his enemies before he became emperor. However, it is one of the pieces of information that he used to say, "You have survived", when he saw someone to whom he had previously been hostile (Magie, 1991, p. 53). The two incidents mentioned above reflect Hadrian's self-aggrandisement and spiteful. The fact that he feels jealous towards people who are superior in any respect shows that he couldn't overcome the feeling of jealousy despite his self-confidence (Dio Cassius, VIII -LXIX, 43). According to the information provided, when Hadrian organized a feast, he was meticulous in detecting the dishonesty of the cooks and checked everything (Magie, 1991, p. 53). This reflects his sceptical and stingy nature.

We can think about how Hadrian could have become one of the most successful emperors of Roman history with these characteristics that today might be considered "negative". At this point, the ancient texts also help us to understand Hadrian's positive qualities.

Whenever he was in or near Rome, he always attended the Senate meetings (Magie, 1991, p. 27). He was skilful with weapons and had knowledge of warfare (Magie, 1991, p. 47). He paid for all the equipment and expenses of those he conscripted for military service, and gave gifts at the Saturlina feast (Magie, 1991, p. 53). He improved the lives of slaves and free citizens (Magie, 1991, p. 57). During his reign, he did his best to help the provinces during disasters such as earthquakes, disease and floods (Magie, 1991, p. 65). Although he did not fight during his rule, he was interested in the army, was generous to the soldiers and was loved by them (Magie 1991, p. 67). He was disciplined and meticulous in both military and civilian life. While he helped the poor and innocent, he hated those who enriched themselves through deceit (Magie, 1991, p. 69).

In the light of the information given to us by ancient texts, it is clear that Hadrian considered the future of the Roman Empire and was cautious in his political moves. In addition, we understand from the texts that he has an angry and spiteful nature. We can say that he is likely to act strategically in matters of state, and that he is more likely to show his cocky, arrogant and angry side in environments where he feels comfortable.

This section analyses four portraits identified as Hadrian. The first portrait is from Cardinal Despuig's collection (Poulsen, 1974, pp. 69-70, plt. LXVIII. 41) (Fig. 4a-b). Unlike Trajan, the emperor had a neatly shaped head and his hair was wavy and voluminous. The curls falling from the forehead and surrounding the head, characteristic of Hadrian's portraits, are turned from the outside inwards. Eyebrows are made close to each other. Glabellar lines caused by the movement of the eyebrows are indicated. The eyes are deep and small, which is consistent with the shrinking of the eyes caused by frowning. It has a large and arched nose. The lips are thin, the mouth is small and closed. The lips have a tightly pressed together appearance. The chin is prominent and protruding.

In this portrait, the anger felt when viewed from the front is also confirmed by facial expressions. The structure of the eyebrows, the pulling back of the mouth, the pressing together of the lips and the resulting thrusting forward of the chin are gestures that reflect the feeling of "*Anger*".

The second portrait (Fig. 5a-b) is the one in the Museo Capitoline (Wegner, 1956, pp. 20-24, plt. 23). The hair is placed in curls around the forehead. His forehead appears to be framed. The inner parts of the eyebrows are made close to each other. The glabellar lines formed by the frowning eyebrow structure are clearly made. The deep set eyes are slightly squinted by the accentuation of the lower eyelids. The large arched nose appears as a characteristic feature in also this portrait. Almost the entire upper lip is hidden under the moustache. Lower lip is tense, slightly full. The mouth is closed and one edge is slightly upturned. Nasolabial lines are prominent. It is directly proportional to the tense and slightly trapezoidal structure of the mouth.

The facial expressions we can read in this portrait correspond to the expressions of "Anger" and "Contempt". Wegner also described the closed mouth as reflecting an authoritarian look, and the eyes under the frowning eyebrows as expressing a cold structure and a sly plan (reckoning) (Wegner, 1956, p. 20).

The third portrait is in the Vatican Museum (Fig. 6a-b) (Özgan, 2013b, p. 137, fig. 142b). The hair is combed forward and arranged in curls on his forehead and temple. The eyebrows are brought closer together and the glabellar lines are prominent. A faint wrinkle is visible on the forehead. Eyes were made small. The right upper eyelid is almost completely covered by the skin tissue under the eyebrow. No such structure is observed in the left upper eyelid. Wrinkles under the eyes and at the corners of the eyes are not swollen like bags under the eyes, they are lines caused by a slight squinting of the eyes. The nose is large and arched (broken fragment added). The right corner of the tightly closed mouth is turned slightly upwards. As a result of this movement, nasolabial lines are made deep and prominent.

In this portrait of Hadrian, the structure of the eyebrows, the squinting of the right eye, the closed and tense structure of the mouth, and the raising of the corner of the mouth to the right are consistent with the gestures we see in the expressions "*Anger*" and "*Contempt*".

Our fourth artefact is a bronze statue found in Kadirli, Adana, which is now in the Istanbul Archaeological Museum (Fig. 7a-b). Although the statue is controversial, its dimensions and quality of workmanship suggest that it is no ordinary statue (Özgan, 2013b, p. 139; İnan-Rosenbaum, 1966, plt. XXIII). Considering that emperor statues and portraits are more voluminous and larger than other statues, it seems likely that the artefact is a statue of an emperor (Prusac, 2011, p. 51). The statue's hair, beard and facial structure are consistent with portraits of Hadrian. The eyebrows are brought closer together and the glabellar lines and forehead wrinkles caused by this movement are indicated. Eyes are deeply. The wrinkles at the corner of the right eye are deeper and more numerous, suggesting a slight squint, as in the previous portrait (Fig. 6a-b). However, it is not as distinctive as in the previous portrait, probably due to the type of material used. The nose is large and arched. The mouth is closed, the edges drooping downwards. The chin is slightly protruded. The expression of dissatisfaction on the emperor's face is clearly visible.

In the other three portraits of Hadrian (Fig. 4a-b, 5a-b, 6a-b), the expressions of "*Anger*" and "*Contempt*" were easily readable. In this portrait, the furrowed structure of the eyebrows reflects the emotion of 'Anger', while the wrinkles on the forehead, the slightly raised outer ends of the eyebrows, the fixed gaze and the drooping corners of the mouth reflect the facial expression of 'Sadness'. At this point, historical information and techniques in the art of sculpture allow us to make comments. It is known that Hadrian was deeply saddened by the death of Antinous, reportedly Hadrian's lover, in 130 AD, and that Hadrian was unable to overcome the effects of the death (Magie, 1991, p. 45). He also feels anger towards the people he holds responsible for Antinous' death. In addition to these events, considering that the drilling of the iris into the pupil in sculpture began after 130 AD, it can be said that the work was made after the death of Antinous. In this context, we can state that the emperor's feelings of "sadness" and "anger" are reflected on his face.

Caligula (Gaius Iulius Caesar Germanicus)

Gaius Caligula was born on August 31, 12. He was the son of Agrippina Major, granddaughter of Augustus, and Germanicus, a commander highly esteemed by the people (Suetonius, 2021, p. 413). From the early years of his life, Caligula faced many difficult events (Ferrill, 1991, p. 34; Gazzetti, 1974, p. 84; Özgan, 2013a, pp. 224-225; Suetonius, 2021, p. 413). The life of the Emperor's life and his policy during his power led him to be called "Mad/Crazy" in the history of the Roman Empire. In addition to ancient writers, it has been

widely discussed and interpreted by contemporary scholars. Caligula, who came to power after the death of Tiberius, was enthusiastically welcomed by the people (Suetonius, 2021; Dio Cassius, VII-LIX). Although he behaved in a way that raised people's hopes for a while, the situation changed very quickly. He went down in history as the "Mad / Crazy" emperor as a result of his exaggerated actions, ruthless punishment of people he did not like, extravagant spending, luxurious life, unstable movements. Their behaviour has attracted the attention of modern researchers and many studies have been conducted on this subject. They interpreted the reasons for their behaviour on the basis of the attitudes and behaviour described in ancient texts (Sandison, 1958, pp. 202-209; Benediktson, 1889, pp. 370-375; Katz, 1972, pp. 223-225, Charlesworth, 1971, p. 656; Barrett, 1989; Keavey-Madden, 1998, pp. 316-320; Massaro-Montgomery, 1978, pp. 894-909, Woods, 2014, pp. 27-26). Barbara Sidwell's "Gaius Caligula's Mental Illness", published in 2010, is the most comprehensive study to date. Sidwell analysed all the data and explained why the proposed diagnoses could or could not be justified (Sidwell, 2010). As I agree, the definition of "Madness" is very simple and outside the current understanding of science. Another view that Sidwell emphasises, and with which I agree, is that his past experiences may have influenced his life (character) (Sidwell, 2010, p. 206). Considering that the factors that shape a person's character are his experiences and the people around him, the events and people Caligula is exposed to from an early age are not of a quality that will help him develop a positive character. The anxiety of self-preservation, the responsibilities of being a descendant of Augustus, and witnessing the frequent deaths or exile of those closest to him at an early age must have deeply shaken his soul. It should also be remembered that it is up to people to choose between good and evil. It is sometimes an unnecessary effort to attribute every villain's actions to a cause. Some people are just bad. We should consider this possibility for Caligula and perhaps stop looking for reasons for his actions.

Caligula was killed in 41 CE (Kleiner, 1992, p. 126, Özgan, 2013a, p. 226; Bowman at. al., 2008, p. 229). The Senate did not deify him posthumously (Kleiner, 1992, p. 126). They were probably rejoicing that they were saved. Despite Caligula's hated character, a number of portraits and coins have survived which help to typify him. In this study, three portraits described below were discussed.

The first portrait evaluated is now in the Jean Paul Getty Museum (Fig. 8a-b). This portrait shows Caligula as a young man in harmony with his age. The effects of the Julius Claudius period continue, which we see in the smooth and proportional structure of the skin. The large skull and hook-shaped, medium-length hair can also be shown among the portrait features of the Julius Claudius period. In this portrait of Caligula, the inner corners of the eyebrows are close to the root of the nose. Probably an attempt was made to create a stern expression, but it could not be fully reflected due to the lack of skin wrinkles such as glabellar lines. They have large almond-shaped eyes. However, the right eye is smaller than the left eye. The nose is large and arched. Ağız kapalı, dudaklar incedir. There is a slight upward shift in the right corner of the mouth. The chin is narrow and protruding forward.

In this portrait of Caligula, the squinting of the right eye and the upward movement of the corner of the mouth are gestures corresponding to the expression "*Contempt*". Although the inner corners of the eyebrows close to the root of the nose reflect anger, the generally straight structure of the eyebrows reduces this possibility.

The second portrait in the Fasanerie Palace (Figs. 9a-b) has a large skull and medium-length hook-shaped tufts of hair, which are common features with the portrait in the Jean Paul Gety Museum (Figs. 8a-b). In a portrait with a high forehead, the inner corners of the arched eyebrows are brought closer to the root of the nose. It has large almond-shaped eyes. Abrasions on the outer corner of the left eye. The nose is large and arched. Mouth closed and tense, lips thin. There is a slight upward shift in the right corner of the mouth. The chin is rounder and more prominent than in the previous portrait. In this portrait, the shift in the corner of the mouth and the prominent structure of the chin are consistent with the expression "Contempt".

The last portrait we have analysed is the most famous one, now in Copenhagen (Fig. 10a-b). The large skull, hook-shaped tufts of hair and high forehead are characteristic features of this portrait. While the inner corners of the eyebrows are brought closer to the root of the nose, the outer corners are directed downwards in this portrait unlike the others. The expression is more focused than angry. The eyes are made deeper. We know that the pupils of the eyes were painted in detail in antiquity, and in this portrait the remains of paint, especially the almost complete painting of the left pupil, make the gaze of the portrait

more realistic and vivid. The right eye is smaller than the left eye. The large arched nose continues to be a characteristic feature. The closed, tense mouth and thin lips are similar to those in the portraits interpreted above. In this portrait, however, the tense structure created by the pressing of the lips is more apparent. The right corner of the mouth is slightly shifted upwards. The chin is protruded forward.

As previously mentioned, this is one of his most well-known portraits. During my undergraduate studies, I also heard my professors mention that this portrait was often interpreted as conveying the expression of “Mad/Crazy”. What is forgotten here is the expression provided by the surviving coloured pupils. If we could see the eyes in detail in other surviving portraits, we would be able to read the expressions more easily, as shown by the pupils made with a drill in 130 CE and later. In the gestures that we can read in the portrait, there are gestures that reflect the expression of “*Contempt*”, as in the other portrait. In this portrait, the small squinting of the eye and the prominence of the chin, caused by the upturning of the corner of the mouth, are much more prominent. "Anger" is reflected in the eye brows and the tense structure of the mouth, but "Contempt" is the dominant expression.

When we look at Caligula's life and the people around him whom he could take as role models (such as Tiberius or his father Germanicus), it is possible that he considered himself superior. However, the fact that he is a second generation grandson of Augustus, and that he was brought up with this situation in mind, can be seen as factors that may cause him to see himself as superior. This young emperor, who went down in history as "mad", can be described in modern terms as a "sociopathic narcissist". Also, as mentioned above, it should be taken into account that "evil" may have been Caligula's own choice, rather than attributing his behaviour to a cause. After all, he was the great-grandson of the great Augustus, and nobody was better than him.

Caracalla

He was the eldest son of Septimius Severus, the founder of the Severan dynasty, and was born on 4 April 188 (Magie, 1993, p. 3; Bowman at. al., 2008, p. 6). The full name of the emperor known as Caracalla in Roman history is Lucius Septimius Bassianus. He is one of the few Roman emperors of whose childhood and early youth we have any information. The information provided by ancient texts has helped us to better understand the character of the emperor. This situation is also important in terms of overlapping and supporting the expressions determined in the mimic reading of the portraits.

When we look at what the ancient texts tell us, it is interesting that we meet two different characters in childhood and adulthood. In his childhood, Caracalla was cheerful, charming and respectful of his family and those around him (Magie, 1993, p. 3). He was courteous, interested in literature and science, generous, popular (Magie, 1993, p. 3). He disliked violence and averted his eyes in the face of brutality (Magie, 1993, p. 3). There are hints that these aspects were sometimes underestimated and unappreciated by his father. We know from ancient texts that there was a rivalry between them through his brother Geta, that Geta was a spoilt child and that Septimius Severus was more affectionate towards Geta (Magie, 1991, pp. 371-430). When he reached adolescence, he began to follow the example of Alexander the Great, charting a different course for himself (Magie, 1993, p. 7). He began to form harsher character traits, throwing his polite and respectful structure into the background.

When Caracalla became emperor, the gentle nature of his childhood changed. This was replaced by a stern and angry character known in Roman history. Although some of his actions during his reign support his harsh temperament, the fact that he prioritised the interests of the Roman people, carried out reconstruction work, supervised provincial administrators and informed the Senate of campaigns (Bowman *et al*., 2008, pp. 15-17). shows that he was committed to state order and Roman tradition. We also learn from Dio's narratives (Dio Cassius, IX-LXXVII; Bowman, *et al*., 2008, p. 17). That he had good reasoning and analytical skills, and was a cultured, well-spoken administrator. Caracalla may have been looking for a solution to the bullying he faced as a child for his elegant and respectful behaviour, and he may have looked to Alexander the Great as an example. When he became Emperor, he may have taken on a more angry character due to the responsibilities he carried and the conditions of the time. As we mentioned in the Caligula chapter, people have free will to choose between good and evil despite the bad events they have

experienced. Although Caracalla has been described as angry and cruel, he was never as ruthless as Nero and Caligula. However, we see in Roman history that similar acts of violence committed by him were also committed by other emperors to protect the Roman Empire and their power. Even today, when we see the cruelties and tortures that societies inflict on each other, Caracalla seems quite innocent in the understanding of state administration of the time.

The stern expression we see in Caracalla's portraits can be seen as an attempt to appear strong. In this context, Ramazan Özgan asks whether the emperor consciously preferred such an image (Özgan, 2016, p. 86).

Modern scholars, because of the vivid facial structure and emphasis on stern expression, have analysed Caracalla's portraits in detail (Wiggers-Wegner, 1971; Fittschen-Zanker, 1985; Kersauson, 1996; L'Orange, 1933; Mazzarino, 2007; McCann, 1968; Penella, 1980; Pollini, 2005). He is one of the rare emperors whose characteristic features and psychological states reflected in his portraits are mentioned in the classification of his portraits. Especially in portraits of adulthood, expressions and gestures can be clearly read. In this context, we have taken three portraits of his adulthood in this study.

The first portrait is now in the National Archaeological Museum of Naples (Fig. 11a-b). His portraits are characterised by a round skull, short-cropped, bushy, curly hair and a short, curly beard that extends from the sideburns to under the chin, leaving the cheeks open. When looking at facial details, it is necessary to evaluate the eyebrow and forehead structure together. The glabellar lines are prominent due to the frowning of the eyebrows. Wrinkles on the forehead are formed and accentuated by raising the eyebrows rather than frowning. The horizontal line at the root of the nose shows that there is an upward movement in the mouth, especially in the upper lip. The eyes are deep and small. Slight squinting of the eyes causes small swellings under the eyes. Natural detention bags are wider and droop, especially the swelling under the left eye, which clearly reflects the squinting in the eye. The nose is large and round. Nose wings are wide. The mouth is tightly closed. The upper lip is thin, the lower lip is fuller and drooping down. The naso-labial lines running from the nostrils to the edge of the mouth, the horizontal line at the root of the nose, the width of the nostrils and the live structure at the corners of the mouth indicate that the mouth was slightly drawn upwards. The jaw is protruding as a result of these movements.

There are two distinctive expressions in this portrait. The first of these expressions is "*Anger*", which is identified with Caracalla both in the character descriptions of ancient writers and in the portrait descriptions of modern researchers. An expression of anger can be felt in frowns, deep-set eyes and focussed gaze. In addition to this, there is another expression, "*Disgust*", which has not yet been said about Caracalla. All the gestures resulting from this expression can be seen in this portrait of Caracalla. These are the shape of the eyebrows as in a state of anger, the formation of wrinkles at the root of the nose towards the eyebrows are the first noticeable mimic reflections. The formation of a horizontal wrinkle at the root of the nose by pulling the upper lip and the nose together are gestures that occur as a result of expressing "disgust". All of these gestures are clearly visible in the portrait.

Another portrait of Caracalla that we have evaluated is the portrait of Caracalla in the Capitoline Museum in Rome (Fig 12a-b). His hair and beard are short, bushy and curly, as in the previous portrait (Fig 11a-b). Although there are traces of corrosion on the surface of the artefact, the gestures can be easily read. Frowning eyebrows, moving forehead (due to wrinkles), deep eyes, large and rounded nose, pressed lips as a result of the tense expression in the closed mouth is seen. In this portrait, the expressions of 'anger' and 'disgust' can be read from the facial expressions. In particular, the lifting of the upper lip, which we see in the expression "*Disgust*", is more evident in this portrait.

The third and last portrait of Caracalla is in the National Museum of Rome (Fig. 13a-b). The processing of short curly hair and beard continues. There are abrasions to the face and the outer corner of the right eyebrow is broken. However, facial details and facial expressions are easily read. Glabellar lines are emphasized as a result of frowning. The plastic structure on the forehead shows that the eyebrows were raised in addition to the frown. Eyes are deep and small. The narrow and raised structure under the eyes indicates that the eyes are slightly squinted. Just below this bulge, the line of the bags under the eyes is more superficially indicated. This form under the eyes supports the idea that the eyes were squinted. Nasolabial lines extending from the sides of the nose to the sides of the mouth are prominent. The mouth is

closed and tense. The thin structure of the upper lip, the bulge in the moustache area indicate that pressure is applied to the lower lip and the upper lip is slightly raised. As a result of this movement, the horizontal line at the root of the nose is clearly defined. As the mouth is pulled upwards, the chin is also directed forwards and upwards.

In this portrait of Caracalla, the inner parts of the eyebrows are brought closer together and the stern expression supported by the closed tense structure of the mouth reflects the "*Anger*" gestures. In addition, the frowning of the eyebrows, as if in a state of anger, the formation of wrinkles at the root of the nose by pulling the nose upwards and the lifting of the upper lip are gestures that reflect the expression of "*Disgust*". Both expressions of emotion can be read in the portrait.

In the portraits of Caracalla, the state of "anger" is an emphasised feature. However, so far we have not come across any interpretation of the expression "*Disgust*". Caracalla's sensitive nature, which was dominant in his childhood, and his inability to watch the slaughter of criminals in animal fights actually show that he cannot stand the images of violence. The expression of disgust we see in his adult portraits shows that he is still reacting to images of atrocity.

Evaluation and Conclusion

Roman portraiture holds a special place in archaeology. The most important reason for this is that the portrait depicts real people. Although the ideal beauty of the Classical period and the baroque structure of the Hellenistic period influenced the styles from time to time, Roman portraiture did not lose its realistic identity.

The reasons for the preference of emperor portraits in this study can be listed as follows. 1-After the gods, emperors were the most important figures in society. 2-In connection with the first item, the depictions of the emperors were made realistic in order to impress the people by emphasizing the human side of the emperor as well as the magnificent image to make them feel close to themselves. In this context, it can be said that the aim of the image of the emperors is to reflect the feeling of "*one of us*" and "*protective like a father*". Especially in Roman culture, the importance of the concept of "Family" and "Father-Head of the House" influenced portrait styles. 3-One of the most important features of Roman culture is the tradition of documenting almost everything. The survival of many texts in the fields of architecture, art and science is the best proof of this. In addition, historiography and biography were actively practiced both inside and outside the palace. The fact that both critical and glorifying texts have survived shows that the lives and deeds of the emperors were carefully observed and recorded. In this context, the character and physical characteristics of many emperors, including their diet lists, are known in the light of the information conveyed (Although the information contained in ancient texts is not considered definitive, it cannot be denied that they are sources of information that reflect the ancient period).

These characteristics make the emperors' portraits the most appropriate subjects for the mimic readings we seek in this study. However, since it is impossible to include all emperors in a single article, the four most famous (popular) emperors in Roman history have been selected to serve as a basis for the study and as a starting point for future studies. Mimic readings were made and interpreted through the officially defined portraits of the four selected emperors. The fact that it was a study that had not been done before was challenging at the beginning. The most important source that helped shape the study is Lindstrøm's study entitled "Facial Expressions (and Non-Expressions) in Roman Faces" (Lindstrøm, 2010). What makes this study different is that the people depicted in the portraits are real people, and what they did during their lives is better known. In analyzing the emperors, we tried to determine the character traits conveyed in ancient texts and their reflection in facial expressions. While we were happy to find gestures that matched the information conveyed in the ancient texts, we were excited to identify new expressions such as "anger" and "disgust" in the portraits. For example, it is emphasized in portrait analysis of both ancient writers and modern researchers that Caracalla is an angry character. However, the expression of "disgust" in his facial expression and thus his fastidious character is not mentioned at all. The expression of "disgust", which we can clearly see in the gestures, shows that the naive and delicate structure, which the ancient authors briefly mention when describing his childhood, actually continues. It reveals that Caracalla, who has been labeled as

a "despot" for centuries, was a ruler who acted according to the conditions of the period and looked after the interests of his country. In addition, it should be noted that his nervous nature is also confirmed by his facial expressions. The emperor, which is called “angry" by making an inference, can be called “meticulous and angry ”with a small addition.

Other interesting examples are the portraits of Trajan and Hadrian. Two of the few emperors in Roman history who were among the exemplary emperors after Augustus are reflected by modern scholars as "good rulers" as well as "ideal person/role model". As a result of reading the gestures in the portraits, we identified "anger" and "contempt" expressions that we can define as "negative traits". The ancient texts actually mention the negative characteristics of both emperors. However, it may have been overlooked, sometimes due to lack of attention, sometimes due to a lack of acceptance of the authenticity of the ancient texts.

Caligula, the so-called "Crazy" Emperor of the Roman Emperors, was the most compliant emperor in this study. Descriptions in ancient texts, interpretations by modern scholars, and imitative readings support each other.

The facial expressions of the four emperors studied can be easily read. The reading of universal expressions of emotion in emperor portraits has allowed us to see the human side of emperors today, as in antiquity. In the next phase of this study, the Facial Action Coding System (FACS) application developed by Paul Ekman can be used to enhance the commentary by animating second gestures from artificial intelligence reconstructed portraits. It should be kept in mind that the development of this research as mentioned above will be possible as a result of access to financial resources and the technological applications mentioned above.

With this study, we wanted to look at Roman emperor portraits from a different perspective. Although standard definitions are always valid, I believe that alternative definitions and interpretations will provide a new perspective on the art of Roman portraiture. In this context, more research and interpretation can be done about the Roman civilization and emperors. I believe that we can better understand the structure of the period when the figures in visual arts are interpreted by emphasizing their human aspects as we have done here.

Ethics Committee Approval: Ethics committee approval is not required.
Peer-review: Externally peer-reviewed.
Conflict of Interest: The author has no conflicts of interest to declare.
Financial Disclosure: The author declared that this study has no financial support.

Figures

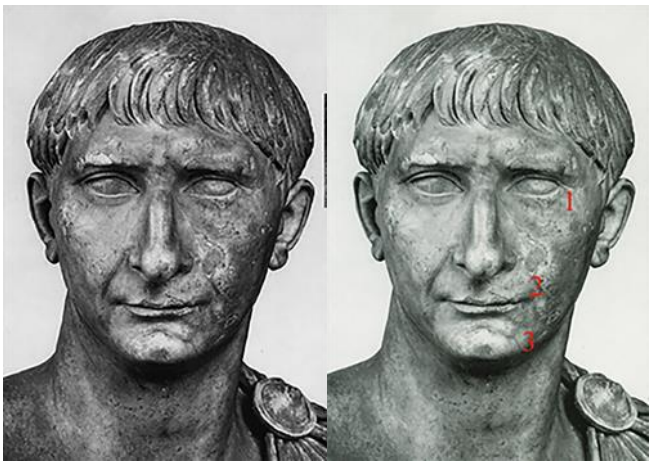


Fig. 1 a-b: *Portrait of Trajan Capitol Museum in Rome (Özgan, 2013b, fig. 59b, p. 73).*

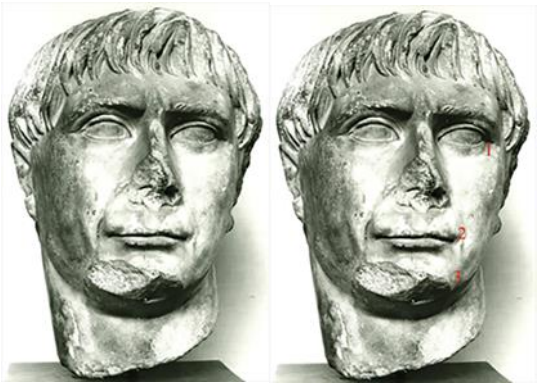


Fig. 2a-b: *Portrait of Trajan Istanbul Archaeological Museum (Özgan, 2013b, fig. 63a, 75)*

Fig. 3a-b: *Portrait of Trajan Museum Hannover (Özgan, 2013b, fig. 65, 78)*

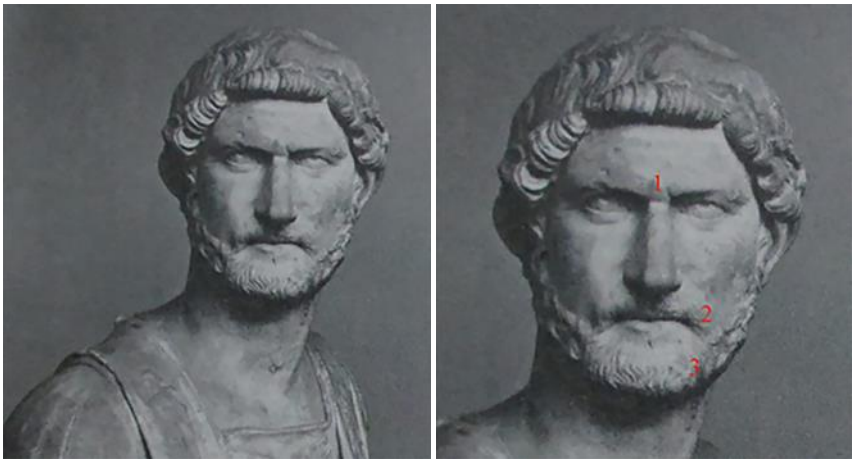


Fig. 4a-b: *Portrait of Hadrian (Poulsen, 1974, Plt LXVIII 41).*

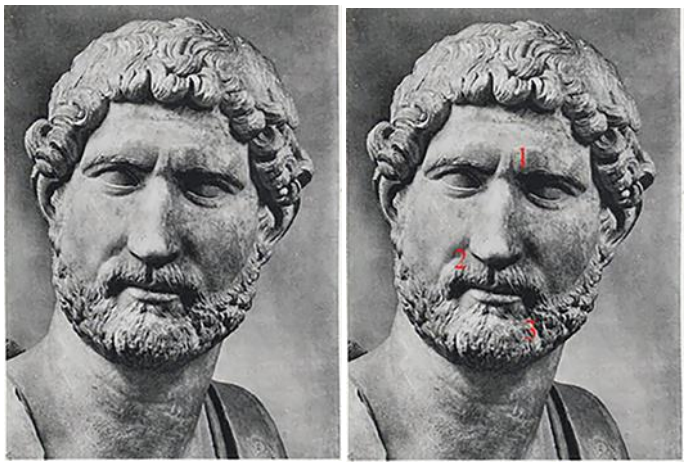


Fig. 5a-b: *Portrait of Hadrian (Wegner, 1956, Plt. 23)*

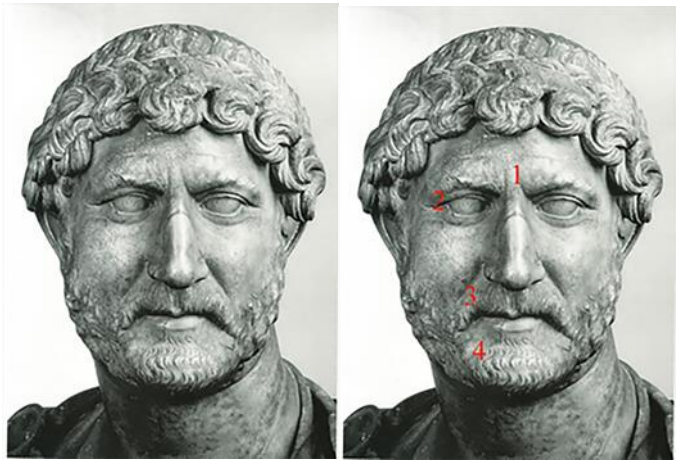


Fig. 6a-b: *Portrait of Hadrian Vatican Museum (Özgan, 2013b, fig. 142b, p.137).*

Fig. 7a-b: *Portrait of Hadrian from Adana-Kadirli (Özgan, 2013b, fig14b, p. 140)*

Fig. 8a-b: *Portrait of Caligula Jean Paul Gety Museum (Özgan, 2013a, fig. 150a, p. 228).*

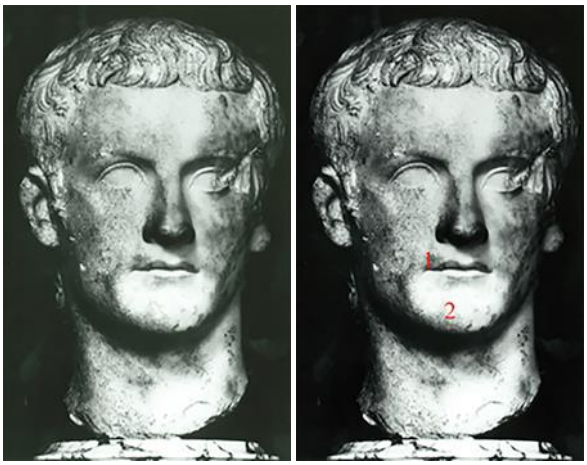


Fig. 9a-b: *Portrait of Caligula Palace of Fasanerie (Özgan, 2013a, fig. 149a, p.228).*

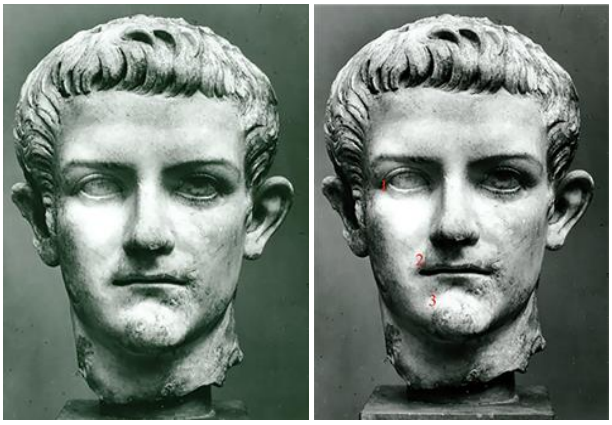


Fig 11a-b: *Portrait of Caracalla, National Archaeological Museum of Naples (Özgan, 2015, fig. 79a, p. 92).*

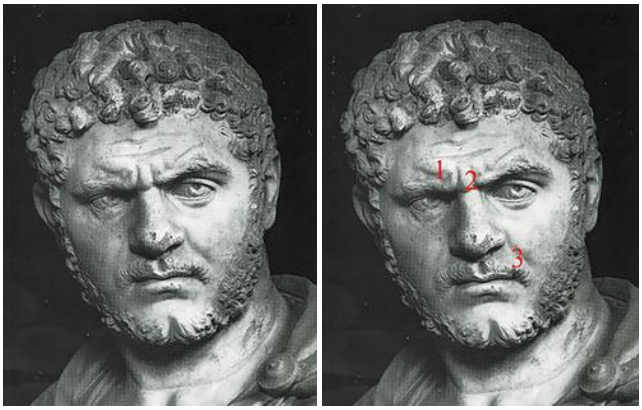


Fig 10a-b: *Portrait of Caligula Copenhagen (Özgan, 2013a, fig. 148c, p.227).*

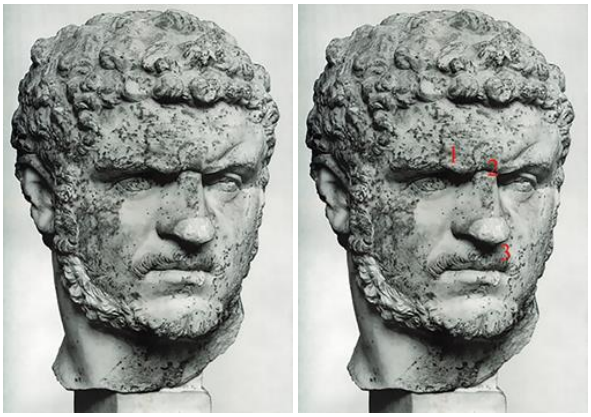


Fig. 12a-b: *Portrait of Caralla, Capitoline Museum, Rome (Özgan, 2015 ,fig.78, p. 91).*

Fig. 13a-b: *Portrait of Caracalla, National Museum of Rome (Özgan, 2015, fig. 80a, p. 92).*

Figure Captions

Note: The gesture numbering on the portraits was done by me.

Fig. 1 a-b: Portrait of Trajan Capitol Museum in Rome (Özgan, 2013b, fig. 59b, p. 73).
Fig. 2a-b: Portrait of Trajan Istanbul Archaeological Museum (Özgan, 2013b, fig. 63a, p. 75).
Fig. 3a-b: Portrait of Trajan Museum Hannover (Özgan, 2013b, fig. 65, p. 78).
Fig. 4a-b: Portrait of Hadrian (Poulsen, 1974, Plt LXVIII 41).
Fig. 5a-b: Portrait of Hadrian (Wegner, 1956, Plt. 23).
Fig. 6a-b: Portrait of Hadrian Vatican Museum (Özgan, 2013b, fig. 142b, p. 137).
Fig. 7a-b: Portrait of Hadrian from Adana-Kadirli (Özgan, 2013b, fig. 14b, p. 140).
Fig. 8a-b: Portrait of Caligula Jean Paul Gety Museum (Özgan, 2013a, fig. 150a, p. 228).
Fig. 9a-b: Portrait of Caligula Palace of Fasanerie (Özgan, 2013a, fig. 149a, p. 228).
Fig. 10a-b: Portrait of Caligula Copenhagen (Özgan, 2013a, fig. 148c, p. 227).
Fig. 11a-b: Portrait of Caracalla, National Archaeological Museum of Naples (Özgan, 2015, fig. 79a, p. 92).
Fig. 12a-b: Portrait of Caralla, Capitoline Museum, Rome (Özgan, 2015, fig. 78, p. 91).
Fig. 13a-b: Portrait of Caracalla, National Museum of Rome (Özgan, 2015, fig. 80a, p. 92).

References

Barrett, A. A. (1989). *Caligula: The Corruption of Power*. Yale University Press.

Benediktson, D. T. (1989). Caligula's Madness: Madness or Interictal Temporal Lobe Epilepsy? *The Classical World,* 82(5), 370–375. https://doi.org/10.2307/4350416

Bernoulli, J. J. (1891). *Romische Ikonographie (Band 2.2) Die Bildnisse Romischen Kaiser: Von Galba bis Commodus*. Stuttgart.

Bowman, A. K., Champlin, E. & Lintott, A. (2008). *The Cambridge Ancient History Second edition Volume X, The Augustan Empire, 43 B.C—A.D. 69*. Cambridge University Press.

Bowman, A. K., Garnsey, P. & Cameron, A. (2008). *The Cambridge Ancient History Second edition Volume XII The Crisis of Empire, A.D. 193–337.* Cambridge University Press.

Charlesworth, M. P. (1971). Gaius and Claudius. S. A. Cook, F. E. Adcock, and M. P. Charlesworth (Eds.), *The Cambridge Ancient History: The Augustan Empire, 44 B.C.-A.D. 70, vol. 10.*

Dio Cassius*, Dio's Roman History VII*. The Loeb Classical Libr*ary. (Translate Carry. E 1925).*

Dio Cassius*, Dio's Roman History VIII*. The Loeb Classical Libr*ary. (Translate Carry. E 1925).*

Dio Cassius*, Dio's Roman History VIII*. The Loeb Classical Libr*ary. (Translate Carry. E 1955).*

Ehrenheim, H. & Prusac, L. M. (2020). *Reading Roman emotions: Visual and textual interpretations.* Skrıfter Utgıvna Av Svenska Instıtutet I Rom, 4º, 64, Stockholm.

Ekman, P. (2007). *Emotions Revealed: Recognizing Faces and Feelings to İmprove Communication and Emotional Life*. Holt Paperbacks.

Ekman, P., Frıesen, W.V. & Hager, J.C. (1978). *Facial Action Coding System (FACS). A Technique for the Measurement of Facial Action*. Consulting, Palo Alto, 22.

Ekman, P. & Friesen, W. V. (2003). *Unmasking the Face. A Guide to Recognizing Emotions from Facial Clues*. Los Altos, Malor Books

Ekman, P. & Rosenberg, E. L. (2005). *What the face reveals: Basic and applied studies of spontaneous expression using the Facial Action Coding System (FACS*) (2.ed.). Oxford University Press.

Ekman, P. & Cordaro, D. (2011). What is Meant by Calling Emotions Basic. *Emotion Review*, 3(4), 364–370. https://doi: 10.1177/1754073911410740

Ferrill, A. (1991). *Caligula: Emperor of Rome.* Thames & Hudson.

Fittschen, K. & Zanker, P. (1985). *Katalog der Römischen Porträts in den Capitolinischen Museen und den Anderen kommunalen Sammlungen der Stadt Rom, I*. Mainz.

Goldsworthy, A. (2016). *The last great conqueror: Trajan and the Dacian Wars. In In the name of Rome: The Men Who Won the Roman Empire* (Chap. 13). Yale University Press. https://doi.org/10.12987/9780300221831-017

İnan, J.& Rosenbaum, E. (1966). *Roman and Early Byzantine Portrait Sculpture in Asia Minor*. The Oxford University Press / The British Academy.

Katz, R. S. (1972). The Illness of Caligula. *The Classical World*, 65(7), 223–225. https://doi.org/10.2307/4347670

Keaveney, A. & Madden, J. A. (1998). The Crimen Maiestatis under Caligula: The Evidence of Dio Cassius. *The Classical Quarterly*, *48*(1), 316–320. https://doi.org/10.1093/cq/48.1.316

Kersauson, K. (1996). *Catalogue des Portraits Rom*ains. Tome II, Edition de la Renuion des Musées Nationaux Paris.

Kleiner, D. E. E. (1992). *Roman Sculpture*. Yale University Press.

Lightfoot, C. S. (1990). Trajan's Parthian War and the Fourth-Century Perspective. *The Journal of Roman Studies*, 80, 115–126. https://doi.org/10.2307/300283

Lindstrøm, C. T. (2010). *Facial expressions (and non-expressions in Roman faces*. Bollettino di Archeologia Online, I 2010/Volume Speciale/Poster Session 7. http://www.uib.no/sites/w3.uib.no/files/roman_facial_expressions_aiac_2008_-_2011_lindstrom1.pdf

L 'Orange, H. P. (1933). *Studien Zur Geschiche des Spätantike Porträt*, Oslo.

Magie, D. (1991). *Scriptores Historiae Augustae*, Volume I Loeb Classical Library. No. 139.

Magie, D. (1993). *Scriptores Historiae Augustae*, Volume II Loeb Classical Library. No. 140.

Massaro, V. & Montgomery, I. (1978). Gaius — Mad, Bad, III, or all Three? *Latomus*, *37*(4), 894–909. http://www.jstor.org/stable/41531093

Matsumoto, D. (2001). *Culture and emotion. The handbook of culture and psychology*, Oxford University Press.

Mazzarino, S. (2007). *L'Impero Romano*. Volume secondo, Laterza, Bari Italy.

Mccann, A. M. (1968). *The Portraits of Septimius Severus (A.D. 193-211*). Memoirs of the American Academy in Rome.

Metin, A. (2019). Yüz İfadelerindeki Duygular: Derleme Çalışması. *Opus* 10(17), 2027-2055. https://doi.org/10.26466/opus.514880

Özgan, R. (2013a). *Roma Portre Sanatı I*. Ege Yayınları.

Özgan, R. (2013b). *Roma Portre Sanatı II*. Ege Yayınları.

Özgan, R. (2015). *Roma Portre Sanatı III*. Ege Yayınları.

Penella, R. (1980). Caracalla and His Mother in the Historia Augusta. *Historia Zeitschrift für Alte Geschichte, 29(3),* 382-384.

Pollini, J. (2005). A Portraıt Of Caracalla From The Mellerıo Collectıon And The Iconography Of Caracalla And Geta. *Revue Archéologique*, 1, 55–77. https://www.jstor.org/stable/41017503

Poulsen, V. (1974*). Les Portraits Romains Vol II*. Glyptotheque Ny Carlsberg.

Prusac, M. (2011). *From face to face: Recarving of Roman portraits and the late-Antique portrait arts*. Monumenta Graeca et Romana, 18. Brill.

Prusac, L. M. (2020). Through the looking glass: Collective emotions and psychoiconography in Roman portrait studies. In H. V. Ehrenheim & M. Prusac-Lindhagen (Eds.), *Reading Roman emotions: Visual and textual interpretations* (Acta Instituti Romani Regni Sueciae, Series in 4º, 64).

Rozin, P., Lowery, L., & Ebert, R. (1994). Varieties of disgust face and the structure of disgust. Journal of Personality and Social Psychology, 66(5), 870–881. https://doi.org/10.1037/0022-3514.66.5.870

Sandison, A. (1958). The Madness Of The Emperor Caligula. *Medical History,* 2(3), 202–209. http://doi:10.1017/S0025727300023759

Sidwell, B. (2010). Gaius Caligula's Mental Illness. *The Classical World*, *103*(2), 183–206. http://www.jstor.org/stable/40599927

Suetonius (2021). *On İki Caesar'ın Yaşamı*. (Translate Gül Özaktürk & Ü. Fafo Telatar), Doğu Batı Yayınları.

Wegner, M. (1956). *Das römische Herrscherbild,* Abteilung 2, 3, Berlin.

Wiggers, H. B. & Wegner, M. (1971). *Caracalla bis Balbinus* (Das römische Herrscherbild, 3.1). Deustsches Arhäologisches Institut, Berlin.

Woods, D., (2014). Caligula Displays Caesonia (Suet. Calıg. 25.3). *Rheinisches Museum Für Philologie*, *157*(1), 27–36. http://www.jstor.org/stable/24392820

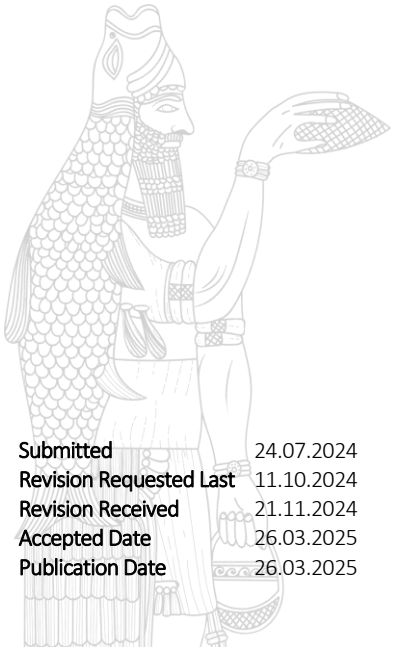
OANNES
2025, 7(1) March

Research Article DOI: 10.33469/oannes.1521853

Changes and Transformations in The Elazığ–Malatya Region in The Early Bronze Age: An Assessment Through Public Buildings

M. Gökçe DEDE
Corresponding Author

Independent Researcher
mgokcededede@gmail.com



Submitted 24.07.2024
Revision Requested Last 11.10.2024
Revision Received 21.11.2024
Accepted Date 26.03.2025
Publication Date 26.03.2025

Cite this article
Dede, M. G. (2025). Changes and Transformations in The Elazığ–Malatya Region in The Early Bronze Age: An Assessment Through Public Buildings, *Oannes*, 7(1), March, pp. 19-38.

Abstract

In archaeological literature, public buildings generally refer to administrative and/or religious structures located within the monumental fortifications of large upper settlements, serving a class of rulers or ruling elite. Public buildings were constructed to serve administrative, religious, or other social functions such as meetings, banquets, ceremonies, festivals, or as symbols of power. While the Elâzığ–Malatya Region is considered part of Eastern Anatolia culturally and politically, it was also a region with its internal dynamics in the Early Bronze Age. This study aims to discuss the architecture of public buildings in the Elâzığ–Malatya Region, their use, the tendencies of the rising ruling class reflected in this architecture and the social dynamics of the region in the Early Bronze Age from a holistic perspective. The region's settlement pattern is analyzed, and the study is illustrated with maps and drawings. The results indicate that in the first half of the Early Bronze Age, when mobile groups dominated the region, there was social chaos. Stabilization began in the second half of the period. The elites emerging towards the end of this period, who ruled the settlements from public buildings named palaces, are considered to have been instrumental in this stability.

Keywords: *Early Bronze Age, Public Building, Elâzığ–Malatya Region, Upper Euphrates Region, Anatolia.*

Genişletilmiş Özet

Arkeoloji ya da sosyal antropoloji yazınında karmaşık toplumlar veya erken devletlerin kökenlerini açıklamak için çeşitli modeller oluşturulmaya çalışılmış, tarihöncesi toplulukların olası yönetim biçimleri üzerine çeşitli sınıflandırmalar yapılmıştır. Bu sınıflandırmalar içerisinde toplumsal değişimin basamakları yorumlanırken yönetici sınıfın yönetim alanlarını oluşturan kamusal binalardaki çeşitli faaliyetler de değerlendirilmiştir. Bu bağlamda yöneticilere yani kamu yönetimini elinde bulunduran azınlığa ait binaların farklılaşma eğilimi göstermeye başladığı saptanmıştır. Kamu yönetimi bilgiyi tekelinde toplayan, üretimi kontrol eden ve pekiştiren yönetici sınıfın/seçkinlerin gücünün en önemli aracıdır ve tüm bu yönetimsel işler kamusal yapılardan yürütülmektedir. Kamusal yapı kompleksleri gücün temsili; seçkinlerin yönetim ve iskân alanlarıdır. Kamusal yapılar bir yerleşimin merkezi gücüne işaret eder, dolayısıyla politik gücün temsilini gösterir. Günümüzde kamu kelimesi ile akla ilk gelen devlet ve onunla ilintili resmî kurumlardır: Kamu görevlisi, kamu kuruluşları, kamu idaresi gibi…Günümüzde kamusal yapıları tanımlamak anlamlı içeriklerle sağlanabilir ancak Erken Tunç Çağı (ETÇ) kamusal yapıları için kısa, anlaşılır bir tanım yapabilmek ve bunu modern tanımlar ile eşleştirmek zordur. ETÇ kamusal binaları bir topluluğun idari, dini, sosyal ve ekonomik gereksinimlerini karşılamak üzere inşa edilmiş; özgün işlevi domestik olmayan yapı ya da yapılar bütünü olarak tanımlanabilir. Başka bir deyişle, idari ile yönetimsel işlerin; dini ile ritüel, toplanma, şölen, tören gibi pratiklerin bu yapılardan yönetici elit ya da elitler tarafından yürütüldüğü anlamlarını kastettiğimizi belirtmeliyiz. Binaların kamusallığı genellikle boyutları ve mimari olarak periferine göre merkezi bina olmalarından kaynaklanmaktadır. Temel tanımlayıcı özelliği, ölçeğinin ve detaylandırılmasının, bir binanın yerine getirmesi amaçlanan herhangi bir pratik işlevi aşmasıdır. Mimari ölçeği, iktidar ve seçkinlerin sosyal–politik kontrolüyle doğrudan ilişkili görmek kamusal yapı tanımında karşılaşılan en yaygın yorumlardan biridir. Binanın ölçeği, detayları ve birimleri hizmet edeceği nüfus sayısı ile doğru orantılı olabilir.

Elâzığ–Malatya¬ Bölgesi tarih öncesi dönemleri, baraj kurtarma kazıları ve uzun yıllardır devam eden Arslantepe verileri ile tanımlanmaktadır. Bölge'nin Geç Kalkolitik Dönem'den ETÇ sonuna kadar Erken Trans Kafkasya, Karaz ya da Kura–Aras olarak adlandırılan kültürün etkisi altında olduğu anlaşılmaktadır. Pastoral bir yaşam tarzını benimsemiş olan bu kültürün Trans Kafkasya, İran'ın kuzeyi, Doğu Anadolu Bölgesi ve Suriye–Levant Bölgesi'ne değin uzanan geniş bir coğrafi alana yayıldığı belirlenmiştir. Kura–Aras kültürünün kendine özgü mimarisi, insan yüzlü ocakları ve seramiği ETÇ'de bölgeye hâkim olmuştur. Bununla birlikte, ETÇ ortalarından itibaren yerel dinamiklerin de ortaya çıktığı; bölgeselleşmeye doğru giden değişikliklerin olduğu saptanmıştır.

Bu çalışma Elâzığ–Malatya Bölgesi'nde kamusal yapı mimarisi, kullanım amaçları, yükselen yönetici sınıfın bu mimariye yansıyan eğilimleri ve bölgenin ETÇ'de sosyal dinamiklerini bütüncül bir bakış açısı ile ele almayı amaçlamaktadır. Bununla birlikte MÖ 2. binyılda ortaya çıkacak olan yerel beyliklerin kökeninin ETÇ sonlarında oluşmaya başlayan siyasi istikrar ile ilişkisinin varlığını da sorgulamaktadır. Bu amaç doğrultusunda bölgenin yerleşim hiyerarşisi incelenmiş, haritalar ve çizimlerle çalışmanın daha anlaşılır hale gelmesi sağlanmıştır. Bu bağlamda Elâzığ–Malatya Bölgesi kültürünün ve kronolojisinin oluşturulmasında anahtar merkezler olan Arslantepe'de iki, İmamoğlu Höyük'te bir ve Norşuntepe'de birbiri üzerine inşa edilen üç kamusal yapı değerlendirilmiş, kullanım amaçlarına dair öneriler sunulmuştur. Ayrıca konunun diğer tamamlayıcı ayağı olan bölgenin yerleşim hiyerarşisi Geç Kalkolitik Dönem'den ETÇ sonuna kadar incelenmiştir.

Elâzığ–Malatya Bölgesi'ndeki kamusal yapılar Geç Kalkolitik Dönem'den sonra ETÇ'de yönetici / seçkinlerin ya da başka bir deyişle erkin biçim değiştirmesinin işaretleri olarak yorumlanabilir. Bölge'deki kamusal binalar yaşama, yönetim ve toplantı–tören ya da şölen binasından oluşmaktadır. Arslantepe'deki 'Şef' kulübesi ve Bina 36, gerek mimari özellikleri gerekse küçük buluntuları ile sosyal tabakalaşmayı yansıtmaktadır. Geç Kalkolitik Dönem'den itibaren aynı alanda kamusal yapıların sürekli inşa edilmesi ve bu binaların benzer işlevleri taşımaları Arslantepe'de bir kolektif belleğin varlığını göstermektedir. Aynı döneme ait olan kralî mezarın karmaşık gömme ritüel özellikleri ve buluntuları sembolik değerine işaret etmekte; bir elit veya topluluğun şefine ait olduğunu düşündürtmektedir. İmamoğlu Höyük'teki 'Merdivenli Yapı', Mezopotamya mühür baskılı bulla parçalarının da kanıtladığı gibi, uzak mesafeli ticaretle uğraşan yöneticilerle bağlantılı bir kamu binası olmalıdır. Uzmanlaşmış işgücü ve depolama kapasitesi İmamoğlu'nun çevre köylerden mal toplayan ve depolayan orta ölçekli bir yerleşim olduğunu göstermektedir. Norşuntepe'de, 8. ve 7. tabakalardan 6. tabakaya uzanan mimari süreklilik, istikrarlı bir idari varlığı yansıtmaktadır. Çok katlı anıtsal bir kompleks olan 6. tabaka sarayında atölyeler, mutfaklar ve depolar; tahıl depolama ölçeği, gelişmiş tarıma işaret etmekte olup ihtiyaç fazlası muhtemelen yöneticiler tarafından ticaret için ya da zor zamanlarda halkı desteklemek için kullanılmıştır. Çeç mühürler de tarımsal ürünlerin dağıtımını kolaylaştırmış olabilir. Verimli Altınova'da yer alan Norşuntepe, seramik, taş, kemik ve metalürji alanlarında vasıflı işgücüne sahip merkezi bir yerleşimdir. Tüm bu bilgilere dayanarak Elâzığ–Malatya Bölgesi'nde incelediğimiz kamusal yapıların yerleşimin en yüksek noktasında ve fiziksel olarak halkın geri kalanından kendilerini soyutlayacak biçimde inşa edildikleri görülmektedir. Merkezlerdeki kamusal mimari ve ele geçen nitelikli eşya ile kralî mezar, dikey hiyerarşinin varlığına da işaret etmektedir. Bu merkezlerde madencilik aktiviteleri (Arslantepe, Norşuntepe), kemik, taş (Norşuntepe) ve seramikte (İmamoğlu Höyük) uzmanlaşmış işgüçlerinin varlığına dair işaretler tespit edilmiştir. Bu durum, bu yerleşimlerin bölgede uzmanlaşmış üretim merkezleri olabileceklerini; bu üretim zincirinin de kamusal yapılardan merkezleri yöneten seçkin sınıfın denetiminde olabileceğini akla getirmiştir.

Elâzığ–Malatya Bölgesi bir bütün olarak da Yukarı Fırat Havzası Kalkolitik Çağ'da Mezopotamya ile ilişkili görünürken Havza'ya Kura–Aras kökenli toplulukların gelişi sosyoekonomik yapıyı değiştirmiş görünmektedir. ETÇ boyunca Elâzığ–Malatya Bölgesi de Kura–Aras kökenli yerleşimlere sahne olur ve bir önceki çağda yoğun olan Mezopotamya ile ilişkiler kesintiye uğrar. ETÇ'de kırsal karakterdeki yerleşim sayısındaki artış, bölgede popülasyonun da arttığının işaretidir. ETÇ I ve II'de yerleşim sayısındaki artış ve bunların geçici yerleşim karakterinde olmaları bu hareketli grupların varlığını göstermektedir. Bölgede bu dönemde mobilize grupların varlığı ile birlikte bir istikrarsızlık söz konusudur. ETÇ II'de bölge halen istikrarsızdır. ETÇ III ile birlikte yerleşimler daha kalıcı karakterdedir ve peyzajda merkezi yerleşimlerin ortaya çıktığı görülmektedir. Bölgede ETÇ'den Orta Tunç Çağı'na geçişte de kültürel bir kesinti olmadığı tespit edilmiştir. Bu durum, MÖ 2. binyılda bölgede ortaya çıkan yerel beyliklerin temelinin ETÇ III'te sağlanmaya başlayan istikrar ile oluşmaya başladığını düşündürtmüştür. Elazığ'da ortaya çıkartılan Harput Kabartması ve mimari bağlamı Orta Tunç Çağı başlarında bölgede siyasi otoritenin

varlığına işaret etmekte ve yukarıdaki bilgiler ele alındığında bu merkezi otoritenin temelinin ETÇ sonlarında atılmaya başladığına işaret etmektedir.

Introduction

The categorization of human history into various stages of cultural and socio–economic development or the classification of the socio–economic and political structures of prehistoric societies has long been a topic of research in various disciplines. Numerous studies have been conducted on the emergence of complex societies, cities, and the first states (Fried, 1967; Service, 1971; Redman, 1978; Morgan, 1986; Childe, 1994; Rothman, 1994; Wason, 1994; Manzanilla, 1997; Algaze, 2001; Şenel, 2001; 2006; Frangipane, 2002; Flannery & Joyce, 2012; Renfrew & Bahn, 2018.). Scholars have attempted to develop different models to explain the origins of social complexity and investigated possible forms of governance in prehistoric societies. While interpreting the stages of social change within these classifications, various activities in public buildings, which constituted the administrative spaces of the ruling class, have also been evaluated. The meanings of the word 'public' significantly depend on the period to which it refers. Today, the term public is most commonly associated with the state and its official institutions, as in public officials, public organizations, and public administration.[1]

Today, it is possible to identify public buildings through meaningful contents, but looking at the public buildings of the Early Bronze Age (hereafter EBA) from the present, it seems difficult to make a brief and clear definition for them or even to relate them to modern definitions. Both clarity and ambiguity can result from such attempts. The EBA public buildings appear to have been constructed to meet the administrative, religious, social and economic needs of a community; they were buildings or building complexes with non–domestic original functions. In other words, administrative, governmental and economic affairs, and religious practices such as rituals, meetings, feasts and ceremonies were conducted from these buildings by the ruling elite or elites (Dede, 2024). The public nature of these buildings is typically identified by their large size and their central location relative to other buildings. Their main defining characteristic is their scale and detailing, which exceed the requirements for any practical function that a building may have. The scale of a building, its detailing and the number of people it will serve can be directly proportional to the number of units such as administration, living and storage. Viewing architectural scale as directly related to the socio–political control of power and elites is one of the most common interpretations of public buildings (Osborne, 2014, p. 5). The term usually emphasizes that a building is larger than typical in size and/or well–built compared to other ordinary buildings in its surroundings. Public buildings may be constructed for public purposes, such as administrative/governmental and/or religious purposes, or as meeting places, for banquets, ceremonies, celebrations or for demonstrating power (Dede, 2024).

The prehistoric periods of the Elazig–Malatya Region are defined by findings from salvage excavations within dam construction areas and from the long–term excavations at Arslantepe. The region seems to have been under the influence of the Early Transcaucasian, the so–called Karaz or Kura–Araxes culture from the Late Chalcolithic Period until the end of the EBA (Sagona, 1998; Palumbi, 2008; Sagona & Zimansky, 2015; Işıklı & Ergürer, 2017). This culture, characterized by a pastoral lifestyle, primarily focused on livestock breeding and seasonal migrations, spread over a wide geographical area extending to Transcaucasia, northern Iran, eastern Anatolia and the Syrian–Levant Region (Işıklı, 2011; Işıklı & Ergürer, 2017, p. 44; Işıklı et al., 2019, p. 320). The unique architecture, human–faced hearths and ceramics of the Kura–Araxes culture dominated the region throughout the EBA. However, from the middle of the EBA onwards, local socio–political or economic dynamics emerged the region and changes towards regionalization can be observed, which is elaborated in subsequent sections.

This study aims to analyze the architecture of public buildings in the Elazığ–Malatya Region, their intended use, the tendencies of the emerging ruling class reflected in this architecture, and the social dynamics of the region during the EBA from a holistic perspective. For this purpose, the settlement patterns of the region have been analyzed, and the study has been illustrated with maps and drawings.[2]

[1] According to J. Habermas (2003, pp. 57–58), the word 'public' in everyday language in modern times contains contradictory meanings. This confusion stems from the different historical phases of its use, which were simultaneously adapted to the conditions of bourgeois society. For this reason, it often has an ambiguous meaning in everyday use.

[2] This article is adapted from a chapter of the author's Ph.D. dissertation, entitled "Public Buildings in Early Bronze Age Anatolia", at Hacettepe University, Graduate School of Social Sciences, Department of Archaeology, under the supervision of Prof. Dr. Ayşegül Aykurt.

The Elazig–Malatya Region in the Early Bronze Age: Transformations

Arslantepe and Norşuntepe, located on opposite banks of the Euphrates River, are key sites for defining the culture and chronology of the Elazig–Malatya Region (Fig. 6). The first monumental public buildings excavated at Arslantepe in phases 3–4 of the Late Chalcolithic Period according to regional chronology have been described as temples (Frangipane, 2019b). Thousands of mass–produced bowls and numerous *cretula* indicate that the main function of the building may have been the ceremonial distribution of food, and that this distribution was carried out under some kind of administrative control. The center of this administrative control were likely the tripartite planned temples of monumental sizes.[3] The palace complex in the Late Chalcolithic Period 5, covering an area of 3500 m^2 with its audience hall, throne, storerooms, temples and living areas, suggests that there were significant structural changes at this site. Thousands of *cretula*, mass–produced bowls, storage vessels, metal weapons and building units across the complex indicate that it was both an administrative and religious public building.

After the collapse of the Late Chalcolithic Period temple–palace complex at Arslantepe, Kura–Araxes culture seems to have become dominant in the EBA I. At the middle of this phase, public buildings were rebuilt on a smaller scale than before (Liberotti & Alvaro, 2018; Frangipane, 2019a). Towards the end of the EBA I, despite the monumental fortification, no significant public buildings have been identified within the walls, possibly suggesting a shift in settlement pattern (Frangipane, 2014, pp. 172–173). The EBA I can be considered as a phase in which Mesopotamian and Kura–Araxes characteristics were found together. From the beginning of the EBA I, radical changes in settlement patterns occurred also in Malatya. The number of settlements in the region increased, and at least 54% of them were located on natural hills. These settlements spread from the centre of the plain towards the foothills to the east; they were not stratified and reported to have been short–lived settlements (di Nocera, 2008, fig. 3d.) This settlement type suggests short–term occupations of mobile groups known from Kura–Araxes elements such as ceramics and architecture (Fig. 1).

Following the conflicts between nomadic and sedentary groups, turmoil and successive settlements, Malatya Plain was disconnected from Mesopotamian cultures in the EBA II, and only Kura–Araxes cultures and the local Gelincik Culture emerged (Frangipane, 2012, pp. 240 ff.). Alongside the geography of Northeastern Anatolia and the Southern Caucasus, this new culture displays unique characteristics as well as a regional cultural identity. Although nomadic groups dominated the cultural landscape, a clear settlement hierarchy remained difficult to establish, as evidenced by the ceramics and architecture, as well as the lack of distinction between the EBA I and II settlements (Fig.1), (di Nocera, 2008; Parlıtı & Caner, 2021).

[3] With Ubaid culture (5800–4200 BC) that emerged from southern Mesopotamia, tripartite plan was commonly used in public and domestic architecture in the 5th and 4th millennia BC. From this period onwards same tripartite plan appears in buildings at other sites associated with Mesopotamia (Erarslan, 2010).

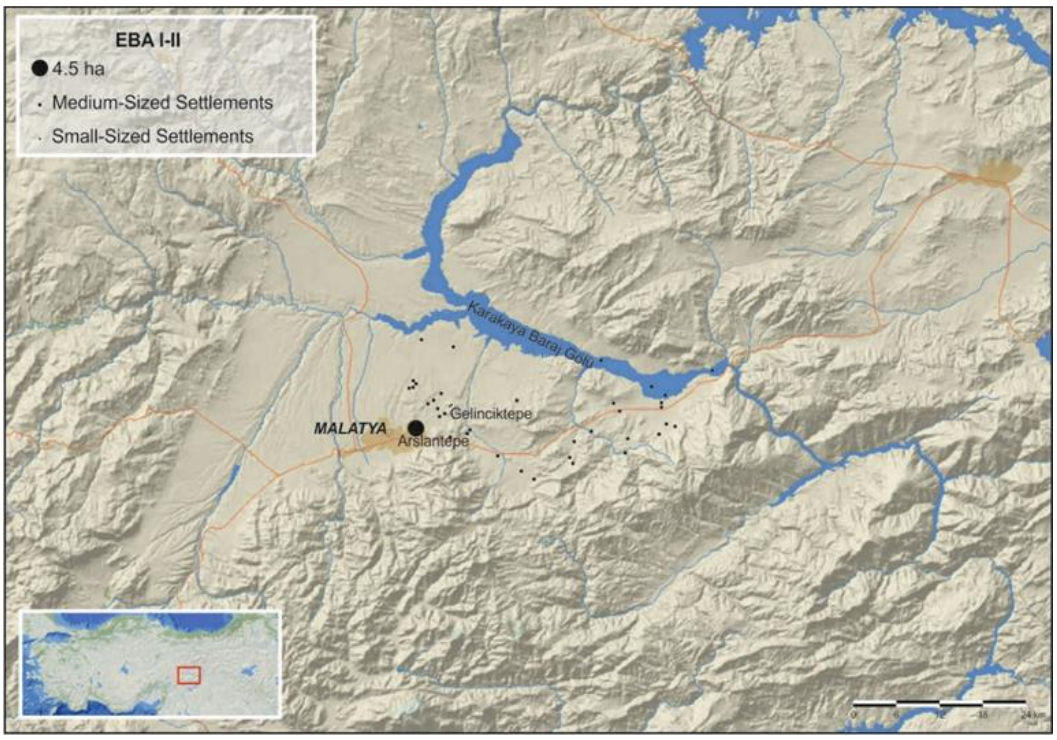


Fig. 1: *The EBA I and II settlements identified in the in Malatya Plain and Karakaya Dam Reservoir Area (adopted by the author after di Nocera, 2008, p. 642, fig. 2a; Frangipane & di Nocera, 2012, p. 296, fig. 2b)*

We can observe the Malatya Plain appears to have severed its traditional cultural ties with the Syro–Mesopotamian world towards the end of the 3rd millennium BC, re–establishing maintained limited trade or cultural relations with Central Anatolia. From 2500 BC onwards, the settlement expanded gradually, and the settlement planning continued until the mature phase of VID2 in ca. 2300 BC.[4] The compact and clearly defined settlement from the middle of the EBA III onwards is defined as 'urban'.

In the second half of the 3rd millennium BC, the number of settlements increased, especially along the Euphrates (Figure 2). By the end of the 3rd millennium BC, the population was concentrated in more stable areas and settlements became permanent rather than temporary. Settlements were characterized by permanent and planned architecture. In this context, several central settlements emerged and expanded across the region. Pirot, Köşkerbaba, İmamoğlu, Cantepe and Süleyman Tepe (Hasırcılar) along the Euphrates; Fırıncı Höyük, Bire Tepe, Galip Baba Tepe, İçmesu Tepe and Maltepe to the south of the Euphrates are among the sites of this type of settlements. While some of these sites were already settled, others were settled for the first time in the EBA III (di Nocera, 2008, p. 638; Frangipane & di Nocera, 2012). This phase can now, characterized by the emergence of local political structures typical of the Anatolian plateau, in which a new form of power emerged, based on small local leaders who dominated the conflicts and rivalries (di Nocera, 2008, pp. 636–638; Frangipane & di Nocera, 2012; Frangipane, 2012, fig. 12). Although we do not know whether Arslantepe was a central settlement in the EBA III, as it was in the 4th millennium BC, it was the largest site on the Malatya Plain. A distinctive local culture developed at Arslantepe during the EBA III, and along with this culture, the settlement expanded and steps towards centralization were taken.

[4] M. Frangipane (2012, pp. 257–258) emphasizes that she uses the term 'urban' in a sense that is different from the sense used for Mesopotamia, where it refers to “a large concentration of population in a vast and organic settlement comprising numerous specialised and interdependent social sectors”.

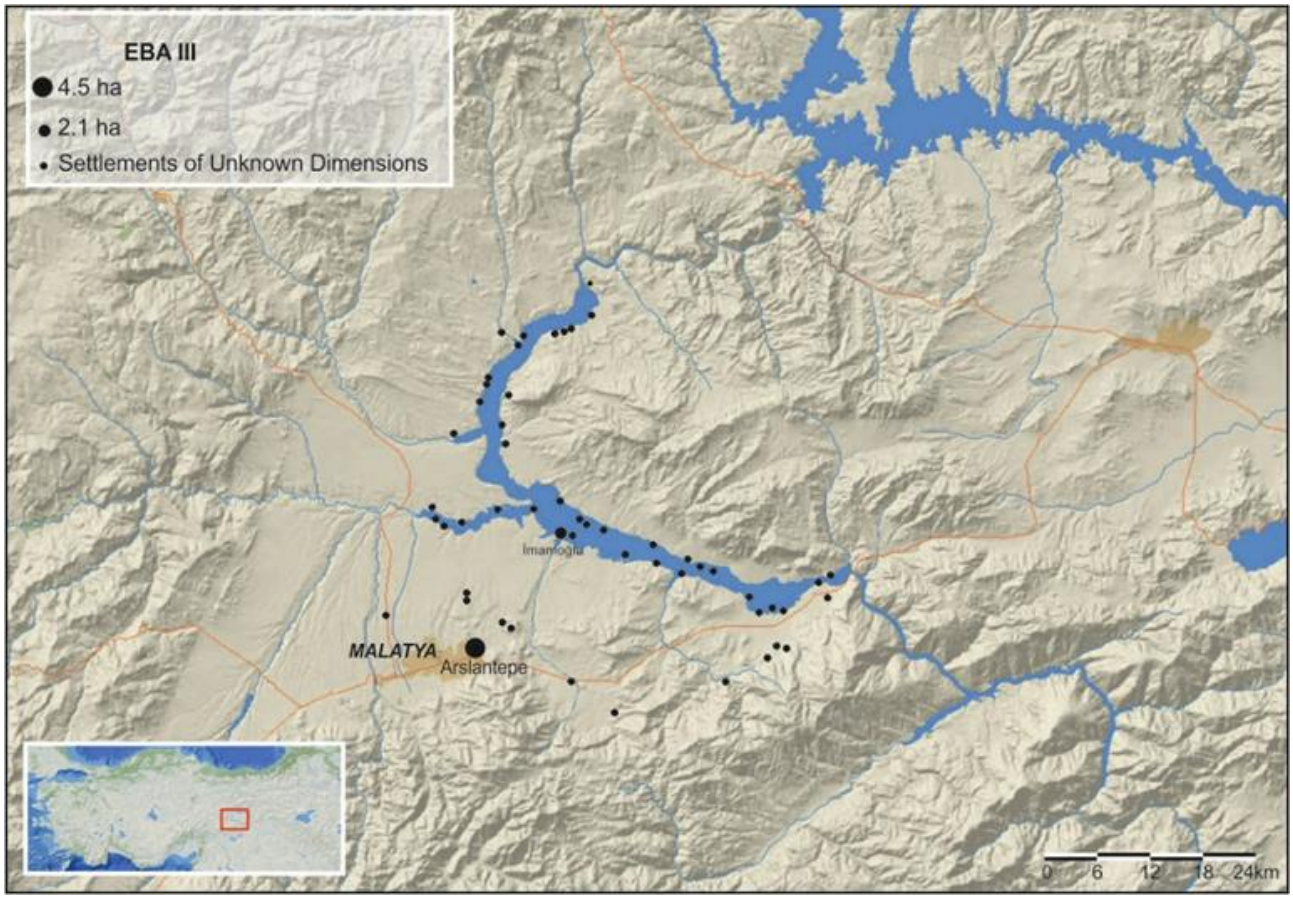


Fig. 2: *The EBA III settlements identified in Malatya Plain and Karakaya Dam Reservoir Area (adopted by the author after Özdoğan, 1977, lev. 6 and di Nocera, 2008, 642, fig. 2b)*

In the Late Chalcolithic Period, the situation in Elazığ seems to have been different from that in Malatya. In the Elazığ Region, no central settlements like Arslantepe existed region during this period. Analysis of pottery and other small finds indicates that Elâzığ was connected with Syria in this period. The data for the EBA I is weak, but the high proportion of Syrian pottery suggests that the region was still associated with Syria and, by extension, Mesopotamia. The number of settlements in Altınova increased during the EBA I (Fig. 3). With an area of 3.2 ha, Norşuntepe was the largest settlement at the center of the plain. A few settlements covered areas of 2.0–1.7 ha, and the rest of the settlements were 1 ha or less in area (Fig. 3), (Whallon, 1979, p. 281, tab. 13).

Similar settlements and settlement pattern continued in the EBA II (Fig. 4). The noticeable increase of Kura–Araxes pottery and wattle and daub architecture in the region during this period points to a change, characterized by the Kura–Araxes and local cultural elements appearing together (Yalçın, 2022). The sites smaller than 1 ha in area during the EBA I and II can point to mobile groups in the Elazığ Region, as also observed on the Malatya Plain (Fig. 3–4).

With the EBA III, while the number of sites decreased, the site sizes increased (Fig. 5). Apart from sites like Norşuntepe, Tepecik, Tülintepe, Değirmentepe and Korucutepe, all other sites cover areas of ca.1 ha or less (Whallon, 1979, p. 282, tab. 14–15). These central settlements in the landscape of the EBA III can be interpreted as an indicator of stabilization. The public buildings at Norşuntepe, now named as palaces, can also be interpreted as an indicator of stabilization. On the other hand, the defensive walls, which seem to have become a characteristic feature of the EBA III settlements, point to conflicts between independent and perhaps rival centers (Frangipane, 2012, pp. 257–258).

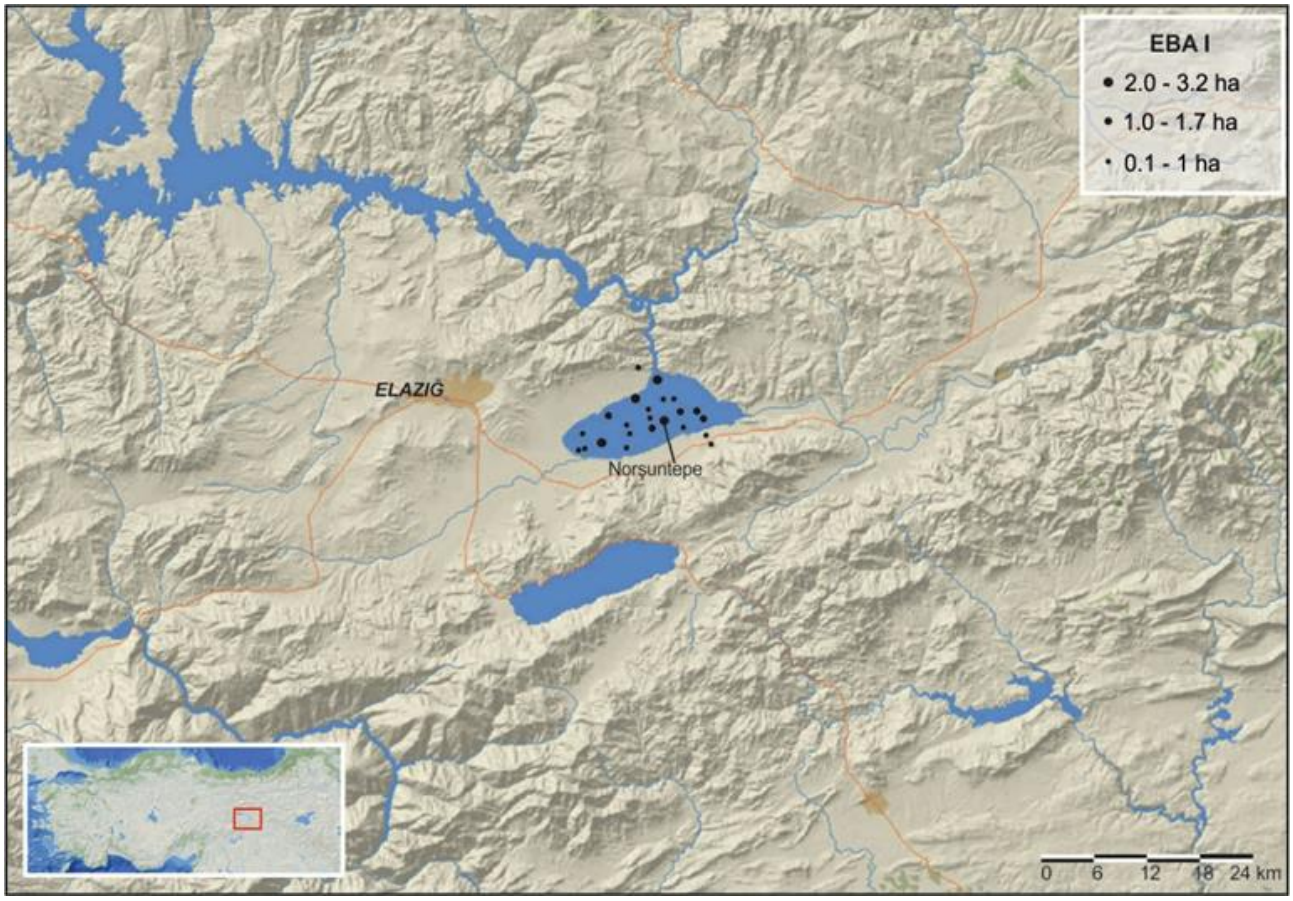


Fig 3: The EBA I settlements identified in Altınova, Elazığ (adopted by the author after Çevik, 2007, fig. 3)

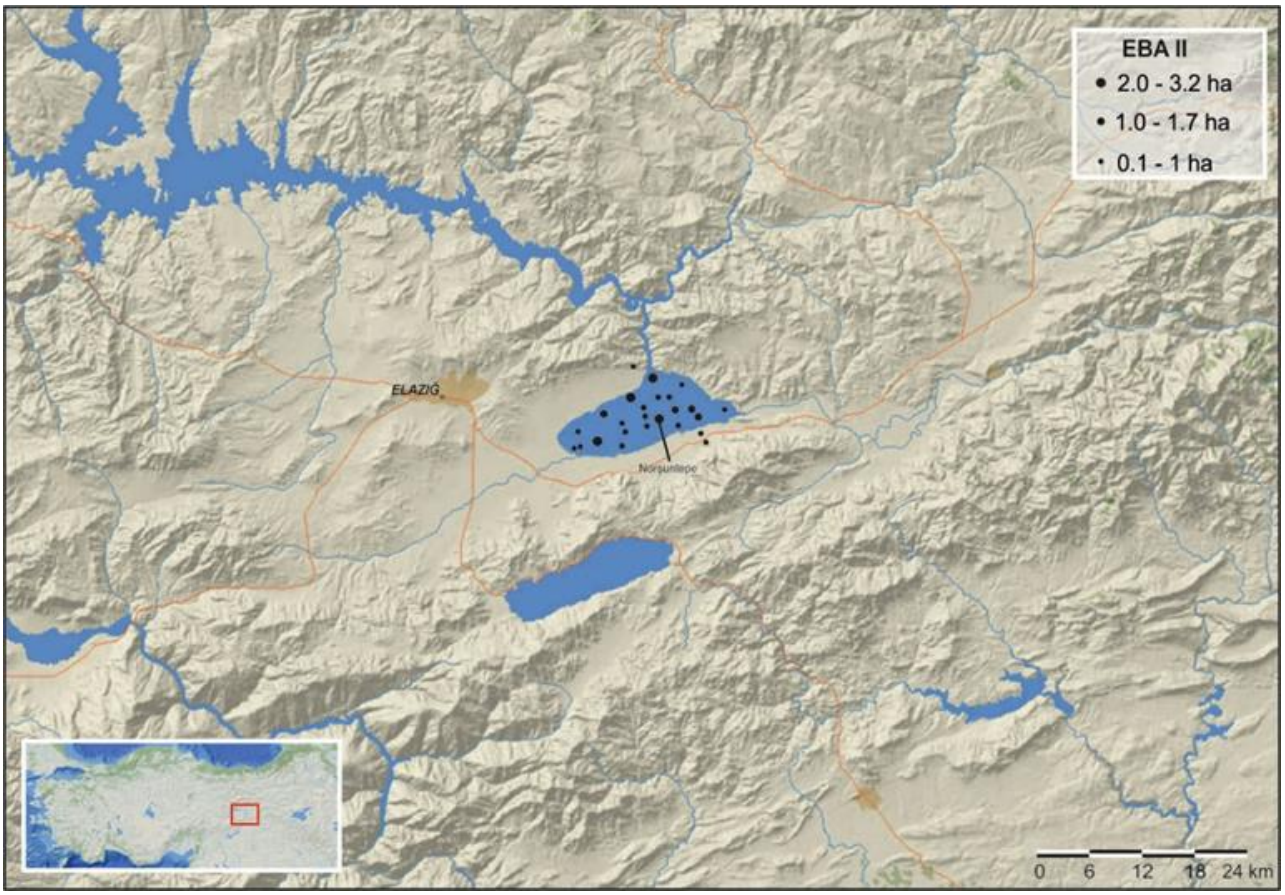


Fig. 4: EBA II settlements identified in Altınova, Elazığ (adopted by the author after Çevik, 2007, fig. 3)

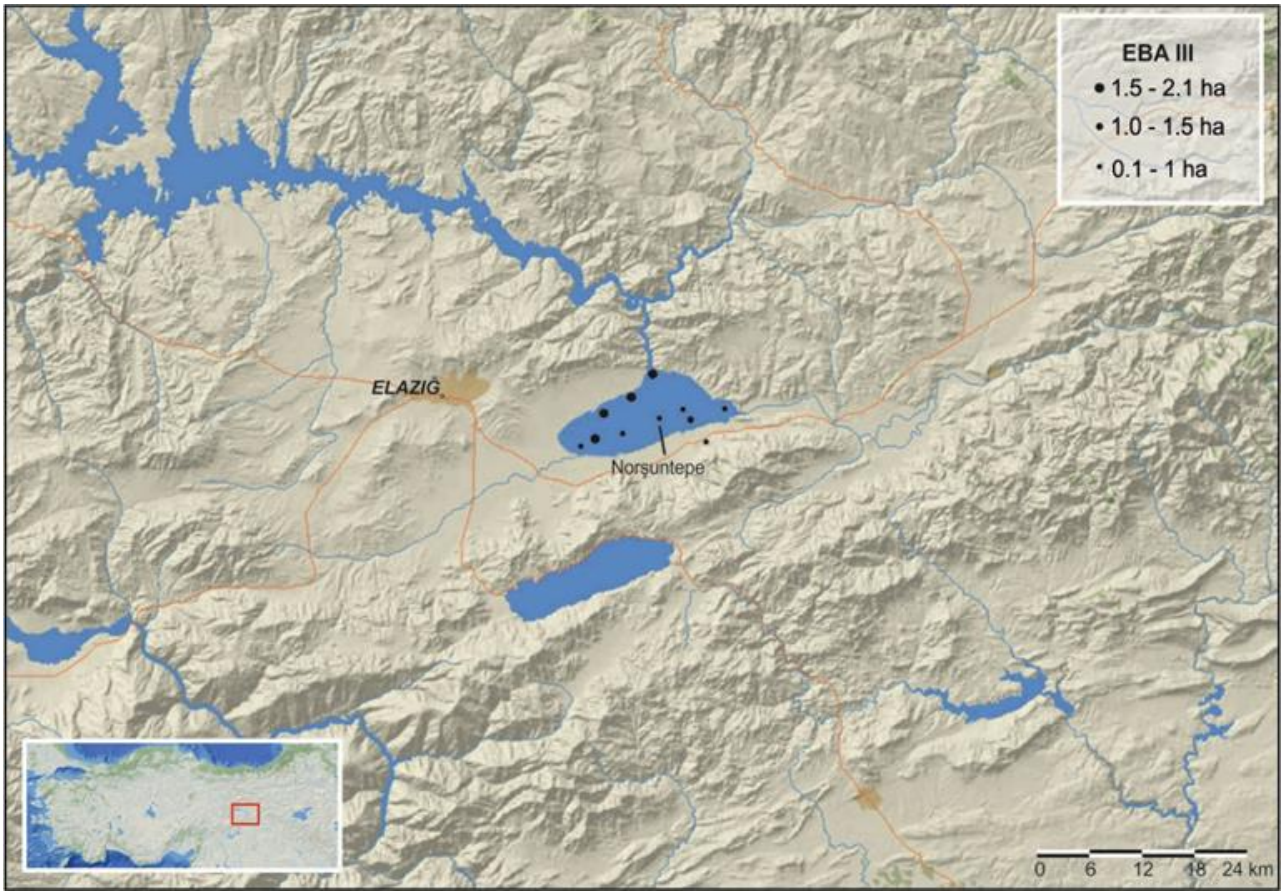


Fig. 5: *EBA III settlements identified at Altınova, Elazığ (adopted by the author after Whallon, 1979; Conti & Persiani, 1993, map 3–4; Çevik, 2007, p.103, fig. 3)*

According to conventional and absolute dating in the Elazığ–Malatya Region, the EBA I is dated to 3200/3100–2750/2800; the EBA II to 2750/2800–2500; and the EBA III to 2500–2000 BC (Mellink, 1992, tab. 2–3; Sagona, 2000, pp. 333–335; di Nocera, 2000, pp.73–93; Palumbi, 2008, p. 327, tab. 1; Marro, 2011, pp. 290–306; Yakar, 2011, pp. 70–71, tab. 4.5; Frangipane, 2019a, p. 93).

Centers	Layers	Dates (BC)	Absolute Dates (BC)	References
Arslantepe	VIB1–B2	3200–2800	3100–2800	Frangipane, 2019a, p. 93
Norşuntepe	6	2500–2000	2000	Schmidt, 1996, p. 6; 2002, p. 3; Hauptmann, 2000, p. 428, abb. 1
	7		2150–100	
	8		2300/2400	
İmamoğlu	V	2500–2000	–	Uzunoğlu, 1983, p. 132; 1985, p. 237

Table 1: Stratigraphy and dating of public buildings analyzed in the study

Public Buildings in the Elazığ–Malatya Region

In the region, public buildings have been recovered at Arslantepe, İmamoğlu and Norşuntepe (Fig. 6). These buildings are assumed to have been used by the rulers or ruling elites of these settlements for residing and for public purposes like administration, storage, meetings and ceremonies.

Arslantepe

Two the EBA I (Tab. 1) buildings from Arslantepe (Fig. 6) at the center of the Malatya Plain were investigated as public buildings.

Fig 6: *The EBA sites with public buildings in the Elâzığ–Malatya Region (by the author)*

'Chief's' Hut

The 'Chief's' hut, of level VIB1, was built on the highest part of the mound, surrounded by a strong palisade to the south, and is much larger than the other huts (Fig. 7). The 'Chief's' hut, with at least three phases, was built in the same place in each renewal phase and was in use during level VIB1. Like the other domestic huts of this phase, it was built by wattle and daub technique (Frangipane, 2014, p. 173). In the first phase, the building was limited by a row of three rooms and another room or plastered outer area to the east (Fig. 7). According to its finds, this unit was a storage area. In the next phase, the building takes a rectangular form, maintaining its area of 42 m^2 as well

as keeping its isolated place (Frangipane, 2014, p. 173). According to its isolated location by the palisade that surrounded the hut to its south, to the multiple rebuilding processes of a single hut, the fact that its larger dimensions compared to the other huts in the settlement, and the associated finds, it can be suggested that this hut was the house of the community ruler (Frangipane, 2014, p.174). In the open area between the 'Chief's' hut and the palisade (Fig. 7), a large number of animal bones in piles found in all rebuilding phases appear to had been the remains of collective feasts or celebrations. Moreover, pottery assemblages associated with the Mesopotamian and Kura–Araxes cultures, as well as a stamp and a cylinder seal, were found in and around the building (Frangipane, 2014; Dede, 2024, figs. 19–20; Dede & Oğuzhanoğlu, 2024, cat. nos. 1, 3, 4). Concluding, the deliberate separation of this area at the highest point of the site from the rest of the settlement suggests that the hut was used by the ruler (Frangipane, 2014, p.174).

Building 36

Building 36, dated to the third phase of level VIB1, was built on the monumental audience hall of the palace complex of level VIA and at the highest elevation of the settlement (Fig. 7), (Frangipane, 2014, p. 173). In the first phase, the building was constructed of mud bricks on stone foundations, and had a rather large circular hearth, known from the Middle–Upper Euphrates Region, was located at the center of a large hall (Fig. 7). To the south of the room, there is a protruding section with symmetrical passages on its both sides that provided access to the room (Frangipane et al., 2014, p. 458; Palumbi et al., 2017, p. 91). In the early phase of the building, the main room was surrounded by a storage area, including pits and two rectangular areas dug in the ground (Fig. 7), (Frangipane, 2014, p. 175; Frangipane et al., 2015, pp. 179–180).

Building 36 became more complex and larger in its second phase (Fig. 7). New huts scattered on the slopes indicate that the settlement expanded also during this phase (Palumbi et al., 2017, p. 92). Building 36 consists of an interconnected long rectangular hall oriented in northwest–southeast directions covering an area of 120 m^2 and a square room takes place to the west (Palumbi et al., 2017, p. 91) Numerous burnt beams inside the building indicate the existence of a flat roof (Palumbi et al., 2017, p. 96, fig. 7). A large open area to the south of the building was probably used as an animal pen (Frangipane et al., 2015, p. 179). An imposing east–west palisade against the rear northern wall of the building separates Building 36 from the area to its west, and from the 'Chief's' hut. Accordingly, the palisade separates the northern area from the southern areas (Frangipane et al., 2015, p. 179; Palumbi et al., 2017, p. 92).

Building 36 was destroyed by a severe fire. As a result, a large number of *in situ* material was found on the floor (Frangipane, 2017). The material consists of Kura–Araxes and Mesopotamian–related vessels, metal ornaments, spears and rivets (Dede, 2024, fig. 20). Near the south–east corner of Building 36, a narrow, subterranean hut with wooden coating of the inner surface (Fig. 7) was found; this building may have been used for ritual ceremonies or symbolic activities (Frangipane et al., 2014, p. 458). Level VIB1, including both buildings, is dated to ca. 3100 BC (Tab. 1), (Palumbi et al., 2017, pp. 118–119, tab. 4, fig. 30).

İmamoğlu Hoyuk '*Merdivenli Yapı*' (House with Stairs)

'*Merdivenli Yapı*' of the EBA III (Tab. 1) at İmamoğlu Hoyuk (Fig. 6), 15 km north–east of Malatya, is considered to have been a public building.

The building, which occupies an area of 690 m^2, extending in an east–west direction, '*Merdivenli Yapı*' (House with Stairs) by the researcher, basing on the steps recovered inside (Fig. 8). Although no data on the construction technique of the whole building is published, it is stated that one room was built with mudbrick foundations and walls. The post holes excavated in some of the rooms indicate the roof system of the building. The interior surfaces of the walls were plastered and whitewashed. The floor of the room was mud–plastered on compacted earth. An 11–stepped staircase was depicted in a drawing at the base of the seven–stepped staircase inside the building. This depiction seems to had been a plan of the mudbrick staircase drawn on the wall. Fixed installations in the rooms consist of various types of ovens, horseshoe–shaped hearths, and mud brick benches with mud–plastered surfaces. Fixed and portable finds from the complex suggest that it was used as a kitchen, storage and living area (Uzunoğlu, 1983; 1986; 1987; 1988; Dede, 2024).

Fig 7: Early and late phase plans of the 'Chief's' hut and Building 36 at Arslantepe (adopted by the author after Frangipane, 2014, p. 179, fig. 1 and Palumbi et al., 2017, p. 92, fig. 3)

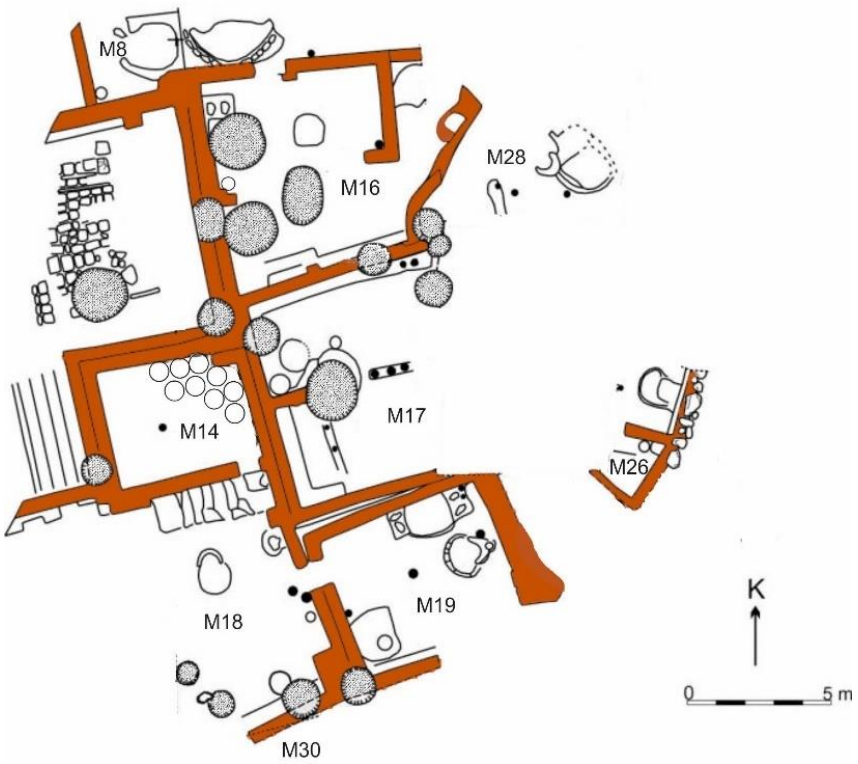


Fig. 8: *İmamoğlu Höyük 'Merdivenli Yapı' (redrawn by the author after Uzunoğlu, 1988, pln. 2; Özdemir, 2019, draw. 60)*

Kura Araxes pottery, mostly *in situ*, and Elâzığ–Malatya painted pottery were found in almost all rooms of the building (Uzunoğlu, 1986, p.185; 1987, pp. 218–219; 1987, pp. 208–209; 1989, p. 73). Small finds are rarely mentioned in excavation reports. In a pit dug into the floor of a storeroom, two bullae with the impressions of the same cylinder seal were found (Uzunoğlu, 1986, pp.184; Dede, 2024, fig. 146). Traces of the sack to which the bullae were tied are preserved on the inner surface (Uzunoğlu, 1986, p. 184). According to relative chronology, '*Merdivenli Yapı*' is dated to the EBA IIIB (Tab. 1), (Uzunoğlu, 1988, p. 210).

Norşuntepe

At Norşuntepe (Fig. 6), 26 km southeast of Elazığ, now under the Keban Dam reservoir, three public buildings were determined, superimposed in successive levels dating to the EBA III (Tab. 1).

Level 8 Public Building

The complex is located on the plane area on the top of the mound, between an east–west oriented street and a slope extending towards the plane area on the top of the mound (Fig. 9). The L–shaped building, constructed of mudbricks on stone foundations, without exact dimensions, occupies an area of ca. 660 m^2. The complex consisted of rooms of similar sizes arranged side by side. Fixed and portable finds recovered from the rooms of the complex indicate that the building consisted of units such as living spaces, a kitchen, workshops and storage areas (Hauptmann, 1979b, p. 61). To the west of the L–shaped main building, there was a 20 m long courtyard. The complex's main entrance was located to the southeast, and the domestic buildings take place to the west (Fig. 9), (Hauptmann, 1979b, p. 61; 1982, p. 17). The white plastered walls of room 10 had been decorated with red painted geometric designs. The western street of the settlement had numerous paving's, indicating its long–term use (Hauptmann, 1976, p. 47). The building inventory consists of a large number and variety of vessels, as well as stone, bone and metal tools, finds related to mining and baked clay stamp seals named as *çeç*.[5]

[5] *Çeç* stamp seals are interpreted as related to agricultural activities (For more information see: Kökten, 1945; Dede, 2014, cat. nos. 169, 171, 174; 2024, figs. 137–138; Tekin, 2017; Özdemir & Özdemir, 2020).

Fig.9: Public building of Norşuntepe, level 8 (redrawn and renumbered by the author after Hauptmann, 1979b, fig. 23; 1982, pl. 29)

Level 7 Public Building

The building, which comprise four phases, consisted of a courtyard in the plane area on the top of the mound, and a group of rooms connected to the courtyard to the east and west (Hauptmann, 1974, p. 75). Constructed with mudbricks on stone foundations, the building is L–planned and occupies an area of 690 m^2 (Fig. 10), (Hauptmann, 1974, p. 75; 1982, p. 17). The complex, with its entrance to the southeast, consisted of living quarters, storerooms, kitchens and workshops. The rooms composing the public building of the previous level, level 8, were assumed to have been used also in level 7 with minor changes for similar functions (Hauptmann, 1976, p. 45). A street sloped up to provide access to the complex was closed by a wooden gate; charred remains of wood covered the entire street. The architecture bears a large number of Kura–Araxes and imported Syrian table and storage vessels, as well as ornaments, weapons and tools made of stone, bone and metal (Dede, 2024, figs. 139–140).

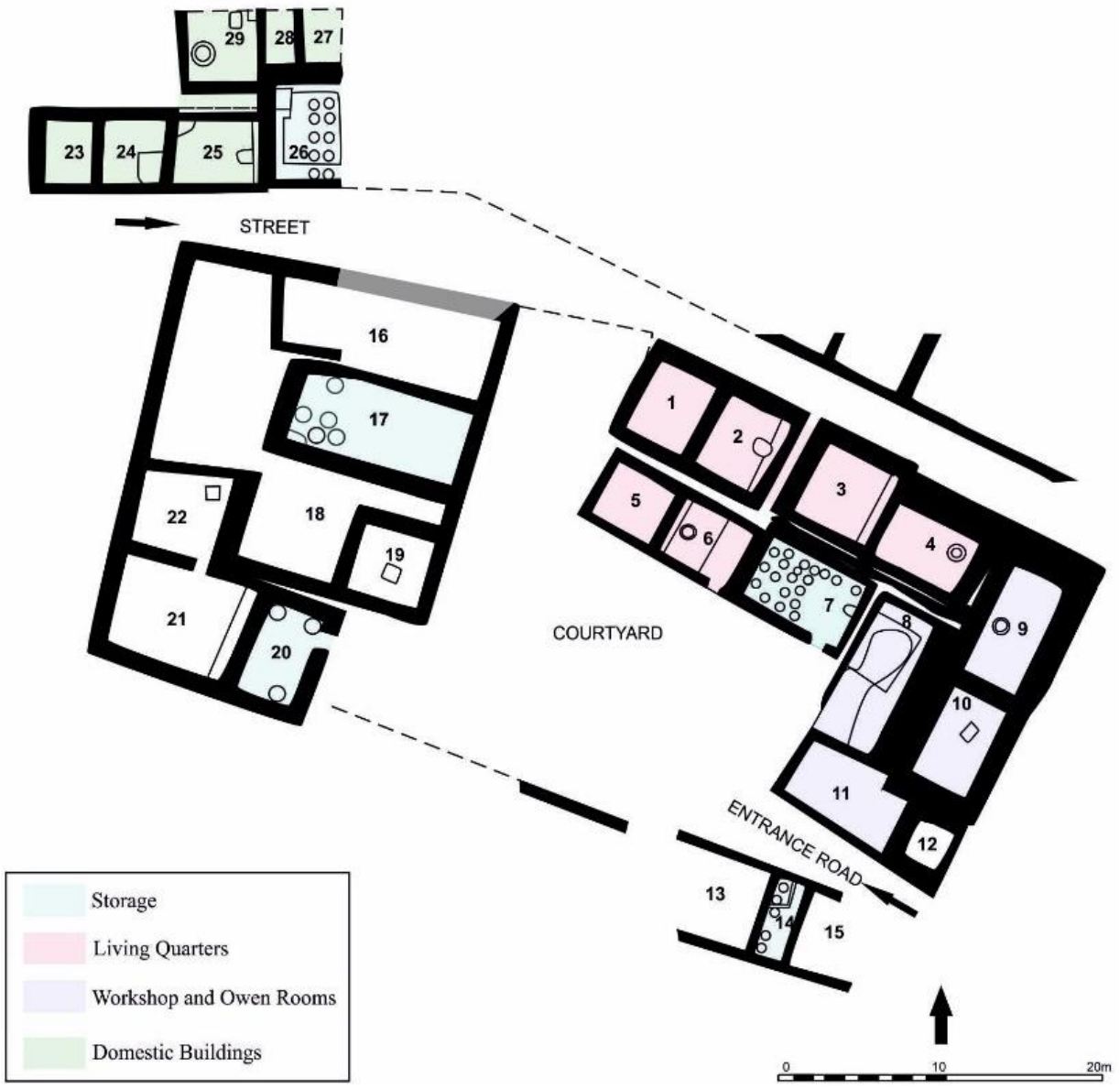


Fig.10: Norşuntepe Level 7 public building (redrawn and renumbered by the author after Hauptmann, 1979, fig. 24; 1982, pl. 38)

Level 6 Public Building/Palace

The palace was constructed with extensive filling and terracing to the south and west. The building had at least two floors, and covered an area of 2700 m^2. The palace was a monumental building consisting of living

quarters, storerooms, storehouses, workshops and kiln rooms around a central courtyard (Fig. 11). The complex is accessed via a south–easterly stone–paved street. The *Pithos Building* and the western storage building of the palace were constructed of mudbricks on strong, wide stone foundations, and were reinforced against the slope to the north and west (Hauptmann, 1972, p. 93). The walls of the rooms were white plastered, and the floors had been rebuilt several times. Some rooms were red painted (Hauptmann, 1976, p. 44). The fixed installations in the rooms comprise clay benches, various types of ovens, horseshoe–shaped hearths, and benches. In the *Pithos Building*, 25 pithoi in rows of 5x5 were found in each room, buried up to their necks in the white plastered floor (Fig. 11). Storage pithoi were also uncovered in the western storehouse (Fig. 11). The sloping entrance around the courtyard was approximately 2 x 15 m. The northern half of this street was paved with stone slabs, large potsherds and plastered with mud. A channel in the middle of the street was covered with large stone slabs to drain the water from the courtyard. The palace shows traces of heavy fire (Hauptmann, 1974, p. 74). The palace inventory consists of a large number of handmade Kura–Araxes ceramics, Elazığ–Malatya painted ceramics and a small number of wheels–made ceramics of Syrian origin, stamp seals named as *çeç,* stone, bone and metal ornaments, weapons and small finds indicating metallurgical activities (Dede, 2014, cat. nos. 151, 175; 2024, figs. 141–142).

Fig. 11: Norşuntepe Level 6 Public Building/Palace (redrawn and renumbered by the author after Hauptmann, 1979b, fig. 25).

Overall Assessment and Conclusion

In complex societies or early states, 'rulers' or 'elites' buildings began to show a tendency toward differentiation (Frangipane, 2002; Çevik, 2005). Examples include temples from mid–4th millennium BC Mesopotamia, the palace–temple complex at Arslantepe, and the palaces that began to appear in the 3rd millennium BC (Crawford, 2015; van de Mieroop, 2018; Frangipane, 2019a; 2019b; 2022). Public

administration served as the primary tool of the ruling class or elites, who monopolized key knowledge, controlled production, and managed administrative affairs from public structures (Çevik, 2005). Public buildings represented elite power, management, and settlement organization (Byrd, 1994; Steadman, 2011). These structures, both monumental and smaller in scale, indicated centralized power and were often reserved for privileged individuals.

Arslantepe's public buildings, including the 'Chief's' hut and Building 36, reflect social stratification. No seal impressions directly indicating administrative use have been found, though Late Chalcolithic Period sealing practices are known (Frangipane, 2019a). Applying Occam's razor suggests that these seals likely served administrative purposes. Building 36, with its distinct construction methods, also served public purposes, likely for assembly, banquets, and storage. The repeated construction of public buildings in the same area since the Late Chalcolithic Period indicates a collective memory (Halbwachs, 2017; Palumbi, et al., 2017, p. 117, fig. 28).

The "royal tomb" suggests an elite burial, reflecting the symbolic value of such structures (Frangipane, 2014; 2019a). Artifacts such as zoomorphic rhyta and bone piles suggest feasting practices that align with Brian Hayden's (2001, pp. 23–64). criteria for identifying feast behavior (Dede, 2024, pp. 72):

-Recreational food and drinks (alcohol),

-Ritual vessels for the consumption/presentation of alcohol (zoomorphic rhyta),

-The presence of a large number of vessels

-Some elements that are larger than usual (circular hearth)

-Piles of bones

-Prestige objects (metal objects)

The 'Chief's' hut, building 36, and the Cult Area appear to form a public complex.

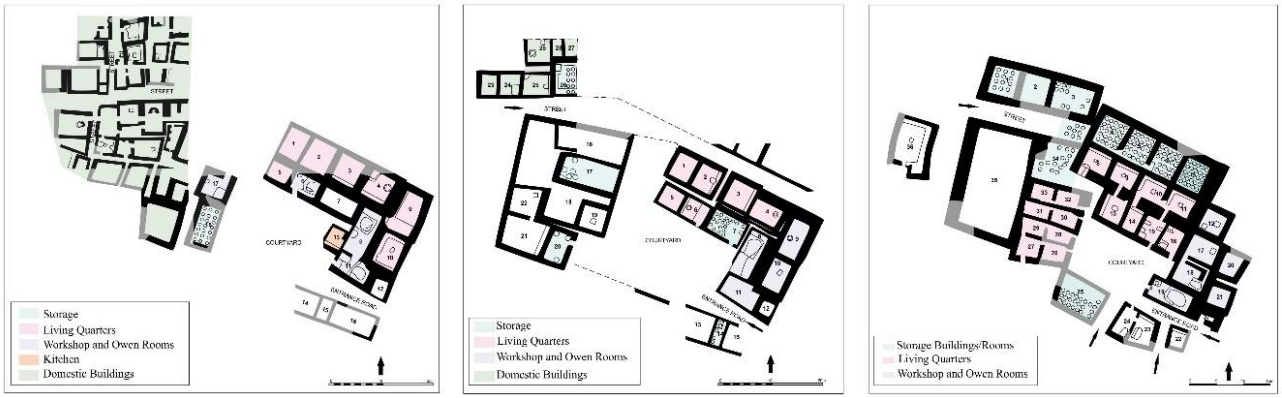


Fig 12: Plan showing the development/alterations of the public buildings of levels 8, 7 and 6 at Norşuntepe (redrawn and renumbered by the author after Hauptmann, 1979b, figs. 23 – 25)

At İmamoğlu Hoyuk, the '*Merdivenli Yapı*' may have been a public building linked to administrators involved in long–distance trade, evidenced by Mesopotamian seal–impressed bulla fragments (Dede & Oğuzhanoğlu, 2024, cat. nos. 113-114). The specialized workforce suggests İmamoğlu was a medium–sized settlement that collected and stored goods from surrounding villages.

At Norşuntepe, the architectural continuity from levels 8 and 7 to level 6 reflects a stable administrative presence (Fig. 12). The palace at level 6, a monumental multi–story complex, housed workshops, kitchens, and extensive storage. The scale of cereal storage points to advanced agriculture, with the surplus likely used by rulers for trade or to support the populace in hard times. The stamp seals named as *çeç* may have facilitated the distribution of agricultural products (Dede, 2014, p. 86; 2024, p. 293). Norşuntepe, located in fertile Altınova, was a central settlement with skilled labor in ceramics, stone, bone, and metallurgy.

The public buildings in the Elazig–Malatya Region were built at the highest point of the settlement and were physically isolated from the rest of the population. The public architecture of the settlements, the

quality of the objects recovered, and the 'royal tomb' at Arslantepe suggest the existence of a vertical hierarchy in these centers. No spatial arrangement indicating that religious rituals were performed directly inside the public buildings or units that could be interpreted as temples were found at any of the three sites. However, Arslantepe probably had a separate area for ritual activities (Fig. 7). There is evidence that these centers had a labor force specialized in mining (Arslantepe, Norşuntepe), bone, stone[6] (Norşuntepe) and pottery (İmamoğlu Hoyuk), (Dede, 2024). This suggests that these settlements may have been specialized production centers in the region, and that this production chain may have been under the control of the elite class, who ruled the settlements from public buildings.

The public buildings analyzed in the Elazığ–Malatya Region consist of residential, administrative, and ceremonial buildings. When the internal dynamics of the period and all the data discussed above are evaluated as a whole, it should be considered that the buildings defined as 'Chief's' hut or bey's mansion should be considered to have been used not only as dwellings, but also for administration, i.e., for public purposes. On the other hand, the buildings that were built successively and repeatedly, which show the stability of the rulers in Norşuntepe, were undoubtedly public buildings due to their size, equipment, and quality of furnishings. The building on level 6, which was converted into a palace, had a rich collection of artifacts. It should not be overlooked that these buildings may have been evacuated due to the intense fires, particularly at İmamoğlu Hoyuk and Norşuntepe where the remains of such fires were found. These public buildings in the Elazığ–Malatya Region can be interpreted as signs of transformation of the elite or the ruling elites, in other words, of power after the Late Chalcolithic Period and in the EBA.

While the Elazığ–Malatya Region as a whole, and the Upper Euphrates Basin seem to have been related to Mesopotamia during the Chalcolithic, the arrival of communities of Kura–Araxes origin in the basin seems to have changed the socio–economic structure (Coşkun, 2019a, p. 32; Parlıtı & Yücel, 2021, p. 100). During the EBA, the Elazığ–Malatya Region also witnessed settlements of Kura–Araxes origin, and the interruption of relations with Mesopotamia, which were intense in the previous period. The increase in the number of rural settlements during the EBA indicates that the population of the region also increased (Erarslan, 2006, p. 83; Coşkun, 2019a, p. 32). The increase in the number of settlements in the EBA I and II and their temporary settlement characteristics indicate the presence of these mobile groups. During this period, there is instability in the region due to the presence of mobile groups. However, by evaluating the public buildings excavated at Arslantepe and the settlement data, it can be suggested that Arslantepe may have been the central settlement of these small mobile groups (Fig. 2). No buildings that can be defined as public buildings in the region during the EBA II were found. The main reason for this can be explained by the spread of the Kura–Araxes culture throughout the region, the decline of Mesopotamian influences, and the constant moving of this nomadic community, suggesting that the region was still unstable.

By the EBA III, settlements became more permanent (di Nocera, 2008). In this context, several centralized settlements emerged and developed in the landscape. It can be defined as a more 'Anatolian' phase in which a new form of power emerged, based on small local lords who had to dominate the region in conflict and competition (Nocera, 2008, pp. 636–638; Frangipane & di Nocera, 2012; Frangipane, 2012b, fig. 12). İmamoğlu Hoyuk is classified as medium–sized among the mounds of the region, (Özdoğan, 1977, pp. 21, 38) and is one of the few sites excavated in the northeastern part of Malatya where data for the EBA III can be obtained (Fig. 3). İmamoğlu Hoyuk demonstrates the existence of a ruling class even in small settlements, and these rulers established their living and administrative areas at the highest point of the settlement, isolating themselves from the rest of the population. Similarly, on the other side of the Euphrates, in the Elazığ Region, settlements grew in the EBA III, and central settlements emerged. The presence of a building in Norşuntepe, which can now be defined as a palace, indicates that the region may have become centralized (Coşkun, 2019b). No cultural breaks were found in the transition from the EBA to the Middle Bronze Age in the region (Coşkun, 133, footnote 137). It is assumed that the stability achieved in the EBA III was the basis for its establishment in the region in the 2nd millennium BC. Unearthed in Elazığ, *Harput Relief*

[6] 13 kg of obsidian found at the entrance to level 6 palace at Norşuntepe must have been taken to the palace workshop for processing (Hauptmann, 1979a, p. 479).

(Demir et al., 2016).[7] can be defined as a war and victory stele from the Middle Bronze Age, and together with its architectural context, it points out the existence of political authority in the region during the early phase of the Middle Bronze Age. The relief, considered with the discussion above, suggests that the foundations of this central authority may have been established in the late EBA.

Acknowledgments

I would like to thank my supervisor Prof. Dr. Ayşegül Aykurt for her valuable comments and guidance. I am eternally grateful to my colleague Dr. Azer Keskin for suggestions and help in English. I would also like to thank my colleagues Dr. Süheyla Gedik Zimmermann, Assoc. Prof. Dr. Nilgün Masatcıoğlu and Dr. Tuğçe Şener for their valuable insights and constructive comments. Special thanks are due to the Editor–in–Chief of OANNES–International Journal of Ancient History, Assoc. Prof. Dr. Okay Pekşen, and the anonymous reviewers who worked to improve this study.

Ethics Committee Approval: Ethics committee approval is not required.
Peer-review: Externally peer-reviewed.
Conflict of Interest: The author has no conflicts of interest to declare.
Financial Disclosure: The author declared that this study has no financial support.

References

Algaze, G. (2001). Initial Social Complexity in Southwestern Asia. *Current Anthropology, 42*(2), 199–233. https://doi.org/10.1086/320005

Byrd, F. B. (1994). Public and Private, Domestic and Corporate: The Emergence of the Southwest Asian Village. *American Antiquity, 59*, 639–666. https://doi.org/10.2307/282338

Childe, V. G. (1950). The Urban Revolution. *The Town Planning Review, 21*(1), 3–17.

Childe, V. G. (1994). Toplumsal Evrim. Alan Yayıncılık.

Conti, A. M. & Persiani, C. (1993). When Worlds Collide Cultural Developments in Eastern Anatolia in the Early Bronze Age. M. Frangipane, H. Hauptmann, M. Liverani, P. Matthiae & M. Mellink (Eds.), *Between the Rivers and Over the Mountains: Archaeologica Anatolica et Mesopotamica Alba Palmieri Dedicata* (pp. 361–413). Dipartimento di Scienze Storiche Archeologiche e Antropologiche dell'Antichita Universita di Roma «La Sapienza».

Coşkun, N. (2018). Keban Projesi: Ağın Hoşrik Mevki ve Kalecikler Kurtarma Kazılarına Yeni Bir Bakış. *Anadolu Araştırmaları, 21*,124–153.

Coşkun, N. (2019a). Keban Projesi: Ağın–Kalaycık Höyüğü Kurtarma Kazısının Yeniden Değerlendirilmesi. *Belleten,* 83(296), 25–46. https://doi.org/10.37879/belleten.2019.25

Coşkun, N. (2019b). The societies of the Upper Euphrates Basin during the Early Bronze Age: The case study of Ağın excavations. M. Novotná, W. Jobst, K. Kuzmová, V. Varsik E. Hrnčiari (Eds.), *Proceedings of the International Conference Ancient Communities and Their Elites from the Bronze Age to Late Antiquity (Central Europe–Mediterranean–Black Sea) Part I* (pp.75–85)*, ANODOS Studies of the Ancient World 13/2013*, Trnavskej Univerzity.

Crawford, H. (2015). *Sümer ve Sümerler*. Arkadaş Yayınevi.

Çevik, Ö. (2004). *Anadolu'da Kentleşme Süreci* (Yayımlanmamış Doktora Tezi). Ege Üniversitesi.

Çevik, Ö. (2005). *Arkeolojik Kanıtlar Isığında Tarihte İlk Kentler ve Kentleşme Süreci: Kuramsal bir Değerlendirme.* Arkeoloji ve Sanat Yayınları.

Çevik, Ö. (2007). The emergence of different social systems in Early Bronze Age Anatolia: urbanisation versus centralization. *Anatolian Studies*, 57, 131–140. https://doi.org/10.1017/S0066154600008553

Dede, M. G. (2014). Anadolu'da Bulunmuş Eski Tunç Çağı'na Ait Silindir ve Damga Mühürler [MA dissertation, Ankara University].

Dede, M. G. (2024). Erken Tunç Çağı'nda Anadolu Kamusal Yapıları [Doctoral dissertation, Hacettepe University].

Dede, M. G. & Oğuzhanoğlu, U. (2024). Cylinders in Anatolia: Remarks on Early Bronze Age Seals and Sealings. *Anatolian Research, 31*, 31–75. https://doi.org/10.26650/anar.2024.31.1472831

Demir, B., Abay, E. & Sevin, V. (2016). Harput Kabartması: Anadolu Uygarlıklarına Yeni Bir Katkı. *Arkeoloji ve Sanat* Dergisi, *153*, VII–XVI.

[7] The *Harput Relief* is characteristic of the Akkadian Period stylistically and technically, but it also contains elements of the Old Babylonian Period. It is thought to date to the Middle Bronze Age based on its context.

Erarslan, A. (2006). Progress towards first cities in eastern and southeastern Anatolia (2600–1900 BC): The local dynamics of urbanistic development. *TÜBA–AR*, *IX*, 81–96.

Erarslan, A. (2010). Tripartite Plan Evsel ve Kamusal Mimaride Kullanımı (M.Ö. 5800–3100). *Arkeoloji ve Sanat Dergisi*, *135*, 11–22.

Flannery, K. & Joyce, M. (2012). *The creation of inequality: how our prehistoric ancestors set the stage for monarchy, slavery, and empire*. Harvard University Press.

Frangipane, M. (1996). Doğu Anadolu'da Kentleşme Modelleri. Y. Sey (Ed.), *Tarihten Günümüze Anadolu'da Konut ve Yerleşme* (pp. 60–70). Türkiye Ekonomik ve Toplumsal Tarih Vakfı.

Frangipane, M. (2002). *Yakındoğu'da Devletin Doğuşu*. Arkeoloji ve Sanat Yayınları,

Frangipane, M. (2003). Developments in Fourth Millenium Public Architecture in the Malatya Plain: From Simple Tripartiteto Complex and Bipartite Pattern. M. Özdoğan, H. Hauptmann & N. Başgelen (Eds.), *Ufuk Esin'e Armağan Köyden Kente Yakındoğu'da İlk Yerleşimler 1* (pp. 147–171). Arkeoloji ve Sanat Yayınları.

Frangipane, M. (2010). Different Models of Power Structuring at the Rise of Hierarchical Societies in the Near East: Primary Economy Versus Luxury and Defence Management. D. Bolger & L. C. Maguire (Eds.), *Development of Pre–State Communities in the Ancient Near East* (pp. 79–87). Oxbow Books.

Frangipane, M. (2011). Arslantepe–Malatya: A Prehistoric and Early Historic Center in Eastern Anatolia. S. R. Steadman & J. G. McMahon (Eds.), *The Oxford Handbook of Ancient Anatolia, 10,000–323 B.C.E*. (pp. 968–992). Oxford University Press.

Frangipane, M. (2012). The Collapse of the 4th Millennium Centralised System at Arslantepe and the Far–Reaching Changes in 3rd Millennium Societies. *Origini*, *XXXIV*, 237–260.

Frangipane, M. (2014). After collapse: Continuity and Disruption in the settlement by Kura–Araxes–linked pastoral groups at Arslantepe–Malatya (Turkey), New data. *Paléorient*, *40*, 169–182.

Frangipane, M. (2017). The Role of Metallurgy in Different Types of Early Hierarchical Society in Mesopotamia and Eastern Anatolia. P. W. Stockhammer & J. Maran (Eds.), *Appropriating Innovations. Entangled Knowledge in Eurasia, 5000–1500 BCE* (pp. 171–183). Oxbow Books.

Frangipane, M. (2019a). Arslantepe. Siyasi Merkezin Yükselişi ve Düşüşü: Tapınaktan Saraya Saraydan Surla Çevrili Bir Kente. N. Durak & M. Frangipane (Eds.), *Arslantepe I. Uluslararası Arkeoloji Sempozyumu Bildirileri* (pp. 71–104). İnönü Üniversitesi.

Frangipane, M. (2019b). The secularization of power: A precocious birth and collapse of a palatial system at Arslantepe (Malatya, Turkey) in the 4th millennium BC. D. Wicke (Ed.), *Der Palast im antiken und islamischen Orient 9* (pp. 43–61). Harrassowitz Verlag.

Frangipane, M. (2022). Archaeological Evidence of the Political Economy in Pre–State and Early State Societies in the Near East. Mesopotamia and Anatolia, Some Remarks and Comparison. M. Frangipane, M. Poettinger & B. Schefold (Eds.), *Ancient Economies in Comparative Perspective: Material Life, Institutions and Economic Thought* (pp. 91–110). Springer.

Frangipane M., Balossi Restelli, F. & Çalışkan Akgül, H. (2014). Arslantepe 2011–2012 Yılı Kazı Sonuçları: İlk Tunç Çağı I'in Yeni Buluntuları. *Kazı Sonuçları Toplantısı, 35*(2), 456–470.

Frangipane M., Balossi Restelli, F. & Çalışkan Akgül, H. (2015). Arslantepe'de 2013 Yılı Kazı Sezonu: İlk Tunç I ve Geç Kalkolitik Tabakalarının Yeni Buluntuları. *Kazı Sonuçları Toplantısı, 36*(2),177–191.

Frangipane, M., Di Nocera, G. M. (2012). Discontinuous developments in settlement patterns and socio–economic/political relations on the Malatya Plain in the 4th and 3rd millennia BC. F. B. Tena, M. B. García, A. G. Bach, C. T. Dacasa & O. V. Campos (Eds.), *Broadening Horizons 3. Conference of Young Researchers Working in the Ancient Near East* (pp. 289–305). Universitat Autònoma de Barcelona Servei de Publicacions.

Fried, M. H. (1967). *The Evolution of Political Society.* Random House.

Habermas, J. (2003). *Kamusallığın Yapısal Dönüşümü*. İletişim Yayınları.

Halbwachs, M. (2017). *Kolektif Hafıza*. Heretik Yayınları.

Hauptmann, H. (1972). Norşun Tepe Kazısı, 1970. *Keban Projesi 1970 Çalışmaları* (pp. 87–119). Türk Tarih Kurumu Basımevi.

Hauptmann, H. (1974). Norşun Tepe Kazıları, 1971. *Keban Projesi 1971 Çalışmaları* (pp. 71–103). Türk Tarih Kurumu Basımevi.

Hauptmann, H. (1976). Norşun Tepe Kazıları, 1972. *Keban Projesi 1972 Çalışmaları* (pp. 41–101). Türk Tarih Kurumu Basımevi.

Hauptmann, H. (1979a). Norşuntepe Kazıları, 1973. *Keban Projesi 1973 Çalışmaları* (pp. 43–79). Türk Tarih Kurumu Basımevi.

Hauptmann, H. (1979b). Kalkolitik Çağ'dan İlk Tunç Çağı bitimine kadar Norşuntepe yerleşiminin gelişimi. *VIII. Türk Tarih Kongresi, 1*, 55–63.

Hauptmann, H. (1982). Norşuntepe Kazıları, 1974. *Keban Projesi 1974–1975 Çalışmaları* (pp. 15–71). Türk Tarih Kurumu Basımevi.

Hauptmann, H. (2000). Zur Chronologie des 3. Jahrtausends v. Chr. am Oberen Euphrat Aufgrund der Stratigraphie des Norşuntepe. C. Marro & H. Hauptmann (Eds.), *Chronologies des pays du Caucase et de l'Euphrate aux IVe –IIIe millenaires. From the Euphrates to the Caucasus: Chronologies for the 4th –3rd millennium B.C. Vom Euphrat in den Kaukasus: Vergleichende Chronologie des 4. und 3. Jahrtausends v. Chr. Varia Anatolica 11* (pp. 419–438). Institut Français d'Études Anatoliennes.

Hauptmann, H. (2003). Norşuntepe. *ArkeoAtlas*, *2*, 22–24.

Hauptmann, H. (2011). The Urfa Region. M. Özdoğan, N. Başgelen & P. Kuniholm (Eds.), *The Neolithic in Turkey New, Excavations & New Research the Euphrates Basin* (pp. 85–138). Archaeology & Art Publications.

Hayden, B. (2001). Fabulous feasts: A prolegomenon to the importance of feasting. M. Dietler & B. Hayden (Eds.), *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power* (pp. 23–64). Smithsonian Institution.

Işıklı, M. (2011). *Doğu Anadolu'da Erken Transkafkasya Kültürü, Çok Bileşenli Gelişkin Bir Kültürün İzleri*. Arkeoloji ve Sanat Yayınları.

Işıklı, M. & Ergürer, H. (2017). Erken Tunç Çağı Doğu Anadolu Bölgesi Kura–Aras Kültürü'nde Mekân ve Mekan Kullanımına Dair Gözlemler. Gökhan Coşkun (Ed.), *Anadolu, Arkeoloji, Zaman ve Mekân* (pp. 43–64). Bilgin Kültür Sanat Yayıncılık.

Işıklı, M., Parlıtı, U. & Teimourpour Torabi, P. (2019). Doğu Anadolu Kuzeybatı İran Kura–Aras Halklarının Sosyal Yapısına Dair; Ölü Gömme Verileri Üzerine Gözlemler. Aydın Erön & Emre Erdan (Eds.), *Doğudan Batıya 70. Yaşında Serap Yaylalı'ya Sunulan Yazılar* (pp. 319– 337). Bilgin Kültür Sanat Yayınları.

Kökten, İ. K. (1945). Kuzey–Doğu Anadolu Prehistoryasında Bayburt Çevresinin Yeri. *Anadolu*, *5*, 465–505.

Liberotti, G. & Alvaro, C. (2018). Arslantepe–Malatya: Domestic Architecture and Building Technology during the Early Bronze Age II–III. *Scienze Dell'antichità, 24*(1), 19–39.

Manzanilla, L. (1997). Early Urban Societies: Challenges and Perspectives. (Ed.) L. Manzanilla, *Emergence and Change in Early Urban Societies* (pp. 3–27). Springer.

Margueron, J. C. (2019). Palais 'mésopotamiens': status questionis. P. M. M. Bietak & S. Prell (Eds.), *Contributions to the Archaeology of Egypt, Nubia and the Levant. Ancient Egyptian and Ancient Near Eastern Palaces Volume II* (pp. 9–31). Harrassowitz Verlag.

Marro, C. (2011). Eastern Anatolia in the Early Bronze Age. S. R. Steadman & J. G. McMahon (Eds.), *The Oxford Handbook of Ancient Anatolia 10,000–323 B.C.E* (pp. 290–313). Oxford University Press.

Mellink, M. (1992). Anatolian Chronology. R. W. Ehrick (Ed.), *Chronologies in Old World Archaeology*, *Vol. I–II* (pp. 171–184; 207–220). University of Chicago Press.

van de Mieroop, M. (2018). *Eski Yakındoğu Tarihi MÖ 3000–323*. Homer Yayınevi.

Morgan, H. L. (1986). *Eski Toplum I–II*. Payel Yayınevi.

di Nocera, G., M. (2000). Radiocarbon Datings from Arslantepe and Norşuntepe: The fourth– third millennium absolute chronology in the Upper Euphrates and Transcaucasian Region. P. Matthiae, A. Enea, L. Peyrone & F. Pinnock (Eds.), *First International Congress on the Archaeology of the Ancient Near East* (pp. 333–348). Università Degli Studi di Roma "La Sapienza".

di Nocera, G. M. (2008). Settlements, population and landscape on the Upper Euphrates between V and II millennium BC. Results of the Archaeological Survey Project 2003–2005 in the Malatya Plain. J. M. Córdoba, M. Molist, M. C. Pérez, I. Rubio & S. Martínez (Eds.), *Proceedings of the 5th International Congress on the Archaeology of the Ancient Near East, Vol I* (pp. 633–647). UAM Ediciones.

Osborne, J. F. (2014). Monuments and Monumentality. J. F. Osborne (Ed.), *Approaching Monumentality in Archaeology* (pp. 1–23). State University of New York Press.

Özdemir, A. & Özdemir, A. (2020). Murat Höyük'ten Bir Çeç Damga Mühür. *TÜBA–KED*, *22*, 131–139. https://doi.org/10.22520/tubaked.2020.22.008

Özdemir, U. (2019). *İlk Tunç Çağı'nda Malatya–Elâzığ Bölgesi Mimarisi* (Yayımlanmamış Yüksek Lisans Tezi). Şeyh Edebali Üniversitesi.

Özdoğan, M. (1977). *Aşağı Fırat Havzası 1977 Yüzey Araştırmaları*. Orta Doğu Teknik Üniversitesi Aşağı Fırat Projesi Yayınları.

Özgüç, T. (1999). *Kültepe–Kaniš/Neša Sarayları ve Mabetleri*. Türk Tarih Kurumu Basımevi.

Palumbi, G. (2008). *The red and black: social and cultural interaction between the Upper Euphrates and Southern Caucasus communities in the fourth and third millennium BC*. Sapienza Università di Roma.

Palumbi, G., Alvaro, C., Grifoni, C., Frangipane, M., Vignola, C. & Terrasi, F. (2017). A 'communal' building of the beginning of the Early Bronze Age at Arslantepe–Malatya (Turkey). Spatio–functional analysis and interpretation of the archaeological context. *Paléorient*, *43*, 89–123.

Parlıtı, U. & Yücel, Ç. (2021). Doğu Anadolu'nun Erken Tunç Çağında Yaşanan Dönüşümün Parametreleri: Mezar Tipleri ve Ritüeller. L. Gürkan Gökçek, Ercüment Yıldırım & Okay Pekşen (Eds.), *Anadolu'nun Eski Çağlarında İnanç Olgusu ve Yönetim Anlayışı* (pp. 99–130). Değişim Yayınları.

Parlıtı, U. & Caner, E. (2021). Geography and Climate on the Site Selection of Archaeological Settlements: Examples from Kura–Araxes Settlements in the Upper Euphrates–Malatya Basin. *Aras Türkiye Eski Yakın Doğu Araştırmaları Dergisi, 1*(3), 29–53.

Redman, C. L. (1978). *The rise of civilization. From early farmers to urban society in the Ancient Near East*. W. H. Freeman & Co.

Renfrew, C. & Bahn, P. (2018). *Arkeoloji. Kuramlar, Yöntemler ve Uygulama*. Homer Kitabevi.

Rothman, M. S. (1994). Introduction Part. I. Evolutionary Typologies and Cultural Complexity. G. Stein & M. S. Rothman (Eds.), *Chiefdoms and Early States in the Near East the Organizational Dynamics of Complexity*. *World Archaeology No. 18* (pp. 1–11). Prehistory Press.

Sagona, A. (2000). Sos Höyük and the Erzurum Region in late prehistory: a provisional chronology for Northeast Anatolia. C. Marro & H. Hauptmann (Eds.), *Chronologies des pays du Caucase et de l'Euphrate aux IVe–IIIe millenaires. From the Euphrates to the Caucasus: Chronologies for the 4th–3rd millennium B.C. Vom Euphrat in den Kaukasus: Vergleichende Chronologie des 4. Und 3. Jahrtausends v. Chr. Varia Anatolica 11* (pp. 329–275). Institut Français d'Études Anatoliennes.

Sagona, A. & Zimansky, P. (2015). *Arkeolojik Veriler Işığında Türkiye'nin En Eski Kültürleri MÖ 1.000.000–550*. Arkeoloji ve Sanat Yayınevi.

Schmidt, K. (1996). *Norşuntepe Kleinfunde I Die Lithische. Industri Archaeoloica Euphratica Ausgrabungen und Forschungen im Türkischen Euphratgebiet*. Verlag Philipp von Zabern.

Schmidt, K. (2002). *Norşuntepe Kleinfunde II. Artefakte aus Felsgestein, Knochen und Geweih, Ton, Metall und Glas*. Verlag Philipp von Zabern.

Service, R. E. (1971). *Primitive Social Organization an Evolutionary Perspective (Second Edition)*. Random House.

Steadman, S. R. (2011). Take Me to Your Leader: The Power of Place in Prehistoric Anatolian Settlements. *Bulletin of the American Schools of Oriental Research*, *363*, 1–24. https://doi.org/10.5615/bullamerschoorie.363.fm

Şenel, A. (2001). *İlkel Topluluktan Uygar Topluma*. Bilim ve Sanat Yayınları.

Şenel, A. (2006). *Kemirgenlerden Sömürgenlere İnsanlık Tarihi*. İmge Kitabevi.

Teather, A. (2020). Neolithic monumentality for the 21st century. A. B. Gebauer, L. Sørensen, A. Teather & A. C. Valera (Eds.), *Monumentalising Life in the Neolithic: Narratives of Change and Continuity* (pp. 9–19). Oxbow.

Tekin, H. (2017). Hakemi Use'den Bir Pintadera. S. Özkan, H. Hüryılmaz & A. Türker (Eds.), *Samsat'tan Acemhöyük'e Eski Uygarlıkların İzinde Aliye Öztan'a Armağan* (pp. 231–238). Ege Üniversitesi Basımevi.

Trigger, G. B. (1990). Monumental Architecture: A Thermodynamic Explanation of Symbolic Behaviour. *World Archaeology*, *22*, 119–132.

Uzunoğlu, E. (1981). Malatya İmamoğlu Höyüğü 1980 Çalışmaları. *Kazı Sonuçları Toplantısı*, *III*, 17–19.

Uzunoğlu, E. (1983). İmamoğlu Höyüğünde 1981 Yılı Çalışmaları. *Kazı Sonuçları Toplantısı*, *IV*, 131–137.

Uzunoğlu, E. (1985). Malatya İmamoğlu Höyüğünde 1983 Yılı Kazı Çalışmaları. *Kazı Sonuçları Toplantısı*, *VII*, 235–245.

Uzunoğlu, E. (1986). İmamoğlu Kazıları 1984 Yılı Çalışmaları. *Kazı Sonuçları Toplantısı*, *VII*, 181–201.

Uzunoğlu, E. (1987). Malatya–İmamoğlu Höyüğünde 1985 Yılı Kazı Çalışmaları. *Kazı Sonuçları Toplantısı*, *VIII*(I), 213–231.

Uzunoğlu, E. (1988). Malatya İmamoğlu Höyüğü 1986 Yılı Kazısı Çalışmaları. *Kazı Sonuçları Toplantısı*, *IX*(I), 205–229.

Uzunoğlu, E. (1989). Malatya İmamoğlu Höyüğünde 1987 Yılı Kazı Çalışmaları. *Kazı Sonuçları Toplantısı*, *X*(I), 71–95.

Ünlüsoy, S. (2018). İlk Tunç Çağları Boyunca Batı Anadolu'da Toplumsal Değişim. *Cedrus*, *VI*, 105–124.

Wason, P. (1994). *The Archaeology of Rank*. Cambridge University Press.

Whallon, R. Jr. (1979). An Archaeological Survey of the Keban Reservoir Area of East–Central Turkey. University of Michigan Museum of Anthropological Archaeology.

Yakar, J. (2011). *Reflections of Ancient Anatolian Society in Archaeology from Neolithic Village Communities to EBA Towns and Polities*. Homer Yayınevi.

Yalçin, H. G. (2022). Tepecik ve Yukarı Fırat Havzası MÖ 3. Binyıl Yerleşmeleri. M. Işıklı, E. Fidan, A. Türker & M. A. Yılmaz (Eds.), *MÖ III. Binyılda Anadolu* (pp. 539–553). Ege Yayınları.

OANNES
2025, 7(1) March

Research Article DOI: 10.33469/oannes.1540862

Cultural Heritage-Wise Analysis Based on Multilateral Comparanda Attesting to The Uniqueness of Castrum Zerzevan and its Mithraeum

Aytaç COŞKUN
Department of Archaeology, Dicle University, Sezai Karakoç Faculty of Literature, Diyarbakır, Türkiye
aytaccoskun@hotmail.com

Eser Deniz OĞUZ KIRCA
Independent Researcher, Ankara
zedok33@gmail.com

Volkan DEMİRCİLER
Corresponding Author
Çanakkale Onsekiz Mart University, Faculty of Humanities and Social Science, Department of Archaeology, Çanakkale, Türkiye
volkandemirciler@gmail.com

Submitted	30.08.2024
Revision Requested Last	11.10.2024
Revision Received	14.10.2024
Accepted Date	26.03.2025
Publication Date	26.03.2025

Cite this article
Coskun, A., Oğuz Kırca, E. D. & Demirciler, V. (2025). Cultural Heritage-Wise Analysis Based on Multilateral Comparanda Attesting to The Uniqueness of Castrum Zerzevan and its Mithraeum, *Oannes*, 7(1), March, pp. 39-63.

Abstract

The Zerzevan Fortress on the eastern borders of the Roman Empire reflects the prototype of the headquarters established by the Romans in Upper Mesopotamia. The fortress is one of the rare examples that has survived to the present day, partially preserving its plan scheme. It is also a quasi-civilian settlement where rituals of different belief systems and Roman military planning elements can be seen together. Dating back to the 1st-6th centuries AD, the castrum is a prototype of the castra Romana outside central Rome, with a carefully designed construction scheme and appearance matching a medium-sized garrison.

Based on all the available architectural and archaeological data, without any assumptions or limitations, this paper endeavors to posit the rightfulness of the nomination of the site as a world cultural heritage as a unique testimony of the Roman world in Mesopotamia and the necessity for finalizing the process. It aims to demonstrate the site's uniqueness and show the reasons for its rarity all over the globe through national, regional, and continental comparanda, either on a fortress system, single-building, or duo scale.

There is either a gap in the WHL regarding the co-presence of the duo of Castrum and Mihtraeum, or they have not been adequately represented in the same historical site/archaeological belonging so far. In this context and in comparison to counterparts, Zerzevan, with its Mithraeum, is a featured area where forts and mithraeums known from Europe and the Mediterranean Basin, where Roman rule was established, can be best observed in a single point.

Keywords: *Castrum, Roman, Heritage, Mithraeum, Zerzevan*

Genişletilmiş Özet

Yukarı Mezopotamya'da, Roma İmparatorluğu'nun Suriye eyaleti sınırları içerisinde yer alan Zerzevan Kalesi, günümüzde Diyarbakır'ın 35 km güneyindeki tepelik bir alan üzerine kurulmuştur. İ.S. 1.-6. yüzyıllara tarihlenen kale, orta büyüklükteki bir garnizona denk tasarlanmış planıyla kıta Avrupası dışındaki Roma kalelerinin bir prototipidir.

Literatürde kastrum tipolojisiyle uyum sergileyen Zerzevan Kalesi, Asur Dönemi'nden (MÖ 882-611), 639 yılında İslam ordularının bölgeyi fethine kadar kesintisiz olarak yerleşim görmüştür. Ana askeri yerleşim Roma Dönemi'nde MS 2. ve 3. yüzyıllarda, Severuslar Dönemi'nde (MS 198-235) inşa edilmiştir. Yerleşimin surları ve yapıları I. Anastasios I (MS 491-518) ve I. Justinianos (MS 527-565) dönemlerinde onarılarak bazı yapılar ise yeniden inşa edilerek mevcut son haline getirilmiştir.

UNESCO'ya aday gösterilen alan, Zerzevan Kalesi ve Mithraeum (Mithras Kutsal Alanı)'dan oluşmaktadır. Bu ikisi, Roma egemenliğinin kurulduğu Kıta Avrupası ve Akdeniz Havzası'nda bilinen kalelerin ve mithraeumların tek bir noktada en iyi şekilde gözlemlenebileceği özellikli bir alandır.

Askeri yerleşim, mimari ve teknik bütünlük oluşturan ve Roma askeri tarihinin planlama projelerine örnek teşkil eden ünik bir yapılar grubudur. Yanı sıra, farklı inanç sistemlerinin, ritüellerin ve Roma askeri planlama unsurlarının bir arada görülebildiği yarı sivil bir yerleşimdir. Kale sistemi, askeri mühendislerin stratejik tasarım becerisini net bir şekilde ortaya koymakta, MS 3.-4. yüzyıllar arasında Akdeniz'in doğusundaki Mezopotamya bölgesindeki sınır hatlarında (limes) arazi koşullarına ve topografik özelliklere uygun planlayıp inşa ettiklerini göstermektedir.

Zerzevan Kalesi, pagan Roma'dan Hıristiyan dünyasına geçişi temsil etmesi bakımından önemli bir konumdadır. MS 1-3. yüzyıllara tarihlenen Mithraeum kompleksi, Part-Sasani sınırları boyunca uzanan en eski kutsal alanlardan biri olup tamamen ana kayaya oyulmuştur. İlişkili mekânları, bütüncül bir mimari peyzaj içinde istisnai bir pagan uygulama alanı olarak yerinde gözlemlenebilmektedir. Kompleks, M.S. 4. yüzyılda Hıristiyanlığın kabulünden ve dönemin ilgili otoriteleri tarafından yasaklanıp kaldırılmasından sonra tahrip edilip üzeri örtülmüş olduğundan günümüze değin mümkün olan en iyi durumda ulaşmıştır. Aynı zamanda, planlanma biçimi, yerinde mimari unsurlarla iyi tanımlanmış iç tasarımı ve dönemin "teknolojisini" yansıtan yüzey uygulamaları ve sembol izleriyle ideal bir örnek mekân olup Mithras'ın ritüellerinin yorumlanması için eşsiz bir tanıklık sunmaktadır. Surların içinde yer alan Mithraeum, muhtemelen Roma tarafından doğuda kurulan ilk kült alanlarından biridir.

UNESCO Dünya Mirası Listesi'nde (WHL) Mithras tapınaklarına sahip az sayıda Roma lejyoner kalesi bulunmaktadır. Bunların hiçbiri, yıllardır teorik düzeyde tartışılan Mithras ritüellerinin ayrıntılarına dair kanıt ya da ipucu sağlayacak bütünlüğe sahip değildir. Öte yandan, dini yapıların çoğu Hıristiyanlıkla ilgili olup geri kalanı İbrahimi veya İbrahimi olmayan dinler temelinde listelenmiştir. Ayrıca, antik dönemde sadece Mithras dini ve/veya kültü ile ilgili tescilli bir mülk bulunmamaktadır. Ancak antik merkezlerdeki yapılar içerisinde yer alan mithraeumlar dolaylı olarak listede yer almaktadır. Dolayısıyla bugüne kadar herhangi bir kale ve mihtraeum birlikteliğinin, UNESCO Dünya Miras Listesi'nde şimdiye kadar yeterince temsil edilemediği anlaşılmaktadır.

Zerzevan Kalesi, Yukarı Mezopotamya'daki askeri-dinsel özelliklere sahip en eski Roma surlarından biridir. Bu makale, mevcut mimari ve arkeolojik veriye dayanarak ve herhangi bir varsayım veya sınırlama olmaksızın, Zerzevan'ın, Mezopotamya'daki Roma dünyasının eşsiz tanığı olarak bir dünya kültür mirası olarak aday gösterilmesinin haklılığını ortaya koymaya çalışmaktadır. Ayrıca, Zerzevan'ın benzersizliğinin nedenlerini ulusal, bölgesel ve kıtasal karşılaştırmalar yoluyla ve gerek kale sistemi gerekse tek veya ikili yapı ölçeğinde göstermeyi amaçlamaktadır. Bu bağlamda, bir dizi kriter çerçevesinde;

- Kastrum Zerzevan, Roma sınır garnizonları bağlamında, yakın bölgedeki ve Roma dışındaki benzer örneklerle,

- Mithraeum, tek bina ölçeğinde bölgesel ve diğer mithraeumlarla,

- Kastrum Zerzevan ve Mithraeum birlikte, bir mithras tapınağı içeren yakınlardaki bölgesel ve bölgesel olmayan Roma kaleleriyle karşılaştırılmıştır.

Avrupa örnekleri arasında Zerzevan ile en çok ortak özellik taşıyan kaleler Almanya ve İngiltere sınırları içinde yer almaktadır. Antoninler ve Hadrian Surları, daha erken tarihli varlıklar olup Roma İmparatorluğu'nun stratejik planlama ve organizasyonunu yansıtmaktadır. Hadrian Duvarı, Antonine Surları ve Zerzevan Kalesi, Roma'nın topografyayı dikkate almak suretiyle bir kastrumun planlanması sürecindeki özenli mühendisliği ve uygulamış oldukları süreçleri, mevcut görünür yapılar ve sur sistemleri özelinde gayet iyi yansıtmaktadır. Daha büyük olmasına rağmen, Almanya'daki Novaesum, nehir kenarında konumlanışı, doğal koruma için bir uçurum alanına sahip olması, iç organizasyonu ve sağlam sur sistemi açısından Zerzevan'a en çok yaklaşan kaledir.

Mithraeumlara bakıldığında, İtalya'da Santa Maria Capua Vetere Mithraeumu ön plana çıkarken Roma dünyasının doğusunda, Mezopotamya'daki örneklerin sayısı yetersizdir. Capua Vetere de Zerzevan gibi kasıtlı olarak tahrip edilerek üzeri kapatılmış bir yapıdır. Aralarındaki temel fark, Capue Vetere'nin kent içinde inşa edilmiş bir yapı olması, Zerzevan Mithraeumu'nun ise Mezopotamya'nın kırsalında, tepe üzerine kurulan kale içerisinde inşa edilmiş olmasıdır.

Zerzevan'ın bir muadili, içinde yine bir mithraeum bulunan Duro-Europos Kalesi'dir. Her ikisinin de tepe üstüne inşa edilen kaleler olması; topografik ve konumlanma açısından benzerlik arz etmeleri ve birden fazla inanç sistemine kucak açan dini yapıları içlerinde barındırmaları ve iç planlarındaki benzerlikler dikkat çekicidir. Zerzevan'daki ve Duro-Europos'taki mithraeumlar arasındaki fark, ritüeller sırasında yeme içme eylemlerinin gerçekleştirildiği oturma sekilerinin Zerzevan'da kuzey ve batı yönünde, Dura Europos'ta ise kuzey-güney yönünde planlanmış olmasıdır. Ayrıca MS 2. yüzyıla tarihlendirilen Dura Europos Mithraeumu, Zerzevan'dan daha geç bir döneme işaret etmektedir. Ancak en temel fark, Dura-Europos'taki tüm unsurların yer üstünde inşa edilmiş olmasıdır.

Sonuç olarak, Zerzevan Kalesi, Dicle'nin çevresinde, Roma'nın en doğusundaki limes sistemi içinde bulunan; tipik Roma kastrum geleneğini tepelik bir arazide doğrudan yansıtan; günümüze kadar tamamen korunmuş kaya oygu bir Mithraeum'a ev sahipliği yapan şimdilik ilk ve tek Roma Lejyoner Kalesi'dir.

Introduction

Situated in the Roman province of Syria, which covered Upper Mesopotamia, the Zerzevan Castle (hereinafter referred to as "Castrum Zerzevan, Zerzevan") (Fig. 1-2) is located on a hill 35 km south of Diyarbakır Province in the southeast part of Türkiye. The findings indicate that the area was used during the Parthian (140-85 BC), Late Hellenistic, and Early Roman Periods, from the 2nd century BC to the 3rd century AD. The Castrum became a Roman garrison and legionary base in the 3rd century AD. Given the current architectural ruins and findings, it has been understood that the core military settlement was built during the Severan Period (198-235 AD) and that walls and structures inside the fortification system were reconstructed at the times of Anastasios I (491-518 AD) and Justinian I (527-565 AD) while some of the constructions were rebuilt and restored to their current state. The Castrum remained in use until the advent of Islamic armies around 639 AD (Coşkun, 2017).

Zerzevan exhibits traces left by Roman legionaries, a testament to their strategic prowess. The fortress system (Fig.3) vividly demonstrates the precision and skill of the military engineers. It showcases how they meticulously planned and constructed their fortresses, adapting to the terrain conditions and topographical features in the border lines (limes) in the Mesopotamian region east of the Mediterranean from the 3rd–4th centuries AD. The area is exceptional in representing the transition from pagan Rome to the Christian world. As a potential pioneer for castles outside the central city of Rome, it boasts a carefully designed construction scheme and appearance that reflects that of a medium-sized castrum.

Alongside a variety of defense structures and associated buildings, the significance of Zerzevan reached its peak with the discovery of the first Mithraeum (temple and complex) along the eastern borders of the Roman Empire. The Mithraeum complex has hallmarked the site's attractivity with growing interest since it was unearthed, and the Castrum and Mithraeum were accepted to the UNESCO World Heritage Tentative List together.

The Mithraeum, dating back to the 1st-3rd centuries AD, is one of the oldest sanctuaries along the Parthian-Sasanian borders (Coşkun & Oğuz-Kırca, 2022). Its associated spaces can be observed *in situ* as an exceptional pagan practice area within a holistic architectural landscape.

The Mithraeum complex is completely carved into the bedrock, lying in the northernmost part, near the east-to-north running walls, under a trimmed terrace (Fig. 4-5). It has survived to the present day in the best possible condition since it was destroyed and covered up after the adoption of Christianity in the 4th century AD and its prohibition and abolition by relevant authorities of the period. At the same time, it is an ideal exemplary space with the way it was planned, its well-defined interior design with in-situ architectural elements, and traces of plaster and symbols applied on the surface reflecting "technology". It offers a unique testimony to the mysterious beliefs and secret rituals of Mithras, with four symmetrical animal tethering places on the ceiling, unexplained inscriptions and symbols on the entrance door, a blood or water basin in a niche, a blood or water pool at ground level and a human-sized lying area, three functional niches connected to it, and an underground structure next to the temple (Fig. 6-7). Its architecture is quite well preserved compared to other "temples" found within the Roman borders.

Rationale and Brief Overview

Zerzevan Fortress is one of the oldest Roman fortifications with military-religious features in Upper Mesopotamia. There are few Roman legionary fortresses with Mithras sanctuaries in the UNESCO World Heritage List (WHL). None of them have the integrity to provide evidence or clues to the details of Mithras rituals, which have been discussed for years at a theoretical level. On the other hand, most religious buildings are related to Christianity, with the remainder being listed based on Abrahamic or non-Abrahamic religions. Also, there is no registered property related to the religion and/or cult of Mithras in antiquity. However, the Mithraeum within the structures in the ancient centers is indirectly included in the list.

When the UNESCO WHL is examined, one may come across many religious assets, such as churches and monasteries, along with some located within castle systems. However, the duo of castle and mihtraeum has not been adequately represented in the same historical site/archaeological property so far, and there is a gap in the WHL. Despite many fortress systems with Christian buildings, fortified areas with mithraeums are

rare worldwide. In this respect, Zerzevan represents a combination of little-known building groups simultaneously.

When evaluated in general and regarding pagan and Mithraic elements, every relevant temple and finding completes a missing piece about the Mithras cult. Given small findings in Zerzevan Mithraeum (basically (i) utensils/ ceramic assemblages dating to an interval between Late Roman and Early Islamic periods, (ii) materials of ritual or entertainment function such as fragments of tibiae, (iii) candles, (iv) iron or ornamental objects such as chains, bracelets, etc.), one can hardly mention the paucity of evidence. The number of mithraeums in and outside Türkiye is quite limited. The complex in Zerzevan must be among the best-preserved examples ever found.

The coexistence of the Mihtraeum with small-scale churches provides insight into the history of religions along the limes in Upper Mesopotamia from the 1st to 6th centuries AD. Hence, it has a distinct place in the subcategory of "sanctuaries of Mithras within Roman fortified systems". In this context, there is a need to check and understand other systems within a set of criteria given here below:

- Castrum Zerzevan is compared with similar examples in the immediate region and outside Rome, in the context of Roman border garrisons,

- The Mithraeum is compared with regional and other Mithraeums on a single-building scale,

- Castrum Zerzevan and Mithraeum are compared with nearby regional and non-regional Roman fortresses featuring a Mithras temple.

Comparative Analysis

Castra Romana was established in continental Europe, mostly on flat land and occasionally on barren land in other parts of the Mediterranean Basin. They are physically connected to city walls. A street-avenue system was organized in a T-shaped interior plan. Along the long side of the castle, the Via Principalis, a main road between the gates, and secondary roads (Via Praetoria and Via Decumana) leading to the front and back gates were designed. The gates to the right and left of the long sides were named Porta dextra and Porta sinistra, respectively (Lander, 1984; Campbell, 2006). Legionary forts had three or four gates and regularly spaced towers (Campbell, 2006, pp. 33-49).

The Porta Praetoria, the only excavated gate at Zerzevan, is one of the elements in the best condition that is also compatible with those seen in the fortress plans of the Roman limes. Since Zerzevan has a natural defense orientation, no clavicula or fossa system (double row ditch) can be mentioned (Vitruvius, De Architecture, I.V.) The Principia, the headquarters building built in the center of the fortress, is not far from the main gate but not precisely in the middle. Forts had a Praetorium (Vegetius, De Re Militari I, Lines 22-24), the residence of the commander (often with his family), near the Principium (Lander, 1984, p. 59). All of these are present at Zerzevan. Granaries were usually built of local stone (mainly sandstone) and red tiles. Space was planned for stables, warehouses, drill grounds, weapon stores such as arsenals, dispensaries (valetudinariums), and artisan workshops such as blacksmiths. Soldiers had barrack blocks (centuriae), and officers had private rooms at the ends of these blocks. For now, the difference in other Roman castles is that even smaller forts had communal toilets, saunas, or steam rooms (Campbell, 2006, pp. 37-49 and Goldsworthy, 2013). At Zerzevan, such rooms are thought to have been located inside the barracks, based on some traces of a funnel route.

Close Regional and European Examples in the Context of Roman Border Garrisons

Anatolia was home to other legionary fortresses (Parker, 2000, p. 122; Uzunoğlu, 2012, pp. 96-97). Among the main known headquarters were Zeugma (Gaziantep), Samosata (Adıyaman), Melitene (Malatya) (Gabriel, 1940, pp. 264-269 and Mitford, 1998, p. 16), Satala (Gümüşhane) (Lightfoot, 1998, pp. 273-284 and Hartmann et al., 2006); Ankyra (Ankara); Anastasiopolis (Dara) (Metin ve Durukan, 2022, pp. 429-446) and Nisibis (Nusaybin).

Garrison towns in the province of Syria formed a link in the Roman chain of eastern limes on the Sassanid border. Between the northern Mesopotamian plain and the eastern Anatolian plateau, important stations

included newly established outposts. Zerzevan Fortress was one of the strategic points that completed the chain of fortresses (Eastern Limes) such as Melitene, Zeugma, Samosata, Satala, and Dara, of which very few traces of their integrity remain today.

Compared to sites in the immediate region, such as Dara (Ahunbay, 1991 and Metin, 2021) and Nisibis (Demir & Keçiş, 2017, pp. 1-29), Zerzevan is quite unique. In northern Mesopotamia, where physical evidence is still weak, the roadside forts between Doliche and Samosata resemble the positioning of Zerzevan between Amida and Nisibis. Another may be Eskihisar, which guarded the road between the legionary bases of Zeugma and Samosata on the east bank of the Euphrates (Guyer, 1939, pp. 183-190). In any case, the architectural features of Zerzevan are significantly different from all those mentioned above and have a unique structure (Coşkun & Dursun et al., 2023).

With regard to the Roman road network in Northern Mesopotamia, where physical evidence is still poor, the Tabula Peutingeriana (Özükan, 2017) and the Itinerarium Antonini Augusti (104.7) are important sources, especially for the Osrhoene region (the sub-region corresponding to western Mesopotamia/east of the Euphrates). A look at neighboring legionary forts in the Syrian province reveals several insights. Without a deepwater line for transport and related logistical concerns, the Roman army must have considered terrestrial solutions in this area. The auxiliary fortifications in the Itinerarium Antonini Augusti and Tabula Peutingeriana are all within a day's walk of each other (Mitford, 1977, p. 507; Löhberg, 2006). Zerzevan has physical and relative proximity to both the legionary fortresses such as Nisibis on the modern borders of Syria and Turkey, to fortress cities such as Dura Europos, built on waterfronts and high ground, and to Singara in northern Iraq, as auxiliary forces recruited from local forces. However, it can be stated that very few unified images of these fortresses have remained.

Zeugma (Gaziantep)

Included in the UNESCO World Heritage Tentative List, Zeugma (Fig. 8) is the closest to Amida and Dara and represents a civilian example (Görkay, 2017, pp. 149, 165). Legionaries were present in the city from the end of the 1st until the 3rd century AD (Görkay, 2011; Kadıoğlu & Görkay, 2011, pp. 536-538). Legionaries from continental Europe were mainly stationed from the early 2nd century AD to the middle of the 3rd century AD. Zeugma, which was founded and operated as a Macedonian colony in the Hellenistic period, was a city of propaganda and prestige where Rome demonstrated its power against the Parthians in architectural terms (Görkay, 2017, pp. 149-150). Therefore, it was not a small-scale garrison city with predominantly military qualities like Zerzevan.

Many legion-stamped roof tiles and Latin inscriptions are concentrated in the Horse Square (Hartmann and Speidel, 2013, pp. 385-399 and Görkay, 2017, pp. 153-155), which is spread over an area of approximately 225 acres and consists of terraces. It was built on relatively flat land bounded by Belkıs Tepe in the east and the ridge descending from Belkıs Tepe to the west in the south. Zeugma had a walled settlement texture during the Roman Imperial Period (Görkay, 2017).

It is thought that the Horse Square and the wide flat area to its south may belong to the garrison where Legio IIII Scythica was stationed (Wagner, 1977). This legion, which settled in the city around 66/67 AD, first established a "conventional legion settlement" in this area outside the Hellenistic walls, then expanded towards the south, and together with the incoming Auxilia legions, "transformed the settlement from a fortress to an urban settlement in the form of a Roman military colony." Therefore, we are faced with a very large-scale program. The closest parallel regarding the settlement model is the Dura-Europos. It is meaningful considering that soldiers of Legio IIII Scythica, who moved from Zeugma to Dura-Europos in 165 AD, also engaged in similar practices in Dura-Europos (Görkay, 2017, pp. 161-162). However, the civil city identity of Zeugma predominates.

The discovery of a Mithras relief within the legion compound is significant, suggesting the existence of a Mithraeum in Zeugma. This location is reminiscent of the Mithraeum built adjacent to the city wall within the military camp at Dura-Europos (Görkay, 2017, p. 161).

Dara (Anastasiopolis)

Located 30 km southeast of Mardin, Dara is in today's Oğuzlar Village. The Roman Emperor Anastasius founded it as a garrison (491-518 AD) to protect the eastern border of the Roman Empire against the Sassanid threat. It was designed much later than places like Zerzevan and Zeugma. The walls and the civil settlement are intertwined and spread towards the water source on the plain. All city structures can be seen within the city wall system, which is 4 km long (Ahunbay, 1991). Similar to Zerzevan, Dara's main structures are rock-carved (see Dursun, 2024, for Mardin stone elements). Despite similarities in the functions of in-city buildings, Dara's civilian settlements' distinct design and prominence over the military garrison set them apart (Metin & Durukan, 2022).

Hatra, Iraq (WHL, Dossier 277)

Hatra, a fortified city under Parthian influence, had thick walls and towers. Also known as the city of Shamash, its connection with the sun god is questioned. The Romans captured it in 116 and 198 AD. The city's ruins stand out, especially the temples, which blend Hellenistic and Roman architecture with Eastern ornamental features. It had a circular plan surrounded by inner and outer walls of about 2 km long. The city is also characterized by several temples dedicated to Indo-European deities. There is a possibility of a mithraeum here, but it is not yet clear. The presence of regionally different gods underscores the city's historical significance (Kaizer, 2000, pp. 229–252).

Hatra, which gives its name to the city and the fortress, differs from Zerzevan in that it has more sophisticated architecture and a unique moat system, a defensive trench filled with water, in addition to the inner and outer walls. The moat was a unique feature of Hatra's architecture, enhancing its defensive capabilities. Zerzevan is not an extensive settlement since it is built in a hilly area. As Hatra dates back to the Hellenistic and Roman periods, it also differs chronologically.

Ancient Villages of Northern Syria, Syria (WHL, Dossier 1348)

Encompassing approximately 40 villages, traces of rural life in Late Antiquity and Byzantine times provide important testimony to history in Syria. The cultural landscape of the villages, which date to the 1st–7th centuries AD and were abandoned in the 8th–10th centuries, is an important example of the transition from the ancient pagan world of the Roman Empire to Byzantine Christianity.

Within the North Syrian Villages, Deir Zor in north-eastern Syria (Blétry, 2020, pp. 137-146) may be a worthy comparison. Although its fortification and tower architecture can be compared with Zenobia-Khalabia (Deir Ezzor) and Qasr Bashir in Jordan, the architectural features of Zerzevan differ significantly. Qasr Bashir is a "desert" fortress. The corner towers have 3 stories. Although it is very small in scale, it has giant-sized stones. The Roman fortress of Qreiye in Deir Ezzor is 220 x 220 m. It is one of the rare examples of a Roman fortress that was not integrated into an existing settlement in the region. It is surrounded on three sides by a double-walled moat system. A steep slope towards the Euphrates on the north side forms a natural protection. Archaeological remains are covered only by a thin layer of sand (Gschwind & Hasan, 2008).

Singara, Iraq

A parallel example concerning its natural layout and architectural appearance over a barren landscape is Balad Sinjar (Parker, 2000, pp. 122-138) at Singara, southeast of Nisibis (modern Sinjar in northern Iraq), a fort of Legio I Parthica. Singara Fortress (Oates, 1968, fig. 8), located in the Nineveh (Mosul) region, remained one of the easternmost outposts of Rome during the 3rd century AD. It was promoted to a Roman colony by Septimius Severus. The name appears in Tabula Peutingeriana. Its defense system was formed by ditches and outer and inner walls. Zerzevan shares a similar chronology. However, it lacks, unlike Singara, a ditch and double wall system. Therefore, the layout and silhouette of Singara can only be a comparison criterion. The Roman historian Ammianus Marcellinus wrote that the fortress's terrain was highly arid (Ammianus Marcellinus, History, XVIII.5).

Roman Garrison in Timgad, Algeria

Timgad is an example of a Roman military camp established during the Imperial period. It is a site where Rome's central power was applied in colonizing the Algerian high plains but it also reflects tradition. Its grid plan mirrors the outlines of Roman town planning and is modeled on the original plan of the military camp. The rich architectural inventory, created by Roman military engineers with various typologies, includes a defense system, public buildings, and a religious complex. The stone buildings were quite restored (WHL, Dossier 194).

In Tunisia, a significant part of the forts that were elements of the Limes Tripolitanus, a military frontier region of North Africa under Roman rule, are under the sands. This chain of forts formed the easternmost part of the African Limes. Until the 2nd-6th centuries AD, they were used to defend coastal areas in the Maghreb and port cities up to the border with Cyrenaica. Most of them are lost due to desertification and, hence, are not as visible as the Mesopotamian examples.

Frontiers of the Roman Empire in Europe

The most general category of Roman military forts that can be used as a benchmark for Zerzevan is the "Frontiers of the Roman Empire (Germany, UK, Netherlands, Austria, Slovakia, and Romania)", which is shared by several European countries (Fig. 9). The fragmented frontiers are registered in the WHL as the western and lower frontiers (WHL, Dossier 430ter, 1631, 1608rev, 1718).

The Roman Empire reached its most extensive frontiers in the 2nd century AD. The "limes" system, which was also decisive in the military road system, stretched for more than 5000 km from the Atlantic coast to continental Europe and the Black Sea, from the Red Sea and the North African coast to the south of the Atlantic, including today's Northern Britain. The Roman Limes consisted of fortifications, walls, castles, moat systems, watchtowers, civilian settlements, etc. The surviving boundaries were generally documented in two parts of Germany. These categories include Germany and other countries (England, the Netherlands, Austria, Slovakia and Romania).

The Upper Germanic-Rhaetian Wall (Limes Germanicus) was the Empire's northernmost external frontier between the Rhine and Danube in Germany. The borders, known as the Western and Lower Limes, stretched for 550 km. The next sub-part analyses the fortresses containing a Mithraeum.

As per its military mission, Zerzevan was similar to many documented fortresses such as Chester (Deva) in Britain, Castra Regina (Regensburg) in Germany, where the Regen River meets the Danube, and Novaesum (Neuss) on the Rhine, Inchtuthil in Scotland, etc. (Carrington, 1977, pp. 36-42; Dietz & Fischer, 1996; Campbell, 2006, pp. 24, 33, 39; Shirley, 1996, pp. 111-127; Gechter, 2007, pp. 207-213).

Novaesium (Neuss), Germany

Novaesium (Fig. 10), a Flavian fortress founded in 80 AD, is one of the oldest in the lower German limes system. It was built on a natural terrace, protected by the small river Erft to its south. Zerzevan overlooks a stream bed and valley in the west. This sector, which was formed by a natural scarp, made the castle, like Novaesum, more sheltered. Novaesum covered an area of about 24 ha. Although it can not be a complete comparison criterion for Zerzevan, it is within the standard of a legionary fortress regarding the plan and internal organization (Le Bohec, 2000, fig. 4a; Sparavigna, 2019). In addition to similar standard structures (e.g., valetudinarium), Zerzevan has an oval-shaped Porta Praetoria.

Hadrian's Walls, England

Hadrian's Wall (Fig. 11), an essential segment of the Roman Limes, was built during the reign of Emperor Hadrian in 122 AD in the northernmost part of the Roman province of Britain, 118 km long, on the borders of present-day Britain. It is a complex of fortifications. The original plan envisaged stone walls with a maximum height of 4,6 m and a depth of about 3 m. Milecastles or small forts were placed along the wall with two towers between them. These forts were placed at 7-mile intervals along the wall where the terrain permitted (Hodgson, 2017). Hadrian's Wall and its surroundings are good representatives of Roman military organization, which provide important data on the defense techniques of legionary troops. Offering a long position, it is a "wall" system consisting of fortresses and fortifications. Zerzevan is a singular example.

Antonine Wall, Scotland

The Antonine Wall, 60 km long, at the northernmost part of the Roman Limes, on the borders of Scotland, was built by Antonius Pius in 142 AD against the invasions of the northern tribes. These are complementary borderlines. They demonstrate the close interconnectedness of military points and their associated 'civilian settlements' enormously, showing how the Empire's reach extended far beyond its military outposts. Like the Hadrian's Wall, Antonine Walls reflect the adaptability and ingenuity of the ancient Romans to geography, topography, and climate (Breeze & Hanson, 2020).

The state of preservation of the Roman fortifications varies. For instance, most of the German-Raet Harbour in Germany remains underground while the Antonine Wall in Scotland is in excellent condition. The height and depth of the protected sections can be observed vividly. Seventeen forts, with a capacity of about 6,000–7,000 soldiers, were built at regular intervals along the Antonine Wall. These forts, including Hadrian's Wall, were smaller than the principal legionary forts in the Empire.

Slightly smaller forts were placed in the center of the main legionary strongholds. The fact that some of them were located close to the full-fledged forts suggests that some forts may have been added later as part of a change in plan. This should not be the case for Zerzevan. Most smaller forts/ fortlets, such as those at Zerzevan and the Antonine Wall, are rectangular with rounded corners. Unlike Zerzevan, however, most of these forts were equipped with walls built of loose earth, with stone and timber-inserted buildings.

Examples of Regional and Other Single Building Mithras Temples

The number of sanctuaries known to exist in Anatolia or considered to be Mithraeum is quite insufficient. However, those that can be put forward as a comparison criterion are found in Cappadocia, Pamphylia, Phrygia, Psidia, Mysia, Pontos, Lyconis, etc. Although unclear, these are the areas where the most concrete findings, therefore the most evident traces of the cult, are found. However, none of them is a combination of a legionary fortress and the cult of Mithras. The Mithraeums on a single-building scale are listed below:

Doliche, Gaziantep

A documented site in Anatolia that may provide faint hints of Mithraic features is located at Doliche (Winter & Blömer, 2018) because of an associated relief. However, the structure differs significantly from the architectural features of the Zerzevan Mithraeum in that it was built in a quarry left open. This same architecture and similar belief systems can be seen in the vicinity of the Lalish Temple in northern Iraq, a UNESCO-designated heritage site.

Kapıkaya Mithraeum, İzmir

At Kapıkaya, near Bergama, İzmir, there is a throne arrangement and a cave that appear to have been used as a mithraeum (Radt, 1979). It is recorded that the cave was used during the Hellenistic and Roman periods. The difference here is that Kapıkaya is singular on a scarp area where cults of the mother goddess and the sun are seen together.

Hawarte Mithraeum, Syria

The Mithraism found in the village of Hawarte in Syria can be noted as a point of comparison. However, this Mithraeum was discovered under a church in the village (Fig. 12). The collapse of the floor in the center of the church nave revealed a cave with walls covered with Mithraic paintings. It is understood that this was the main room of a Mithraeum. The wall paintings depicting scenes from the life of Mithra are interesting (Gawlikowski, 2000, pp. 261-271 and Gawlikowski, 2007, pp. 337-361). The main room is orientated E-W and 4,80 m wide. The seating benches are planned on the right, towards the south side of the room. In comparison to that of Zerzevan, Hawarte presents similarities in the placement of architectural elements. The greatest similarity relates to the designation of sitting benches. The difference is that Zerzevan Mithraeum was not located under a church-like structure but rather stood single in an isolated plot.

Caesarea Maritima, Israel

In the ancient city of Caesarea Maritima in Israel, which is on the WHS Tentative List, a vaulted room was found underground near the harbor. Initially thought to have been built as a warehouse, the structure was converted into a temple of Mithras at the end of the 1st or beginning of the 2nd century AD. It is a flat, simple, vaulted space (Bull et al., 2017).

Mithraeums in Europe on a Single Building Scale

The Mithraeums at Rome, Santa Maria Capua Vetere, and Ostia in Italy present some common architectural features with the structure at Zerzevan. They are explained below. The Mithraeums showing the tauroctony scene in frescoes are the Barberini Mithraeum in Rome and the Mitreo di Santa Maria Capua Vetere (Corpus Inscriptionum et Monumentorum Religionis Mithriacae (CIMRM) 180). On the other hand, elements such as arches, vaults, a stone-paved court, and marble decorations on the walls were found *in situ* in the well-preserved Mithraeum next to the Circus Maximus, where entertainment and races were held in the city of Rome. Some objects were also removed. Although ornaments can be seen on some parts of the original wall, they were significantly damaged (Szabo et al. 2023, p. 742). No objects were found inside the Mithraeum of Zerzevan. However, faint wall decorations have remained to date, as in the case of Circus Maximus.

The Vetere Mithraeum of Santa Maria Capua in Italy is considered one of the most important mithraic buildings in the world (Fig. 13). Its roots can be traced back to the end of the 1st or beginning of the 2nd century AD, making it the oldest known in the West. The rectangular room, approximately 13 x 3 m wide, features benches carved out of stone on the long walls. At the end of the room, an altar with a brightly colored fresco depicting tauroctony stands. The southern bench holds a rectangular water trough, while the other bench houses a well with drain pipes. Near these pools, in front of both benches, a small rectangular niche is visible. At the end of the path leading to the benches with small steps, there is a third bench sloping towards the west wall. A small channel in front of this bench disappears into the channel on the north wall and connects to the well. The side walls and the vaulted section are covered with stucco paintings. The vault is decorated with six-point stars painted in red and green on a yellow background, a design similar to the Mithraeum at Marino (Vermaseren, 1963 and CIMRM 180).

In addition to the similar rectangular ground plans, designation of the benches, and possible placement of the water source in the southern sector in the main room in both of the mithraeums, the comparison with the Capua Vetere is also meaningful in the chronological framework because of its "firstness." Probably one of the first mithraeums built in the early 2nd century AD, Capua Vetere, like the one at Zerzevan, was deliberately covered and destroyed.

In Ostia, a sanctuary was found inside the Baths of Trajan. It was built in the northernmost part of a corridor separate from the other underground rooms. Like the Mithraeum of Zerzevan, the entrance is from the west and leads to a vaulted space. Two benches were found along the side wall. The two benches at Zerzevan lie along the adjacent walls. A brick staircase reaches the temple, and the entrance is between two cross walls. The interior dimensions are 15.37 x 4.55; the maximum height of the vault is 2.1 m. The Mithraeum of Zerzervan is limited to an area of approximately 35 m2. In Ostia, the floor was of brick, and to the east of the vault, there was a shallow square recess painted red for a possible relief or inscription. There are niches on the vertical side of the podia, halfway down the temple (CIMRM 229). In Zerzevan, there is a large niche in the middle and two other small niches on either side in the same wall. On the floor of Ostia is a square brick plinth. In front of it is a small, plastered, triangular altar. At the three corners stand small triangular columns that originally supported something. Presumably, an altar for the ex-voto was present in the middle space, over the floor in that of Zerzevan.

There are structures in Greece that have been interpreted as the Mithraum of Eleusis, but these do not provide sufficient information. In the Sanctuary of Eleusis, a Roman building interpreted as a mithraeum consists of a rectangular room with two large seating benches. The evaluation is based on its peculiar interior part, which recalls the typology of Mithras cult sites. The mithraeum at Aigio was built underground (Kolia, 2006, pp. 208-220).

As seen in the natural and architectural assets of the medieval city of Jajce (Sergejevski, 1937), which is on the World Heritage Tentative List, in the Jajce region of Bosnia, a single-celled temple was found in a cave discovered by chance during the excavation of a house (CIMRM 1901). The Mithraeum, included in the National Monuments of Bosnia and Herzegovina, represents the core of the formerly walled city. The complex with fortresses, city walls, and towers is located on the southern slope of a large rocky pyramid, surrounded by the Pliva River bed to the southwest and the Vrbas River to the southeast and east. The perimeter of Jajce is about 1,3 km, spread over an area of 112,000 m2. Although common temporality cannot be established, similarities can be noted in terms of the city's (perimeter) dimensions and the area of distribution (World Heritage Tentative List, Ref.: 2098).

Again in Bosnia-Herzegovina, the Konjic Mithraeum is a significant historical site, one of the best-preserved mithraeums in Europe. It is not carved into a cave but is nestled in a dense forest. Dating back to the 4th century AD, it is believed to have been used since the 2nd century AD and underwent repairs in the 4th century AD. The Jajce Mithraeum is typologically compatible with the rock-cut ones. However, in instances such as Konjic, where topographical conditions were challenging, the earth was excavated to create small single-celled temples, giving the impression of a cave (CIMRM 1896). The minimum commonality with Zerzevan appears to be the cave silhouette of the building.

As given above, most mithraeums are of similar structure, greatly built underground. There was usually a simple, small vaulted room with two seating areas for the adepts on either side. One can check Mitreo di Marino, which was located in the Lazio region and built underground in a longer and narrower space, offering the usual plan (Vermaseren, 1963). It does not belong to any fortress. It has an altar in the center, as seen at Zerzevan, but this and similar mithraeums were part of the city. Another point of note can be that Zerzevan Mithraeum has some similarities with the "ground" plan of the courtyard mithraeum of Les Bolards, Nuites-Saint-Georges in France.

Poetovio Mithraeum III (CIMRM 1578) in Slovenia was found among a villa and house and is monumental in scale. It is oriented north-south and is considered one of the largest in the Roman Empire. Even though it is not built underground (Szabo et al., 2023, pp. 747–748), a commonality with Zerzevan is that they were both built in the same direction. It consists of a rectangular room with two rows of seats along its long sides. The statue of the deity is placed on a built pedestal at the far end of the room. The shape of the rooms and the way in which the benches were placed are the basic commonalities for Poetovio and Zerzevan.

In Spain, the "Els Munts" Mithraeum near Tarragona is among the largest known mithraeums, together with the mitraeum in the Baths of Caracalla (Mitreo delle terme di Caracalla). However, Els Munts, was not built in the form of a cave but was constructed in an open area. In Seville, in the Roman cemetery at Carmona, in the so-called "Elephant's Tomb", a tomb has been identified allegedly as a mithraeum in the light of archaeoastronomical studies. Symbols of Mithras were found in the place with many building phases. One similarity could be that it was also carved in rock and directly received the sun at the equinox (Hernandez & Gomez, 2012, p. 120). There is an equivalent situation in Zerzevan.

In France, the Sarrebourg Mithraeum can be worth discussing because it was also built underground (Meyer, 2017, pp. 209-221). Measuring 5.40 x 6,20 m, the sanctuary was built of limestone in the 3rd century AD and destroyed by the Christians in the late 4th century. During the first archaeological excavations, the skeleton of a man whose hands were tied behind his back with iron chains was unearthed among the ruins of the altar (Turcan, 2016, p. 51). The sacrificial ceremony here reminds us of the man-sized pit in the plan at Zerzevan.

Examples of Roman Fortresses Featuring a Mithraeum

Dura Europos (WH Tentative List), Syria

The archaeological site of Dura-Europos (Fig. 14-15), located in modern Syria, on a hilly area high above the valley on the banks of the Euphrates River, was home to many pagan and Christian worshippers in Late Antiquity. The levelled area is reminiscent of Zerzevan with its terrain. It is similar to Zerzevan's location close to the northern sector valley the military barracks and the Praetorium. Zerzevan, overlooking a stream bed to the west, is also a hilltop fortress built near water (Coşkun, 2017; 2019; 2023; Coşkun & Oğuz Kırca, 2023b). There are pagan temples with remarkable fresco decoration, a mithraeum, a large synagogue, and a

Christian building in Dura Europos (Simon, 2020). After Dura Europos became one of Rome's frontier cities, new buildings and a mithraeum were constructed for different belief groups (Butcher, 2003, pp. 260-261).

The Mithraeum was a remodelled house in the middle of the 2nd century AD (Pearson, 1939, pp. 76-80). It was destroyed in the 3rd century AD. A cult niche was found in a long, rectangular, narrow room, framed by two painted columns. The walls surrounding the niche were covered with paintings, telling stories related to the cult. In front of the reliefs was an altar for sacrifices and long benches for ritual meals along the north and south walls of the niche. On the wall behind the niche are signs of the zodiac (Pearson & Rostovtzeff, 1939, pp. 101-104).

The Mithraeum at Dura Europos resembles the Mithraeum at Zerzevan in terms of the niche, with the tauroctony scene/place and the belts containing symbols on the niche (CIMRM 34). The sanctuary of Mithra in Dura Europos, located at the northwest corner of the city walls, is contemporaneous with the synagogue. This indicates the presence of multi-religious structures, just like at Zerzevan (Coşkun & Oğuz Kırca, 2022; Coşkun, 2023). The difference between Dura-Europos and Zerzevan in this context is that all religious buildings, including the Mithraeum, were built above ground in the former one (Dirven, 1999, pp. 260-261).

Housesteads Mithraeum, England

Outside the Housesteads Roman Fort at Hadrian's Wall (Rushworth, 2009), the Housesteads Mithraeum, an underground temple still buried, was found on the slope of a hill. If it is considered in the category of buildings related to the fortress, it can be stated that they overlap in terms of plan. A relief of Mithras surrounded by a zodiac was found in the building, consisting of a rectangular room surrounded by seating benches. There is a stone water channel in the centre of the floor (Smith, 1962, pp. 278-280 and CIMRM 860). Since Housesteads Fortress has the status of Auxilia, it probably parallels Zerzevan. Another analogy emerges with respect to cisterns. There is no water source at Housesteads. There are large cisterns around the castle for rainwater harvest but these structures are located inside the castle in Zerzevan (Coşkun & Oğuz Kırca, 2022; 2023a)·

Caernarfon Mithraeum, England

The Mithraeum of Caernarfon in England is located 150 m east/northwest of the Roman castrum of Segontium, on the outskirts of Caernarfon in Gwynedd, North Wales. It was linked to the Roman legionary base at Chester via a Roman road, which was built, like many others, in the 3rd century AD and subsequently abandoned; it was dismantled in the late 4th century AD. There have been a few finds, including four small altars, one with an inscription, and some remarkable ceremonial ironwork. Today, it is in a residential area. The building had a roof. The narthex, chapel, nave, side benches and square alcove for cult objects have been documented. It was divided into two phases during the fortress's active time. Four miniature altars were found, one of which had the initials of an officer. Additionally, some potsherds, oil lamps, and ironworks were discovered (Boon, 1960, pp. 136-177 and CIMRM 2374). An interesting point of comparison is that the Segontium Fortress (modern Caernarvon (Casey & Davies, 1993) had Auxilia characteristics, a characteristic it shares with Zerzevan (Coşkun & Oğuz Kırca, 2022; 2023a).

Mithraeum of Lugo, Spain

A Mithraeum was found in Galicia, in the city of Lugo, in present-day Spain. The city walls of Lugo (WHL, Dossier 987) were built in the late 3rd century AD to defend the Roman city of Lucus. The entire wall survives intact and is one of Western Europe's best representatives of Late Roman fortifications. A Galician city wall in north-western Spain is an exceptional architectural, archaeological and structural heritage of Roman engineering from the 3rd and 4th centuries AD. The fortifications are built of internal and external stone facades with lime mortar. They are rectangular with a total length of about 2 km and cover an area of 1.68 hectares. Excavations in the 2000s uncovered a domus (Domus de Victorinus) dating from the 1st century BC, which housed an unusual sanctuary in the area. The most striking feature of the villa was the sanctuary dedicated to Mithras. It is a rectangular building aligned north-south, measuring 15x7 m (Alvar, 2006, pp. 266-277). The period, quadrangular plan, and some finds (e.g., altars and animal bones) remind the Zerzevan Mithraeum.

Apulum Mithraeum, Romania

The fortresses built by the Dacian administration in the 1st century AD that fall within the borders of Romania can be considered in the classical sense. The defence structures, which formed the heart of the Kingdom of Dacia, were captured by the Romans at the beginning of the 2nd century AD and were probably repaired. Dacian fortresses (WHL, Dossier 960) are representatives of military architectural techniques and concepts (Marcu, 2009). Ancient Apulum, located in Roman Dacia, was the legionary fortress base of the Legio XIII Gemina. The city developed around the fortress of the said Legio. The settlement spread over 140 hectares in the 3rd century AD and had two towns called Apulum, Castrum, and numerous temples, including a mithraeum (Szabo, 2013, pp. 54-60). In ancient Apulum, the remains of a building in the northern "municipium" dated to the 2nd/3rd century AD, can be seen today.

Carrawburgh and Walbrook Mithraeum, England

Carrawburgh is situated between Chesters Castle, which reflects the standard of a typical cavalry legionary fort, and the infantry fort at Housesteads. It is a stone structure, identified by a relief representing a taurochtony scene. Unlike the one at Zerzevan (Coşkun and Oğuz Kırca, 2022; 2023a), the London (Walbrook) Mithraeum, a building with a pronaos (3rd century AD), which today stands between Victorian buildings, was built above ground and has a different architecture (Gordon, 2000, pp. 736-737; Szabo et al, 2023, p. 747 and CIMRM 810). Carrawburgh Roman Fort is only one of several forts along Hadrian's Wall. It stands on a slightly elevated natural terrace overlooking the Northumberland National Park, so it is not a hillfort. The Mithraeum was destroyed in the 4th century AD (Richmond & Gilliam, 1951, pp. 1-92 and CIMRM 844).

Künzig Mithraeum, Germany

The Künzig Mithraeum is a subterranean temple located at Quintana Castle in Bavaria, Germany. It was an important part of the Roman limes system on the Danube and was associated with a nearby fortification. It was constructed within the fortification, similar to the Zerzevan Mithraeum (Coşkun & Oğuz Kırca, 2022; 2023a). The entrance of the mithraeum was likely due east.

This mithraeum was situated between the outer fortress and civilian town, covering an area of approximately 4.3 hectares. It could have served as a macellum/ marketplace. Additionally, a cremation cemetery was discovered 30 m away from the mithraeum. There is some debate about the mithraeum's construction, with suggestions of it having two phases. The first phase was a simple wooden structure with a roof, measuring 8.9 x 6.0-6.2 meters, including the exedra. The corridor ended with a small rectangular exedra. The building had a covered corridor and could accommodate around 17 people. Post holes for roof supports were found, and 5 meters to the east, two pits containing sheep and goat bones, pottery, and other items were discovered. After a destruction by fire, it was reconstructed in a larger size with a timber frame. It was lastly 10 m long, with the center corridor expanded. Some painted plasters indicating the presence of a cult image in the exedra were recorded. The findings include a 45 cm high altar and a 55 cm high altar with an inscription. The inscription bears the name Mithras. Swords, knives, arrowheads, four craters decorated with snakes and terra sigillata containers are among the items discovered in the temple. Based on these findings, the second mithraeum is dated to the early part of the 3rd century AD (Fegerl, 2008, pp. 77-83).

Assessment and Conclusion

There is less available information regarding hillforts and forts situated on level ground than riverfront forts in the European region (Campbell, 2006, pp. 17, 22; Lander, 1984, pp. 8-10). In comparison to flat regions, there are comparatively fewer fortifications constructed in steep terrain (e.g., hilltop strongholds in Tunisia and certain regions like the Iberian Peninsula). Zerzevan is one of the few instances that concurrently exemplifies the typical Roman castrum tradition in a hilltop landscape. It is also a legionary fortress with a Mithraeum in Anatolia and Mesopotamia that has been completely preserved, allowing visitors to experience and understand numerous physical aspects and Roman military base building concepts "*in situ*". The Mithraeum is located within the ramparts unveiling the whole architectural layout with the elements of

rare mithraeums preserved in their entirety. It was probably one of the first cult sites established by Rome in the East.

Given the context of comparative examples, Zerzevan conforms to the basic planning principles of the castra in Europe, Mediterranean Basin and Mesopotamia. Although it reflects the general plan and features of many of the castra built in the Roman style, it is clear that they differed in some way by the customization of the site according to specific needs. The Mihtraeum has many distinctive features for the interpretation of Mithraic rituals on the site. In addition to its symbolic value, the depiction of a legionary fortress with a "mysterious" space is important. Therefore, no entity in the WHL is registered as both a fortified area and a mithraeum, at the same time.

Among the European examples, the castles with the most common features with Zerzevan are located within the borders of Germany and England. The Antonine and Hadrian Walls, albeit being earlier works, reflect the strategic planning and organization of the Roman Empire. The chronological gap between Zerzevan and European examples only shows that fortifications like Zerzevan were the outputs of mature engineering works of the Roman army but unique examples about how the Romans implemented new customized projects far afield. Hadrian Wall, Antonine Walls and Zerzevan Castle all reflect the Roman responses to topography and careful engineering in castrum planning in an orderly manner with the available visible structures and rampart systems. Despite its bigger size, Novaesum in Germany is the enclosure that most closely matches Zerzevan in terms of riverside positioning, possessing a scarp area for natural protection, internal organisation and robust rampart system.

Revisiting the Mithraeums at the single structure scale, Santa Maria Capua Vetere Mithraeum in Italy comes to the forefront, while the number of eastern Mesopotamian examples is insufficient. The proposed chronology for Capua Vetere is around 1-2 century AD, while Zerzevan Mithraeum is assigned to a similar interval. In view of the floor plans, commonalities exist to a large extent. Capua Vetere, like Zerzevan, was deliberately covered up and destroyed. Furthermore, the designation of the benches and the appearance of the location of the possible water source present semblances, as well as the purposeful destruction of the mithraeums around the same period. The main difference is that Capue Vetere is an in-city structure, whereas Zerzevan Mithraeum is situated in a hillfort in the suburbs of Mesopotamia.

A counterpart of Zerzevan is the Duro-Europos Fortress with its mithraeum. The topographical similarities; positioning, hence appearance as hillfort sites; the availability of multi-religious buildings and the similarity of the interior plans (a long, rectangular, narrow room with a cult niche, painted columns, the zodiac belt in the wall, presence of an altar) are remarkable. The main difference between the two mithraeums is that the benches, where meals were also taken, are oriented north and west at Zerzevan, whereas they are oriented north-south at Dura Europos. Moreover, the Dura Europos Mithraeum of the 2nd century AD addresses a later date than that of Zerzevan. The main difference, however, is that all these elements were built above ground at Dura-Europos.

In conclusion, Zerzevan Fortress is the first and only Roman Legionary Fortress in the easternmost limes, around the Tigris, hosting a rock-cut Mithraeum.

Ethics Committee Approval: Ethics committee approval is not required.
Peer-review: Externally peer-reviewed.
Author Contributions: [Aytaç COŞKUN (AC), Eser Deniz OĞUZ KIRCA (EDOK), Volkan DEMİRCİLER (VD)] Concept-AC, EDOK, VD; Design-AC, EDOK, VD; Supervision-AC; Resources-AC, EDOK, VD; Data Collection and/or Processing-AC, EDOK, VD; Analysis and/or Interpretation-AC, EDOK, VD; Literature Search-AC, EDOK, VD; Writing Manuscript-AC, EDOK, VD; Critical Review-AC, EDOK, VD.
Conflict of Interest: The authors have no conflicts of interest to declare.
Financial Disclosure: The authors declared that this study has no financial support.

References

Ancient Sources

Ammianus Marcellinus. (1999). *History* (J.C. Rolfe, Trans.) Loeb Classical Library.

Itinerarium Antonini Augusti. (1848). *Itinerarium Antonini Avgvsti et Hierosolymitanvm ex libris manvscriptis 104.7.* (G.F.C. Parthey & M. Pinder (Eds.) Berolini.

Vegetius. (2015). *De Re Militari* (J. Clarke, Trans.) Lume Books.

Vitruvius. (1960). *Ten Books on Architecture* (M.H. Morgan, Trans.) Dover Publications.

Modern Sources

Ahunbay, M. (1991). Dara-Anastasiopolis 1990 yılı çalışmaları. In *XIII. Kazı Sonuçları Toplantısı,* Vol. 2*,* Ministry of Culture and Tourism Publications, Çanakkale (pp. 197-203).

Alvar, J., Grodon, R., & Rodriguez, C. (2006). The mithraeum at Lugo (Lucus Augusti) and its connection with Legio VII Gemina. *Journal of Roman Archaeology* 19 (1):266–277.

Blétry, S. (2020). The Fortifications of Zenobia reinterpreted. EI Emanuele, SJ Barker & C Courault (Eds.), *City Walls in Late Antiquity* (pp. 137–147). Oxbow Books.

Boon, G.C. (1960). A Temple of Mithras at Caernarvon-Segontium. *Archaeologia Cambrensis*, 109, pp. 136–178.

Breeze, D. J., & Hanson, W. S. (2020). *The Antonine Wall: Papers in Honour of Professor Lawrence Keppie*. Archaeopress Publishing, Oxford.

Bull, R.J., Derose, E.J, Ratzlaff, A.L., Bobeck, A.H., Fritzius, R.S. (2017). *Joint Expedition to Caesarea Maritima Excavation Reports 2*, American Schools of Oriental Research Archaeological Reports 25. American Schools of Oriental Research.

Butcher, K. (2003). *Roman Syria and the Near East*. J. Paul Getty Museum, Los Angeles.

Campbell, D.B. (2006). *Roman Legionary Fortresses 27 BC– AD 378.* Osprey Publishing, Oxford.

Carrington, P. (1977). The Planning and Date of the Roman Legionary Fortress at Chester. *Journal of the Chester Archaeological Society*, 60, pp. 35–42.

Casey, P.J., Davies, J.L. (1993). *Excavations at Segontium (Caernarfon) Roman Fort, 1975-1979*, Archaeology Research Reports 90, Council for British Archaeology.

Coşkun, A. (2017). Zerzevan Castle in the Light of Recent Archeological Researches. *Anatolia*, 43, pp. 91-110.

Coşkun, A. (2019). *Zerzevan Castle- Roman Border Garrison*. Diyarbakır Valiliği, Diyarbakır.

Coşkun, A. (2023). The Past and Present of Zerzevan Castle Excavations. A Coşkun (Ed.) *Roman Border Garrison Zerzevan Castle: From Past to the Future* (pp. 2–26). Orient Yayınları.

Coşkun, A., & Oğuz-Kırca, E.D. (2023a). The Mithraeum At Castrum Zerzevan as a Unique Complex of Rock Hewn Structures. A Coşkun (Ed.) *Roman Border Garrison Zerzevan Castle: From Past to the Future* (pp. 46-76). Orient Yayınları.

Coşkun, A., & Oğuz-Kırca, E.D. (2023b). An Evaluation of the Original Identity Problem and Structural Design of Zerzevan Castle. *Anatolian Research*, 28, pp. 119-142.

Coşkun, A., & Oğuz-Kırca, E.D. 2022. Beyond the Roman East: An Archaeological Evaluation of the Mithraeum Based On Its Architectural Authenticity At Castrum Zerzevan (Diyarbakır, Turkey). *Journal of Ancient History and Archaeology*, 9/2, pp. 94-105.

Demir, M., & Keçiş, M. (2017). Nisibis at the Border of Romans and Sasanians Between the Third and Fifth Centuries AD. *Tarih Araştırmaları Dergisi*, 36/62, pp. 1-29.

Dietz, K., & Fischer, T. (1996). *Die Römer in Regensburg*. Pustet, Regensburg.

Dirven, L. (1999). *The Palmyrenes of Dura-Europos: A study of religious interaction in Roman Syria*. Brill, Leiden.

Dursun, F. (2024). From Quarry to Monument: Considering Mardin Stone (SE, Türkiye) as the Symbol of Architectural and Cultural Heritage. *Geoheritage* 16, pp.1–19.

Dursun, F., Toprak, V., Oğuz-Kırca, E.D., & Coşkun, A. (2023). Reconstruction of an Ancient Hill Used as an On-Site Quarry: Castrum Zerzevan (SE-Türkiye). *International Journal of Architectural Heritage*, pp. 1-19.

Fegerl, K. (2008). *Archäozoologische Untersuchungen eines Fundkomplexes aus dem Tempelbezirk des Jupiter Heliopolitanus von Carnuntum* [Unpublished doctoral dissertation]. Universitat Wien.

Gabriel, A. (1940). *Voyages Archéologiques dans la Turquie Orientale*. E. de Boccard, Paris.

Gawlikowski, M. (2000). Hawarte: Excavations, 1999. *Polish Archaeology in the Mediterranean*, 11, pp. 261-271.

Gawlikowski, M. (2007). The Mithraeum at Hawarte and Its Paintings.*Journal of Roman Archaeology*, 20, pp. 337-361.

Gechter, M. (2007). Der Römische militärplatz Neuss (Novaesium). G Uelsberg (Ed.) *Krieg und Frieden: Kelten-Römer und Germanen* (pp. 207-213). Darmstadt.

Goldsworthy, A. (2013). *Armia Rzymska Na Wojnie 100 P.N.E. – 200 N.E.* Ł. Różycki, Oświęcim.

Gordon, R. (2000). The Story of the Wallbrook Mithraeum in London. *Journal of Roman Archaeology,* 13, pp. 736-742.

Görkay, K. (2011). Roman City Walls (3rd Century City Walls). M Kadıoğlu & K Görkay (Eds.) *Roman Ancyra* (pp. 205-216). Yapı Kredi Yayınları.

Görkay, K. (2017). Zeugma Lejyon Yerleşkesi: Yeni Araştırmalar, Sonuçlar ve Ön Değerlendirmeler. *Anatolia*, 43, pp. 147-179.

Görkay, K. (2022). Zeugma/Seleukeia. A Engin & K Görkay (Eds.) *Archaeology of Gaziantep from Prehistoric Times to the Late Antiquity* (pp. 327-400). Ofset Yayınevi.

Gschwind, M., & Ḥasan, H. (2008). Das römische Kastell Qreiye-ʿAyyāš, Provinz Deir ez-Zor, Syrien: Ergebnisse des syrischdeutschen Kooperationsprojektes. *Zeitschrift für Orient-Archäologie*, 1, pp. 316-334.

Guyer, S., 1939. Eski Hisar, ein römisches Lagerkastell im Gebiet von Edessa. In *Mélanges syriens offerts à Monsieur René Dussaud par ses amis et ses élèves*, Librairie Orientaliste Paul Geuthner (pp. 183-190).

Hartmann, M., & Speidel, M.A. (2013). Military Installations at Zeugma: An Overview of the Swiss Archaeological Investigations 2001–2003. W. Aylward (Ed.) *Excavations at Zeugma Conducted by Oxford Archaeology 3 Vols.* (pp. 381-392). Los Altos.

Hartmann, M., Drahor, M.G., Speidel, M.A., Çiğdem, S. (2006). New Research at the Roman Legionary Camp at Satala, Northeast Anatolia; Geophysical and Archaeological Survey. In *21. Arkeometri Sonuçları Toplantısı, 2005 Antalya,* Ministry of Culture and Tourism Publications (pp. 197-204).

Hernandez, A.J., & Gomez, I.C. (2012). La Tumba del Elefante de la Necrópolis Romana de Carmona. Una revisión necesaria desde la Arqueología de la Arquitectura y la Arqueoastronomía. *Archivo Español De Arqueología*, 85, pp. 119–139.

Hingley, R. (2012). *Hadrian's Wall: A Life*. Oxford University Press, Oxford.

Hodgson, N. (2017). *Hadrian's Wall: Archaeology and History at the Limit of Rome's Empire*. The Crowood Press, Wiltshire.

Kadıoğlu, M., & Görkay, K. (2011). Roma Döneminde Ankyra. In Y. Kurt (Ed.), *Tarihte Ankara Uluslararası Sempozyumu Bildiriler, 25-26 Ekim 2011, Ankara* (pp. 531-541).

Kaizer, T. (2000). Some Remarks About The Religious Life of Hatra. *Topoi*, 10/11, pp. 229-252.

Kolia, E. (2006). The Cult of Mithras in Aigion. In *L' Acaia e l' Italia Meridionale. Contatti, scambi e relazioni dall' Antichità ai nostri Giorni, Atti del Convegno, Eghio, 6-9 Luglio 2006* (pp. 208-221).

Lander, J. (1984). *Roman Stone Fortifications: Variation and Change from the First Century AD to the Fourth*. Bar International Series, England.

Le Bohec, Y. (2009). Histoire militaire des Germanies d'Auguste à Commode. Pallas. *Revue d'études antiques*, 80, pp. 175-201.

Lightfoot, C.S. (1998). Survey Work at Satala, a Roman Legionary Fortress in North-east Turkey, Ancient Anatolia. In R. Matthews (Ed.) *Fifty Years' Work by the British Institute of Archaeology at Ankara*, British Institute of Archaeology at Ankara Special Publication (pp. 273–284).

Löhberg, B. (2006). *Das Itinerarium Provinciarum Antonini Augusti*. Frank & Timme, Berlin.

Marcu, F. (2009). *The Internal Planning of Roman Forts of Dacia*. Mega Publishing House, Cluj-Napoca.

Matheson, S.B. (1982). *Dura-Europos: The Ancient City and The Yale Collection*. Yale University Printing Service.

Metin, H. (2021). Dara (Anastasiopolis) Agora Kazı Buluntuları (2020): Erken Bizans Dönemi Pişmiş Toprak Kandiller. *Amisos*, 10, pp. 87-99.

Metin, H., Durukan, A. & Menteşe, D.H. (2022). Dara (Anastasiopolis) Kazı, Restorasyon ve Konservasyon Çalışmaları 2020. In A. Özme (Ed.) *2019-2020 Yılı Kazı Çalışmaları,* Vol. 2, Ministry of Culture and Tourism Publications (pp. 429-446).

Meyer, N. (2017). Les agglomérations de Sarrebourg/Pons Saravi (Moselle) et de Saverne/Tabernis-Tres Tabernae (Bas-Rhin): Deux Destins de Part et D'autre des Vosges Durant L'Antiquité Tardive. *Gallia Archéologie des Gaules*, 74-1, pp. 209-221.

Mitford, T.B. (1977). The Euphrates Frontier in Cappadocia. *In Studien zu den Militärgrenzen Roms. 2. Vorträge des 10. Internationalen Limeskongresses in der Germania Inferior*, Köln (pp. 501-511).

Mitford, T.B. (1998). The Roman Frontier on the Upper Euphrates. In R. Matthews (Ed.) *Fifty Years' Work by the British Institute of Archaeology at Ankara*, British Institute of Archaeology at Ankara Special Publication (pp. 255-272).

Oates, D. (1968). *Studies in the Ancient History of Northern Iraq*. Cambridge British School of Archaeology in Iraq.

Özükan, B. (2017). *2000-Year Roadmap of the Roman Empire-Tabula Peutingeriana- With Traces On Ottoman And Modern Turkish Geography*. Boyut Yayınları, İstanbul.

Parker, S.T. (2000). Roman Legionary Fortresses in the East. RJ Brewer (Ed.) *Roman Fortresses and Their Legions: Papers in Honour of G.C. Boon* (pp. 121–138). Society of Antiquaries of London.

Pearson, H.F. (1939). *A Guide to the Synagogue of DouraEuropos.* Imprimerie Catholique, Beyrouth.

Pearson, H.F., & Rostovtzeff, M. I. (1939). The Mithraeum: Architecture and history. MI Rostovtzeff (Ed.) *The Excavations of Dura-Europos Preliminary Report of the Seventh and Eighth Season of Work, 1933–34 and 1934–35* (pp. 62–77). Yale University Press.

Radt, W. (1979). Kapikaya Bei Pergamon- Ein Heiligtum Der Kybele und Des Mithras. In U. Bianchi (Ed.) *Mysteria Mithrae*: *Proceedings of the International Seminar on the 'Religio-Historical Character of Roman Mithraism, with Particular Reference to Roman and Ostian Sources'. Rome and Ostia 28-31 March 1978*, Études préliminaires aux religions orientales dansl'Empire romain, Leiden (pp. 789-803).

Richmond, I.A., Gillam, J.P. & Birley, E. (1951). The Temple of Mithras at Carrawburgh. *Archaeologia Aeliana*, 29/4, pp. 1–92.

Rushworth, A. (2009). *Housesteads Roman Fort, the Grandest Station: Excavation and Survey at Housesteads, 1954–95,* English Heritage Archaeological Report, Swindon.

Sergejevski, D. (1937). Das Mithraum von Jajce. *Journal of the National Museum in Sarajevo*, XLIX, pp. 11-18.

Shirley, E.A.M. (1996). The Building of the Legionary Fortress at Inchtuthil. *Britannia*, 27, pp. 111–128.
Smith, D.J. (1962). The Restoration of the Birth of Mithras from Housesteads. *Archaeologia Aeliana*, 4/40, pp. 277–80.
Sparavigna, A.C. (2019). The Orientation of the Plan of Novaesium, a Roman Fort on the Rhine (SSRN). http://dx.doi.org/10.2139/ssrn.3392789
Szabo, C. (2013). Sziklából újraszületett – A Nemzetközi Mithras Kutatás Legújabb Eredményei. *Ókor Folyóirat*, 3/4, pp. 54-60.
Szabo, C., Libita-Partica, M., & Muntean, I. (2023). Mithras Exhibited. Perspectives of Sensory Museology in Mithraic Contexts. *Cercetari Arheologice*, 30/2, pp. 737-763.
Turcan, R. (2016). *Recherches Mithriaques*. Les Belles Lettres, Paris.
Uzunoğlu, H. (2012). Anadolu'da Roma Lejyonları. NE Akyürek-Şahin, B Takmer, F Onur (Eds.) *Eskiçağ Yazıları 2* (pp. 93-128). Arkeoloji ve Sanat Yayınları.
Vermaseren, M.J. (1963). *Mithras, The Secret God*. Barnes & Noble, New York.
Wagner, J. (1977). Legio IV Scythica in Zeugma am Euphrat. In J. Fitz (Ed.), *Studien zu den Militärgrenzen Roms 2*, *Studien zu den Militärgrenzen Roms 2, Ed.: Jenö Fitz, Vorträge des 10th International Limeskongresses in der Germania Inferior, Köln* (pp. 517-539).
Winter, E., & Blömer, M. (2018). *Doliche*. Gaziantep Valiliği.

Electronic Sources

Corpus Inscriptionum et Monumentorum Religionis Mithriacae (CIMRM)
34- Mithraeum. Dura Europos. www.tertullian.org/rpearse/mithras/display.php?page=cimrm34
180- Mithraeum. S. Maria Capua Vetere. www.tertullian.org/rpearse/mithras/display.php?page=cimrm180
229- The Mithraeum at the Baths of Mithras in Ostia. www.tertullian.org/rpearse/mithras/display.php?page=cimrm229
844- The Carrawburgh Mithraeum. www.tertullian.org/rpearse/mithras/display.php?page=cimrm844
860- Mithras and the egg, from Housesteads. Hadrian's Wall. www.tertullian.org/rpearse/mithras/display.php?page=cimrm860
1578- Mithraeum III. Poetovio / Pettau / Ptuj. www.tertullian.org/rpearse/mithras/display.php?page=cimrm1578
1896- Two-sided relief. Tauroctony, Mithraic communion. www.tertullian.org/rpearse/mithras/display.php?page=cimrm1896
1901- Mithraeum. Jajce. www.tertullian.org/rpearse/mithras/display.php?page=cimrm1901
2374. Mithraeum. Caernarvon. www.tertullian.org/rpearse/mithras/display.php?page=cimrm2374

Appendices

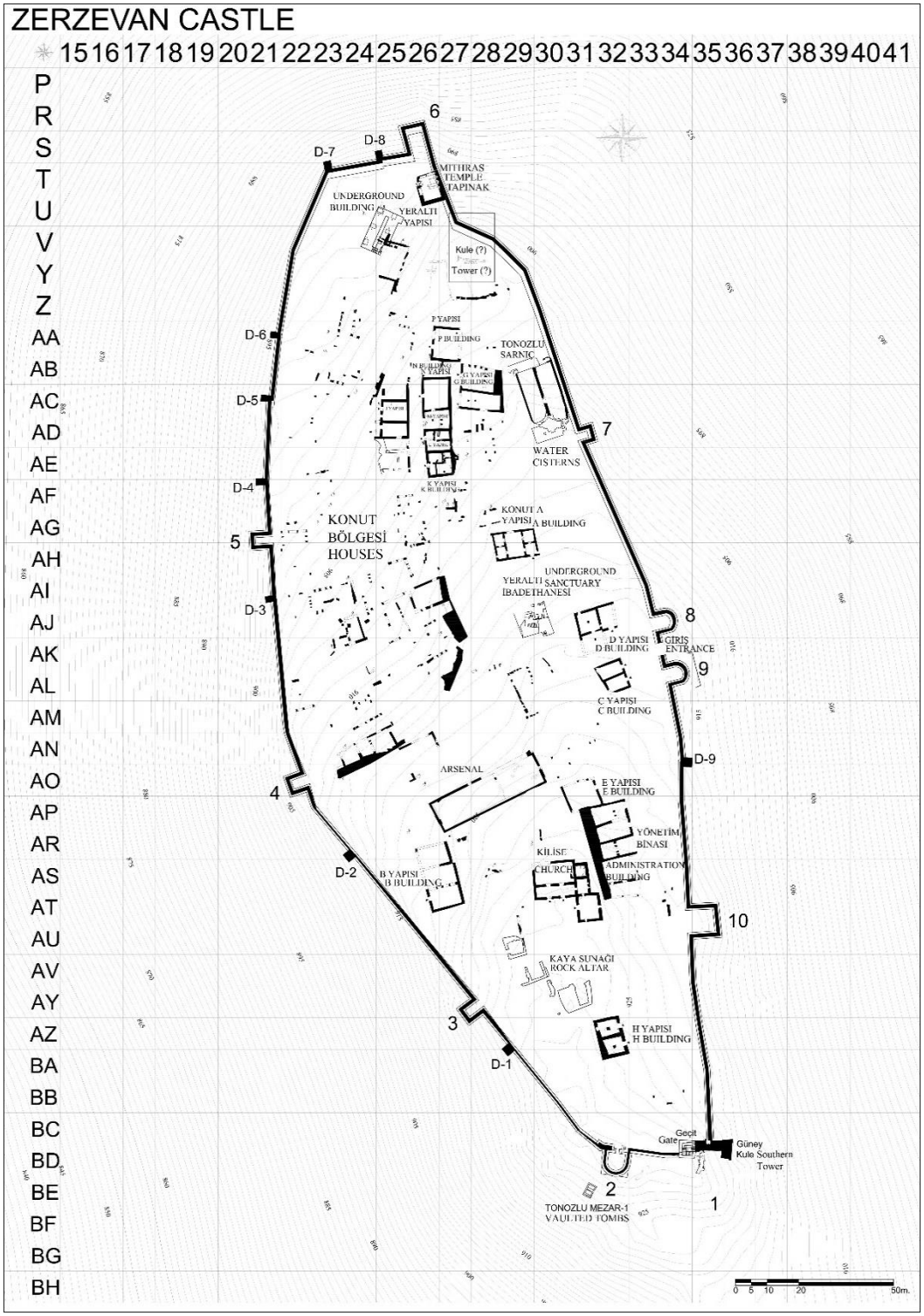


Fig. 1: *Castrum Zerzevan, Topographical Plan. (Zerzevan Excavation Archive)*

Fig. 2: *Castrum Zerzevan, Aerial View. (Zerzevan Excavation Archive)*

Fig. 3*: 3D Reconstruction of Castrum Zerzevan. (Zerzevan Excavation Archive)*

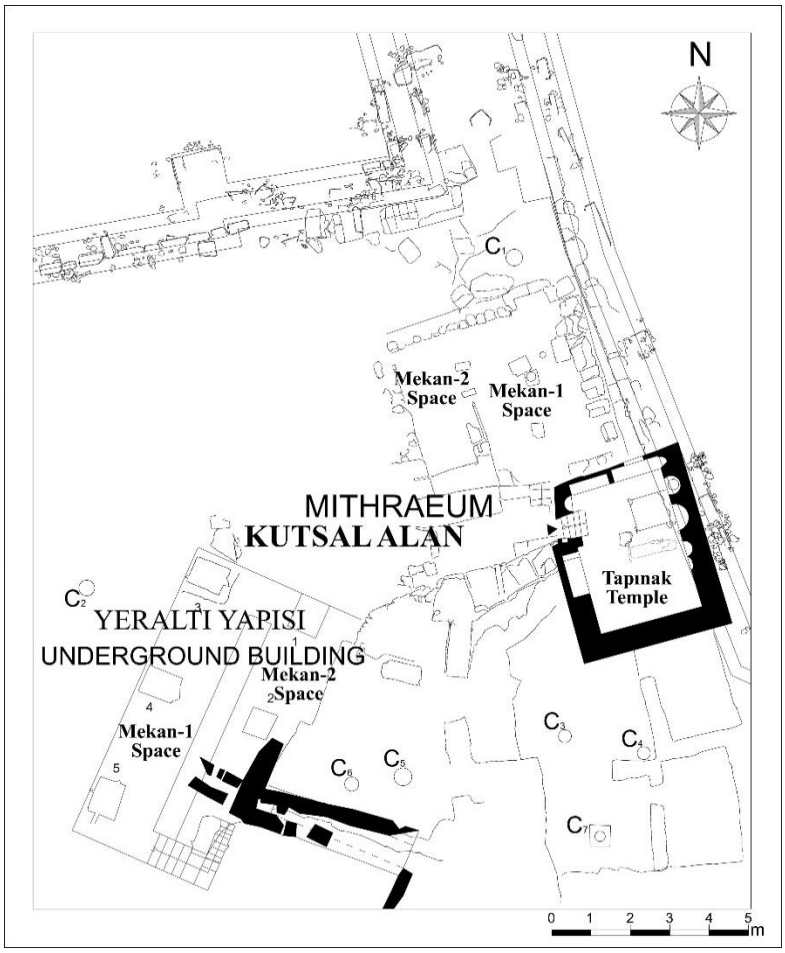


Fig. 4: *Plan of Mithraeum Complex, Zerzevan. (Zerzevan Excavation Archive)*

Fig. 5: *Aerial View of Mihtraeum Complex, Zerzevan. (Zerzevan Excavation Archive)*

Fig. 6: *Inner view of the Mithras Temple, Zerzevan. (Zerzevan Excavation Archive)*

Fig. 7: *3D Reconstruction of Mithras Temple. Zerzevan. (Zerzevan Excavation Archive)*

Fig. 8: *3D View of Zeugma. (Görkay, 2022, fig. 42)*

Fig. 9: *Frontiers of the Roman Empire. https://whc.unesco.org/en/list/430/maps/*

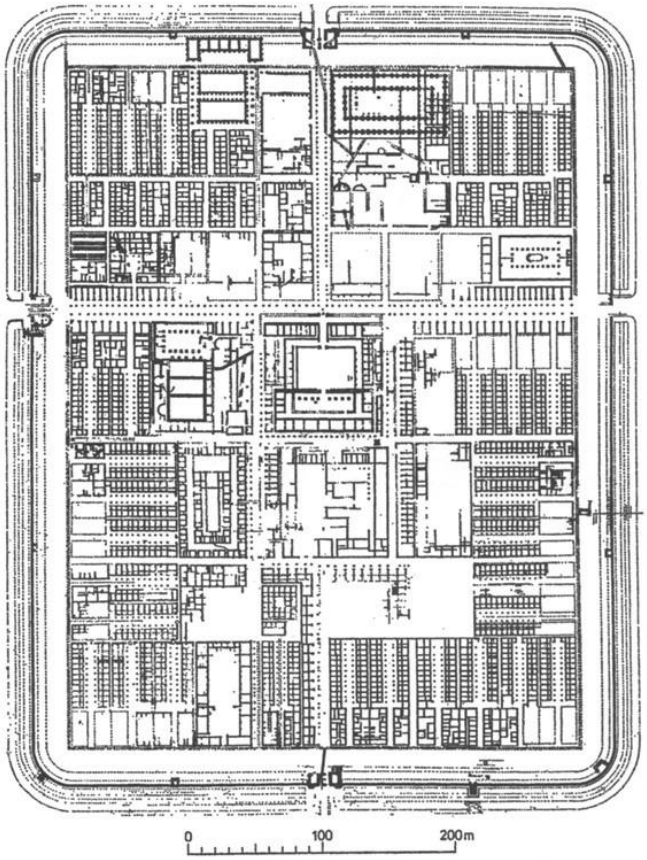


***Fig. 10**: Plan of Castrum Novaesium. (Le Bohec, 2000, fig. 4a)*

***Fig. 11:** Image from Hadrian's Wall. (Hingley, 2012, fig. 2.5)*

Fig. 12: *Inner View of Hawarte Mithraeum. www.tertullian.org/rpearse/mithras/images/supp_22Xmwidok_sali_glownej1.jpg*

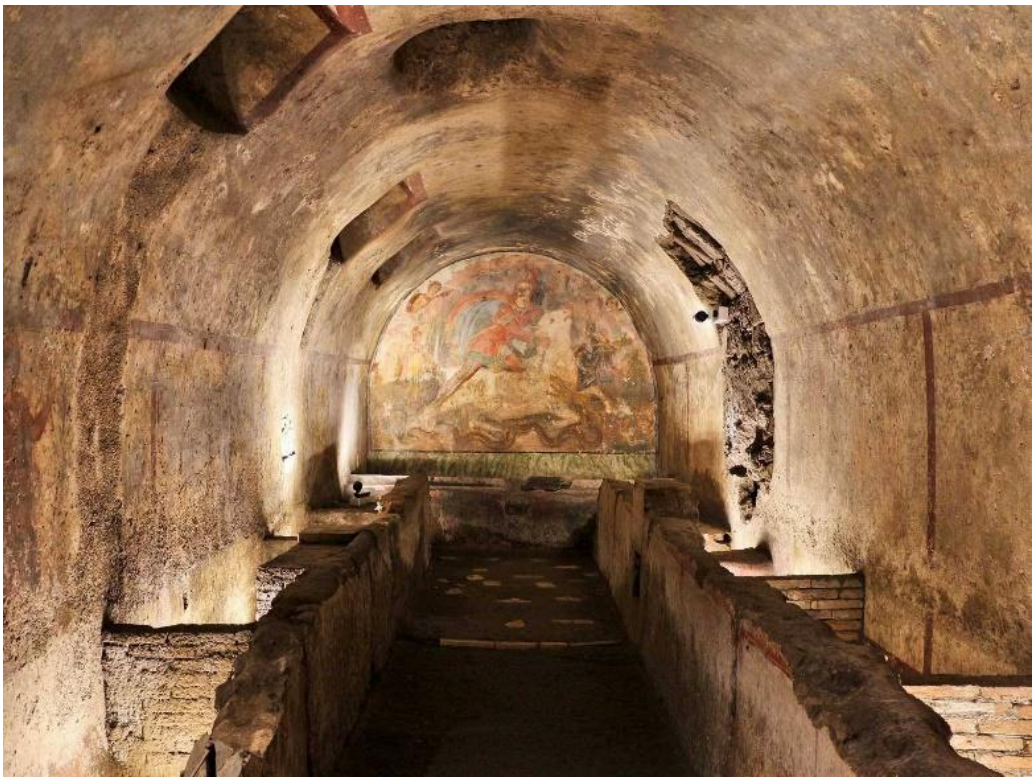


Fig.13: *The Vetere Mithraeum of Santa Maria Capua. www.mithraeum.eu/monument/23*

Fig.14: *Fortress Plan of Dura-Europos. (Matheson, 1982, fig. 15)*

Fig. 15: *Closer Image of Ramparts at Dura-Europos. (Matheson, 1982, fig. 4)*

OANNES
2025, 7(1) March

Research Article DOI: 10.33469/oannes.1544191

Aegean and West Anatolian Amphorae from Tarsus, Zeytin Pazari: Roman Imperial and Late Antique Periods

Erkan ALKAÇ
Corresponding Author

Department of Archaeology, Mersin University, Faculty of Humanities and Social Sciences, Mersin, Türkiye
ealkac77@gmail.com

Submitted 05.09.2024
Revision Requested Last 03.10.2024
Revision Received 31.01.2025
Accepted Date 26.03.2025
Publication Date 26.03.2025

Cite this article
Alkaç, E. (2025). Aegean and West Anatolian Amphorae from Tarsus, Zeytin Pazari: Roman Imperial and Late Antique Periods, *Oannes*, 7(1), March, pp. 64-74.

Abstract

Tarsus is located in the lowland part of the Cilicia Region. The modern city was built on the ancient city. Therefore, the ruins of the Ancient Period are encountered at different points of the modern settlement. The excavation area, called the Zeytin Pazarı, is located about 700 meters north of the Roman colonnaded street. A water reservoir structure and a mosaic from the Roman Period were discovered during the rescue excavation. After the structure lost its function, it was filled with soil, rubble, and many ceramics of different forms from the Late Antique Period.

Among the ceramics are amphorae from different centuries and production centers. They prove Tarsus' trade relations with the Mediterranean, the Aegean, and the Black Sea. This article examines the Aegean and Western Anatolian amphorae of the Zeytin Pazarı. The paper aims to classify and date these amphorae. The finds were discovered alongside mixed fill material dating to the Roman and Late Antique Periods. Therefore, the amphorae were dated with the help of similar samples. As a result of the research, the excavation at Zeytin Pazarı has yielded the Aegean and Western Anatolian amphorae, such as DR 2-4, Late Rhodian, Kapitän II, LR 8, LR 2, and LR 3 types.

Keywords: *Tarsus, Zeytin Pazarı, amphora, Roman Empire, Late Antiquity*

Genişletilmiş Özet

Amphora kelimesi, etimolojik olarak Yunanca amphiphoreus veya amphoreus kelimeleri, "karşılıklı" ya da "iki taraflı" anlamında kullanılan amphi ve "taşımak" anlamına gelen "pherein" kelimesinden türetilen "phoros" fiilinin birleşmesi sonucu oluşmuş isimdir. Eski Yunan dünyasında amphora kelimesi, Miken Dönemi Linear B alfabesi ile yazılmış kil tabletlerde karşımıza amphiphoreus veya amphoreus şeklinde okunan "a-pi-po-re-we" ideogramı ile çıkmaktadır.

Antik dünyanın ticari hayatının somut kanıtları olan amphoralar, arkeolojik kazılarında ya da batıklarda ele geçen buluntular arasında en sık rastlanan seramik grubunun başında gelmektedir. Ticari amphoralar, Antik Dönem ekonomisi hakkında önemli bilgiler aktaran bir seramik grubudur. Bu formun üzerinden yapılacak ekonomik analizler için amphoranın üretim yerinin, içinde taşınan ürünün ve tarihinin bilinmesi gerekmektedir.

Antik Dönem ticari yaşamı hakkında çeşitli bilgiler aktaran amphoralar, arkeoloji literatüründe üretildikleri bölge, kent ya da özel bir isimle anılmaktadır. Bu kargo kapları, Antik Dönem ekonomisi uzmanları tarafından dönemin ticari tarzının yorumlanmasında kullanılan maddi kanıtlardır. Amphoralar şarap, zeytinyağı, defne yağı, balık sosu ve salamura balık gibi temel gıda ürünlerin taşınmasında kullanılmıştır. Amphora üretim merkezlerinin, içerisinde taşınan ürünlerin ve tarihlerinin belirlenmesi, Antik Dönem ticaretiyle ilgili değerlendirmelere önemli katkılar sağlamaktadır. Böylece ticari hareketlilik, ithalat–ihracat modelleri, üretimin niteliği ve boyutu, deniz yolları ve kullanılan limanlar gibi beşerî ilişkiler saptanabilmektedir. Bu form grubu, Antik Dönemde yaşanan ticari hareketlilik ve canlanma ile birlikte, doğal afetlerin ve savaşların olumsuz izleri sebebiyle değişen ticari koşulları da açıkça ortaya koyabilmektedir.

Tarsus batıda Korakeison (Alanya), doğuda Alexandria Kat Isson (İskenderun), kuzeyde Toros Dağları ve güneyde Akdeniz ile sınırlanan Kilikia Bölgesi'nin ovalık bölümündedir. Antik Dönemde bu kenti iki yakaya ayıran Kydnos Nehri, Tarsus'u Akdeniz'e bağlamaktadır. Kydnos'un denize döküldüğü alanda Ekiçağ kaynaklarının bizlere aktardığı bilgilere göre liman yer almaktadır. Tarsus kent merkezi ile liman arasındaki mesafenin antik dönemde 2-3 km civarında olduğu bilinmektedir. Tarsus'u önemli kılan kuzeydeki Gülek Geçidi, doğu-batı arasındaki ulaşımın ana rotasıdır.

Tarsus, Akdeniz'in önemli liman kentleri arasında yer almaktadır. Bu durumu kanıtlayan arkeolojik materyaller arasında seramikler önemli konuma sahiptir. Kentin seramik yelpazesi içerisinde bulunan amphoralar, Tarsus'un farklı yüzyıllarda Akdeniz, Ege ve Karadeniz ile ticari ilişkilerini kanıtlamaktadır. Tarsus'un farklı kazı alanlarında bulunan amphoralar, kentin ticari potansiyelini ortaya koymaktadır.

Konumu ve bereketli toprakları sayesinde çağlar boyunca aynı yerleşim merkezi çevresinde gelişimini sürdüren Tarsus, günümüzde Antik Dönem yıkıntıların üzerindedir. Bu durum, Tarsus'taki arkeolojik araştırmalarının şehrin farklı noktalarında yapılabilmesine neden olmuştur. Şehirdeki inşaat çalışmaları sırasında rastlantı sonucu ortaya çıkan kalıntıların olduğu bölgelerdeki kurtarma kazılarının sayısı fazladır. Söz konusu kazı alanlarından birisi olan Tarsus Zeytin Pazarı, şehir merkezindeki Roma Sütunlu Caddesi'nin yaklaşık 700 m kuzeyinde yer almaktadır. Kazı alanında Roma Dönemi'ne ait bir baraj havzasına bağlı rezervuar yapısı ve mozaikli döşeme ortaya çıkarılmıştır. MS 6. yüzyılda Kydnos Nehri'nin yatağının değiştirilmesinden sonra işlevini kaybeden rezervuarın üst yapısı zamanla tamamen tahrip edilmiştir. Bu yapının içi, toprak, moloz ve kendi döneminin atıkları niteliğindeki çoğunluğu seramik parçalarından oluşan döküntülerle doldurulmuştur. Buradaki dolgunun aşamalarla oluşturulduğu farklı toprak yapısına sahip katmanlarından anlaşılmaktadır. Özellikle alt katmanlarda ki buluntuların hemen hepsi Geç Antik Çağa tarihlenirken, en üst kata Roma dönemine ait buluntuların yoğun bir şekilde karışmış olması, alanda yüzyıllar boyu devam eden işlemlerin (tahribat veya müdahale) sonucu olarak karşımıza çıkmaktadır. Katmanlardaki karışıklığa rağmen Roma ve Geç Antik Dönemlere ait kap formları karakteristik özellikleri sayesinde tasnif edilebilmiştir.

Zeytin Pazarı kazısında bulunan Antik Dönem kaplar arasında farklı üretim merkezlerine ve yüzyıllara ait ticari amphoralar yoğunluğu ile dikkat çekmektedir. Zeytin Pazarı'ndaki amphoralar, Tarsus'un Antik Dönemdeki ticari bağlantılarının ve ekonomik hareketliliğinin belirlenmesine ek bir katkı sağlamaktadır. Bu amphoralar hem Kilikia'nın hem de Doğu Akdeniz'in önemli liman kentlerinden olan Tarsus'un Karadeniz, Ege, Kıbrıs, İtalya, Hispania, Mısır ve Kuzey Afrika ile şaraba ve zeytinyağına dayılı ticari ilişkiler kurduğu, bulunan amphoralar sayesinde tespit edilmiştir.

Bu makalede Zeytin Pazarı'nın Ege ve Batı Anadolu amphoraları incelenmiştir. Makalenin amacı, bu amphoraları sınıflandırmak ve tarihlemektir. Ayrıca Tarsus'un bu coğrafya ile kurduğu ticari bağlantıların tarihsel boyutu da araştırılacaktır. Tarsus'ta bulunan Batı Anadolu ve Ege amphoraları, ilk defa bu çalışma kapsamında toplu bir şekilde incelenmiştir. Araştırılan amphoralar, tipolojik bakımdan tanımlanmış, analoji yöntemi ile tarihlenmiş ve literatürdeki yaygın isimleri kullanılmıştır. Ayrıca değerlendirme yapılırken Tarsus'taki diğer kazılardan ele geçen örnekler de göz önünde bulundurulmuştur.

Tarsus ile Ege Denizi çevresindeki merkezlerle ticari ilişkilerin tarihsel sürecinin –elimizdeki bilgilere göre– MÖ 7. yüzyılın ikinci yarısına kadar geriye gittiği anlaşılmıştır. Bu coğrafyadan Tarsus'a Hellenistik Dönem boyunca da amphoralar içerisinde şarap ya da zeytinyağı aktarılmıştır. Zeytin Pazarı'nda bulunan bazı amphoralar, kentin bu coğrafya ile ticari ilişkilerinin Roma ve Geç Antik Dönemlerde de devam ettiği kanıtlamaktadır. Bu kazı alanında Ege ve Batı Anadolu üretimi DR 2-4 (MÖ 1. yüzyılın ikinci yarısı – MS 1. yüzyıl), Geç Rhodos (MS 1. ve 2. yüzyıl), Kapitän II (MS 3. – 4. yüzyıl ile MS geç 2. yüzyıl – 3. yüzyılın ilk yarısı), LR 8 (MS 4. – 5. yüzyıl), LR 2 (MS 5. – 7. yüzyıl) ve LR 3 (MS 5. yüzyılın ikinci yarısı – 6. yüzyıl) amphoraları bulunmuştur.

Introduction

Tarsus is a large harbor city located in the lowland part of the Cilicia Region (Strabon XIV, III, 1). The modern city was built on the ancient city. As a result, ruins from the ancient period are encountered at various points of the modern settlement. A water reservoir and a Roman mosaic have been found in the area known as Zeytin Pazarı. A rescue excavation was carried out about 700 m north of the Roman colonnaded street after its original function was abandoned; the structure was filled with soil, debris, and a wide range of ceramics representing various forms characteristic of the Late Antique Period. Consequently, no discernible sterile layer was observed in the area under excavation (Dunbabin et al., 2019, pp. 329-358; Alkaç & Adak-Adıbelli, 2024, pp. 369-385).

Ceramics from different centuries and production centers have been found in Zeytin Pazarı (fig. 1). Commercial amphorae are important among the finds. This article analyses the Aegean and Western Anatolian amphorae from Zeytin Pazarı. It aims to classify and date these amphorae. In addition, the historical dimension of Tarsus' commercial connections with this region will be investigated[1].

Koan Production Dressel 2-4 Amphora (DR 2-4)

DR 2-4 amphorae are modeled on the Hellenistic Koan amphorae (Empereur & Picon, 1989, pp. 225-226). The mouth of this type of amphora is flared and rounded. The neck is long and cylindrical. The transition from the neck to the sloping shoulder is gradual. A twin handle emerging from the upper part of the neck connects to the shoulder. The cylindrical body narrows towards the bottom (Kızılarslanoğlu, 2016, p. 122).

Mediterranean viticulture was reorganized during the reign of Augustus, leading to increased export capacity of the Aegean centers. Consequently, this style was designated as the official amphora of the Roman Imperial Period. The DR 2-4 amphorae were produced in different parts of the Mediterranean with similar form characteristics (Sezgin et al., 2022, p. 158). This production lasted from the mid-1st century BC to the early 3rd century AD (Arthur & Williams, 1992, p. 250). Examples of the amphorae were found in the Mediterranean, Aegean, the Black Sea, North Africa, Europe's interior, Britannia, Yemen, and India (Şenol, 2018, p. 321). This form transported wine, olive oil, fish sauce, and dates (Şenol, 2003, p. 46; p. 49).

An individual DR 2-4 amphora was found in the Zeytin Pazarı. No. 1 is a twin handle. The similar handle in the Izmir Archaeological Museum dates to the second half of the 1st century BC - 1st century AD (Sezgin et al., 2022, p. 159, cat. no. 114). It can be reasonably deduced that no. 1 is also of this date.

Late Rhodian Amphora

The mouth of Late Rhodian amphorae is flared and rounded. The neck is long and cylindrical. The handles that emerge from under the mouth meet the sloping shoulder. At the point where the handles turn downwards, the protrusion characteristic of the form is observed. The handles are round in cross-section. The ovoid and fluted body narrows towards the base (Sezgin et al., 2022, p. 35, cat. 22).

The amphorae of this group were produced at various locations in Rhodes and on the opposite coast of its Peraia (Empereur & Picon, 1989, p. 226, fig. 1). The discovery of production waste of this form at Kallipolis and Bybassos in Peraia lends further support to this hypothesis (Şenol, 2019, p. 100, fig. a-d). These examples were widely distributed over a wide geographical area between the 1st century BC and the beginning of the 2nd century AD. These amphorae were used to transport wine, with around 25- or 26-liters capacities. There are also half-scale examples of this type (Şenol, 2003, pp. 26-28). Wine in the Late Rhodian amphorae was exported as Annona to military garrisons throughout the Early Imperial Period (Sezgin et al., 2022, p. 34).

No. 2 has a projection on the upper part of the round-sectioned handle. Similar amphorae from the island of Kekova date to the mid-1st century AD (Aslan et al., 2018, pp. 256-257, fig 5a-b) and from the Izmir

[1] Doğukan Bekir Alper (MA), Director of Tarsus Museum, and Archaeologists of Tarsus Museum for their support to the ceramic works at the Zeytin Pazarı, Tarsus Chamber of Commerce and Industry, especially Mr Fuat Togo and I would like to thank Assoc. Prof. Dr. Işık Adak-Adıbelli and Dr. İlkay Göçmen for her comments on this article.

Archaeological Museum to the second half of the 1st—late 2nd century AD (Sezgin et al., 2022, p. 35, cat. 22). The find from Zeytin Pazarı should also be dated to the 1st- 2nd century AD.

Kapitän II Amphorae

Kapitän II amphorae have a triangular mouth. The conical neck is long and fluted. Oval handles emerge from the upper part of the neck and join the shoulder below. The body is triangular. The high base is tubular (Şenol, 2018, p. 423, fig. 350). This amphora group is classified as Type A1, Type A2, Type B1, Type B2, and Type B3 (Negru et al., 2003, pp. 209-214).

Kapitän II amphorae may have been produced in the Aegean Islands, western Anatolia and the Black Sea (Şenol, 2018, p. 419; Bezeczky, 2013, p. 149; Bezeczky, 2005, p. 45; Reynolds, 2010, p. 90). These amphorae are dated to the late 2nd - 5th century AD (Sezgin et al., 2022, p. 183). Examples of the group have been found in the Mediterranean, Aegean, and the Black Sea (Bezeczky, 2013, pp. 149-150; Bădescu, 2013, p. 189-198, pl. 1-3; Akkaş, 2020, p. 187). The form is common in centers in the eastern Mediterranean in the early 5th century AD (Meyza & Baginska, 2013, p. 149, fig. 9a-c). Examples of the group have not been found extensively in Egypt. However, the Mons Claudianus example shows that the form reached the Red Sea (Tomber, 1996, p. 43). The examples in the Alexandria Greco-Roman Museum range between 9 and 13 liters (Şenol, 2018, p. 420-424, no. 348-351).

No. 3 has a triangular rim. There is a sharp protrusion on the upper part of the conical neck. With these form features, no. 3 belongs to the Type A.2.2.2.1 group dating to the first half of the 3rd century AD (Negru et al., 2003, 209, no. 6, fig. 1). No. 3 is similar in form to the one found at Gözlükule Mound Jones, 1950, 278, no. 834, fig. 210). The Phokaian analog of this amphora dates to the 3rd-4th century AD (Fırat, 2019, 35, cat. no. 4-5, fig. 2). This example from Zeytin Pazarı must also date to this period. No. 4 has a high pedestal in tubular form. There is a projection on the inner side of the seating plane of the pedestal. With these form features, no. 4 resembles the Type B.2.2 examples dating to the end of the 2nd - first half of the 3rd century AD (Negru et al., 2003, 212, no. 30, fig. 2).

Late Roman 8 Amphora (LRA 8)

The mouth of LR 8 amphorae is protruding. The handles emerge from the upper part of the cylindrical neck and join the sloping shoulder. The projection of the cylindrical body is at the bottom. From this point, the body narrows towards the base. The pointed base is solid (Pieri, 2005, pp. 132-137).

The paste consistency and clay composition of LR 8 amphorae suggest that they may have been produced in the Aegean Islands or Western Anatolia. These examples of this form were found in the same region as the Samos Cistern amphorae. Therefore, it is suggested that this group is the predecessor of the Samos Cistern Type (Sezgin et al., 2022, p. 93). LR 8 is dated between the 3rd and 6th centuries AD (Şenol, 2018, p. 429; Sezgin et al., 2022, p. 93). These amphorae probably transported wine to centers in the Eastern Mediterranean and Black Sea (Bezeczky, 2013, p. 156).

An example of LR 8 amphora was found in Zeytin Pazarı. No. 5 has a rounded upright mouth, fluted cylindrical neck and oval-sectioned handle (Adak-Adıbelli & Alkaç, 2024, p. 375-376, fig. 10). Similar amphorae are dated to the early 4th century AD at Shikmona (Opait, 2004, p. 303, fig. 26), Marmaris Museum (Şenol, 2003, p. 91-92, no. 31) and Izmir Archaeological Museum (Sezgin et al., 2022, p. 94-97, no. 69-72) dating to the 4th-5th century AD. The evidence presented here suggests that No. 5 can also be dated to the 4th to 5th century AD.

Late Roman 2 Amphorae (LRA 2)

LR 2 amphorae are classified as Types A, B, and C. The rounded mouth of the amphorae of this group is slanted inwards. The neck is externally angled towards the shoulder. The oval handles emerge from under the neck and attach to the upper part of the spherical body. The base is shaped like a small button (Pieri, 2005, p. 87, fig. 45). LR 2 amphorae were produced in Peloponnessos (Demesticha, 2010, p. 131), Koan (Diamanti, 2010, p. 3, fig. 1b), Porto Cheli (Hayes, 2003, p. 529), Pseira (Poulou-Papadimitriou & Nodarau, 2007, pp. 755-766), Chios, and Argolis (Şenol, 2018, p. 425). The group is dated between the 4th and mid-7th

century AD (Sezgin et al., 2022, p. 88; Bezeczky, 2013, p. 161). Trade in this form continued uninterrupted until the Arab invasions (mid-7th century AD) (Sezgin et al., 2022, p. 88). LR 2 amphorae reached the Mediterranean, the Aegean, the Black Sea, inland regions of Europe, Britannia, and India (Şenol, 2003, p. 96). This wide distribution was made possible by the annona (annona civicia and annona militaris), a system of tax collection and distribution in kind (Kara, 2021, pp. 65-79). Olive oil and wine of the region were exported in these amphorae of Aegean production (Şenol, 2009, p. 161).

Examples of LR 2 amphorae type B were found in Zeytin Pazarı. Nos. 6 and 7 have rounded and inverted mouths. The neck of this fragment is conical. The two amphorae are similarly dated to the 5th - early 7th century AD at Elaiussa Sebaste Kızılarslanoğlu, 2016, p. 394-398, no. 106-109), to the first half of 7th century AD at Knidos (Doksanaltı, 2020, p. 404, no. 55, fig. 12), to late 6th - early/mid 7th century AD at Bathonea (Kara, 2021, p. 75, fig. 1a) and to late 4th-early 5th - 6th century AD at Alexandria (Şenol, 2000, 366, no. 172). It is proposed that the examples from the Zeytin Pazarı should be dated to the 5th to 7th century AD.

Late Roman 3 Amphorae (LRA 3)

LR 3 amphorae are categorized as A and B. The examples of Group A have a narrow mouth and cylindrical neck. The form has one or two handles. The handles emerge from the upper part of the neck and attach to the sloping shoulder (Pieri, 2005, p. 95, fig. 57; p. 98, fig. 61).

LR 3 amphorae were produced at Ephesos, Samos, Koan, Halicarnassos, and Sardis (Outschar, 1993, 47, 48; Pieri, 2005, pp. 94-101). The production of this group started in Ephesos in the middle of the 1st century BC (Bezeczky, 2013, p. 66). The fact that the form was also produced at Aigai is confirmed by the discovery of thousands of LR 3 examples in 3rd-century AD levels of the city (Sezgin et al., 2022, 39, note 80). This form was produced from the 1st century BC to the 7th century AD (Şenol, 2018, p. 427). Amphorae of the group were distributed as far as the Black Sea, Aegean, Cyprus, Levant, eastern North Africa, Italy, southern France, Iberian Peninsula, Britannia, and India (Pieri, 2005, fig. 60-61; Bezeczky, 2013, pp. 164-165, fig. 25). LRA 3 forms carried wine, olive oil, ointment, and garum sauce (Akkaş, 2020, p. 199).

Rim, neck, and base fragments belonging to LR 3 amphorae were found in Zeytin Pazarı. No. 8 has a triangular mouth. The neck opens towards the shoulder. The handle has an oval cross-section. No. 9 is a fragment of the body and base. The base narrows towards the sitting plane (Adak-Adıbelli & Alkaç, 2024, p. 375, fig. 9). No. 8 and 9 belong to Type 3A of LR 3 amphorae (Pieri, 2005, p. 98, fig. 61) and are dated to the second half of the 5th - 6th century AD at Parion (Akkaş, 2020, p. 200, no. 41, fig. 12) and to the late 5th - 6th century AD at the Izmir Archaeological Museum (Sezgin et al., 2022, 45, cat. no. 31). It is proposed that the dates of these two sherds can be suggested as late 5th - 6th century AD. The additive and clay characteristics of the LR 3 amphorae found in Zeytin Pazarı indicate that these examples were produced in Ephesos.

Conclusion and Evaluation

Tarsus is an important harbor city in the Mediterranean region (Durukan, 2015a, p. 5; Durukan, 2015b, pp. 246-247; Durukan, 2017, p. 348; Arıcı, 2004, p. 855; Arıcı & Göçmen, 2022, pp. 288-304). Ceramics are significant in the city's archaeological findings, particularly the amphorae. These vessels, found throughout Tarsus, indicate the city's extensive commercial ties with the Mediterranean, Aegean, and Black Sea regions over various centuries, showcasing the city's strong commercial potential (Alkaç, 2024, pp. 149-165).

The amphorae found in Tarsus show that the Aegean and Western Anatolia were part of the city's commercial network. The history of the city's commercial relations with this region of the ancient world dates back to the second half of the 7th century BC (Hanfmann, 1963, p. 242, no. 1028A, fig. 135. In this article, the amphora is classified as Chios). Wine or olive oil was exported to Tarsus in amphorae throughout the Hellenistic Period (Grace, 1950, p. 135-148; Alkaç, 2021, p. 192-195, fig. 1-13). Some amphorae found in Zeytin Pazarı prove that the city's commercial relations with this region continued in the Roman and Late Antique periods. The excavation area yielded Aegean and Western Anatolian amphorae of DR 2-4 (second half of 1st century BC - 1st century AD), Late Rhodian (1st and 2nd century AD), Kapitän II (3rd - 4th century AD and late 2nd - first half of the 3rd century AD), LR 8 (4th - 5th century AD), LR 2 (5th - 7th century AD) and LR 3 (second half of the 5th century - 6th century AD).

At the beginning of the Roman Imperial Period, the agriculture and trade of the Mediterranean were restructured. During the Pax Romana Period, the commercial mobility and volume of the Mediterranean developed. During this period, important producers of the South Aegean, such as Rhodes, Koan, and Knidos, continued their wine trade within the framework of the new measures and exported South Aegean wine to many parts of the Empire (Şenol, 2015, p. 247). The DR 2-4 and Late Rhodian amphorae from Koan found in Zeytin Pazarı reflect this situation. Despite the growing commercial potential of the Mediterranean under the Pax Romana, the number of Aegean and Western Anatolian amphorae from this period of the Zeytin Pazarı is small.

The Isaurians led a series of revolts against Rome between 350 and 400 AD. These revolts, which lasted for about half a century, spread over a wide geography, including Lycia, Pamphylia, Cilicia, Palestine, and Cyprus. This process also had a negative impact on maritime trade in this part of the Mediterranean (Kurt, 2018, pp. 808-814; 817). The environment caused by the revolts also negatively affected the commercial relations of Tarsus. With the end of the revolts in the early 5th century AD, the commercial relations of Tarsus started to rise (Alkaç, 2024,156-158). The positive reflection of this situation is also observed in the number of Aegean and Western Anatolian amphorae according to the Zeytin Pazarı data. In general, the number of amphorae exported to Tarsus from various parts of the Mediterranean and the Black Sea increased from this century onwards. In addition to amphorae, red slip pottery from Phaokaia also began to increase in this century (Adak-Adıbelli, 2017, 18, graphic 1). The data suggest that Aegean and Western Anatolian merchants were confidently trading in the eastern Mediterranean from the 5th century AD onwards. The interest of consumers in Tarsus in Aegean and Western Anatolian products increased steadily from this time.

Catalogue

No. 1
Amphora: Dressel 2-4
Diameter Rim:
Height:
Surface: 5 YR 7/6 reddish yellow
Clay: 2.5 YR 6/6 light red
Inclusions: Mica, limestone
Date: Second half of the 1st century BC - 1st century AD

No. 2
Amphora: Late Rhodian Amphora
Diameter Rim:
Height: 5.0 cm
Surface: 5 YR 7/4 pink
Clay: 2.5 YR 5/8 red
Inclusions: Limestone, Limestone, chamotte
Date: 1st and 2nd century AD

No. 3
Amphora: Kapitän II - Tip A.2.2.1
Diameter Rim: 6.0 cm
Height: 4.8 cm
Surface: 2.5YR 5/8 red
Clay: 2.5 YR 6/8 light red
Inclusions: Limestone, quartz
Date: 3rd - 4th century AD

No. 4
Amphora: Kapitän II - - Tip B.2.2
Diameter Rim: 7.5 cm
Height: 8.0 cm
Surface: 2.5 YR 6/8 light red

Clay: 2.5 YR 6/8 light red
Inclusions: Limestone, quartz
Date: late 2nd - first half of the 3rd century AD

No. 5
Amphora: LR 8 Amphora
Diameter Rim: 10.0 cm
Height: 10.2 cm
Surface: 5 YR 6/8 reddish yellow
Clay: 5 YR 6/8 reddish yellow
Inclusions: Mica, quartz
Date: 4th - 5th century AD

No. 6
Amphora: LR 2 Amphora – Tip B
Diameter Rim: 11.0 cm
Height: 12.0 cm
Surface: 5 YR 5/6 yellowish red
Clay: 5 YR 6/6 red
Inclusions: Mica, sand
Date: 5th - 7th century AD

No. 7
Amphora: LR 2 Amphora – Tip B
Diameter Rim: 10.5 cm
Height: 3.0 cm
Surface: 5 YR 5/6 yellowish red
Clay: 5 YR 6/6 red
Inclusions: Mica, sand
Date: 5th - 7th century AD

No. 8
Amphora: Late Roman 3 Amphora – Tip A3
Diameter Rim: 3.0 cm
Height: 5.5 cm
Surface: 2.5 YR 6/6 light red
Clay: 7.5 YR 6/6 reddish yellow
Inclusions: Mica, sand
Date: Second half of the 5th century - 6th century AD

No. 9
Amphora: Late Roman 3 Amphora – Tip A3
Diameter Rim:
Height: 3.5 cm
Surface: 2.5 YR 4/8 red
Clay: 2.5 YR 6/6 light red
Inclusions: Mica, sand
Date: Second half of the 5th century - 6th century AD

Ethics Committee Approval: Ethics committee approval is not required.
Peer-review: Externally peer-reviewed.
Conflict of Interest: The author has no conflicts of interest to declare.
Financial Disclosure: The author declared that this study has no financial support.

References

Adak-Adıbelli, I. (2017). Tarsus kırmızı astarlı Geç Roma Dönemi seramikleri. In Adak-Adıbelli I., İlgezdi Bertram, G., Matsumura, K., Baştürk, E., Koyuncu, C., Kızılarslanoğlu, H., A., Yedidağ, T., Y., & A. Topaloğlu Uzunel (eds.), *Barış Salman Anı Kitabı*, (pp. 1–18). İstanbul.

Adak-Adıbelli, I., & Alkaç, E. (2024, 24-26 Kasım). Evaluation of Late Antique Wine and Olive Oil Commercial Routes in terms of Tarsus in the Light of Roman Bath and Olive Market Amphorae [Conference presentation]. In Ü. Aydınoğlu & A. K. Şenol (eds.), *A Olive Oil and Wine Production in Aegean and Mediterranean in Antiquity* (pp. 369-385). Bilgin Kültür Sanat Yayınları.

Akkaş, İ. (2020). Parion yamaç hamamı ticari amphora buluntuları (MÖ 1. yüzyıl- MS 7. yüzyıl). *Arkhaia Anatolika*, *3*, 178–243.

Alkaç, E. (2021). Tarsus hinterlandından bir grup amphora: Keşbükü buluntuları. D. Kaplan (ed.), *Tarsus Araştırmaları II*, (s. 191–214). Bilgin Yayınları.

Alkaç, E. (2024). Trade relations of Tarsus in the light of amphorae: Roman Imperial Period and Late Antique. *Seleukeia*, *14*, 149–165.

Alkaç, E., & Adak-Adıbelli, I. (2024). Cilician Amphorae from the Tarsus Zeytin Pazarı Excavation. *Arkeoloji Dergisi, 32*(*1*), 85–97.

Arıcı, S. (2024). Antik Çağ'da Tarsus Ekonomisi. *Kafkas Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *34*, 855-872.

Arıcı, S., & Göçmen, İ. (2022). Kydnos Nehri ve Tarsus. *Arkhaia Anatolica*, *5*, 288–304.

Arthur, P., & Williams, D. (1992). Campanian wine, Roman Britain and the third century A.D. *Journal Roman Archaeology*, *5*, 25–160.

Aslan, E., Erdoğan, L., Orhan, U., & Kılıç, Y. (2018). Kekova'da bulunan bir grup Rhodos amphorası. *Cedrus*, *6*, 249–263.

Bădescu, A. (2013). Amphoras Kapitän II dscovered at Histria, in Extra Muros Basilica. *Materiale Şi Cercetări Arheologice*, *9*, 189–198.

Bezeczky, T. (2005). Late Roman amphorae from the Tetragonos-Agora in Ephesus. F. Krinzinger (ed.), *Spatantike und Mittelalterliche Keramik aus Ephesos*, *Archaologische Forschungen 13*, (pp. 203–230). Verlag der Österreichischen Akademie der Wissenschaften.

Bezeczky, T. (2013). *The amphorae of Roman Ephesus*. *Forschungen Ephesos 15(1)*, Verlag der Österreichischen Akademie der Wissenschaften.

Cankardeş Şenol, G. (2006). *Klasik ve Helenistik Dönemde mühürlü amphora üreten merkezler ve mühürleme sistemleri.* Ege Yayıncılık.

Cankardeş Şenol, G., Şenol, A. K., & Doğer, E. (2004, 26–29 Eylül). Amphora production in the Rhodian Peraea in the Hellenistic period [Conference presentation]. In J. Eiring & J. Lund (Ed.), *Transport amphorae and trade in the Eastern Mediterranean, Monographs of the Danish Institute at Athens, Vol. 5, (pp. 143–148).* Aarhus University Press.

Demesticha, S. (2010). The cargo of shipwreck 7 in the Pagasitic Gulf. A preliminary interpretation. *Κεραμιχή της ύστερης Αρχαιότητας*, 131-142.

Diamanti, C. (2010). Stamped Late Roman/Poto-Byzantine amphoras from Halasarna of Kos. *Rei Cretariae Romanae Fautorum Acta, 41, 1–8.*

Didioumi, S. (2014). Local pottery production in the island of Cos, Greece from the Early Byzantine period: A preliminary report [Conference presentation]. In N. Poulou-Papadimitriou, E. Nodarou, & V. Kilikoglou (eds.), *Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: Archaeology and archaeometry. The Mediterranean: A market without frontiers LRCW 4(1),* (pp. 169–180). BAR International Series 2616(I).

Doğer, E. (1991). *Antik Çağda amphoralar*. Sergi Yayınları.

Doksanaltı, M. E. (2020). Knidos 'liman caddesi' Geç Antik Dönem atölye/dükkân ve buluntuları. *Olba*, *28*, 377–420.

Dunbabin, K. M. D., Adak-Adıbelli, I., Çavuş, M., & Alper, D. (2019). The man who came late to dinner. A sundial, a raven, and a missed dinner party on a mosaic at Tarsus. *Journal of Roman Archaeology, 32*, 329–358.

Durukan, M. (2015a). Anazarbus, Aegeai ve Tarsus kentlerinin ticaret yollarıyla bağlantısı. *Çukurova Araştırmaları Dergisi*, *1*, 1–7.

Durukan, M. (2015b). Geç Antik Çağ'da Doğu Akdeniz'deki ekonomik gelişmenin nedenleri. *Adalya, XVIII*, 241–257.

Durukan, M. (2017). Yeni veriler ışığında Mallos, Magarsos ve Antiokheia ad Pyramos problemi. *Olba, 25*, 345–380.

Empereur, J. Y., & Hesnard, A. (1987). Les amphores Hellenistiques. *Céramiques Hellénistiques et Romaines,* II, 17–71.

Empereur, J. Y., & Picon, M. (1989). Les régions de production d'Amphores impériales en méditerranée orientale. In M. Lenoir, D. Manacorda, & C. Panella, *Amphores romaines et histoire économique. Dix ans de recherche. Actes du colloque de Sienne (22-24 mai 1986)*, 223–248. Publications de l'École Française de Rome.

Fırat, M. (2019). Phokaia mozaikler alanında ele geçen Roma Dönemi amphoraları. *Seramik Araştırmaları Dergisi, 1,* 30–53.

Grace, V. (1950). The stamped amphora handles. In H. Goldman (ed.), *Excavations at Gözlü Kule*, *Tarsus I*, (pp. 135–148). Princeton University Press.

Grace, V. (1963). Notes on the amphoras from the Koroni Peninsula. *Hesperia, 32*(3), 319–334.

Hanfmann, G. M. A. (1963). The Iron Age pottery of Tarsus. H. Goldman (ed.), *Excavations at Gözlü Kule, Tarsus, Vol. III: The Iron Age,* (pp. 18–332). Princeton University Press.

Hayes, J. W. (2003). Hellenistic and Roman pottery deposits from the Saranda colonies' castle site at Paphos. *Absa, 98*, 447–516.

Kara, Ü. (2021). Geç Antik Çağ amphoralarında görülen yazıt ve mühürler Işığında annona sistemi: LRA 1, LRA 2, LRA 3 ve Zeest 80. *Arkeoloji Dergisi*, *27*(*2*), 65–79.

Kızılarslanoğlu, A. (2016). *Antik Çağ'da Elaiusa Sebaste'nin amphora üretimi ve ticari ilişkileri* [Unpublished doctoral dissertation]. University of Atatürk.

Kurt, M. (2018). MS 4. yüzyılda Isauria Eyaleti'nin siyasal ve idari yapısı. *Belleten*, *285*(*82*), 803–828.

Ladstätter, S. (2008). Überlegungen zur lokalen amphorenproduktion spatantik-byzantinischer Zeit in Ephesos. M. Steskal & M. La Torre (eds.), *Das Vediusgymnasium in Ephesos, Forschungen in Ephesos, 14(1*), (pp.180–183). Verlag der Österreichischen Akademie der Wissenschaften.

Meyza, H., & Baginska, D. (2013). Roman Amphorae from the Polish Excavations at Nea Paphos Maloutena: An Overview. L. Lawall & J. Lund (eds.), *The Transport Amphorae and Trade of Cyprus, Gösta Enbom Monographs 3*, (pp. 134–153). Aarhus University Press.

Negru, M., Bădescu, A., & Avram, R. (2003). Kapitän II amphorae in Roman Dacia. *Rei Cretariae Romanae Favtorvm Acta*, *38*, 209–214.

Opait, A. (2004, September 26-29). The Eastern Mediterranean amphorae in the province of Scythia [Conference presentation]. In J. Eiring & J. Lund (eds.), *Transport Amphorae and Trade in the Eastern Mediterranean*, Monographs of the Danish Institute at Athens Vol. 5, (pp. 293–308). Aarhus University Press.

Outschar, U. (1993). Produkte aus Ephesos in alle welt? *Osterrichisches Archaologisches Institut Berichte und Materialien*, *5*, 47–52.

Palamutçu, S. (2014). Ephesos Liman alanı'ndan ele geçen LR 3 tipi amphoralar. [Unpublished doctoral dissertation]. University of Adanan Menderes.

Peacock, D. P. S., & Williams, D., F. (1986). *Amphorae and the Roman economy*. Longman Press.

Pieri, D. (2005). *Le Commerce du vin oriental à l'époque Bizans (Ve-VIIe siècles)*. Le témoignage des amphores en Gaule Bibliothèque Archéologique et Historique (BAH), Tome 174.

Poulou Papadimitriou, N., & Nodarou, E. (2007). La ceramique protobyzantine de Pseira: La Production locale et les importations, étude typologique et petrographique. M. Bonifay ve J.-C. Treglia (eds.), *Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archae* (Vol. 2/2, pp. 755–766). BAR International Series 1662. Arkeopress.

Reynolds, P. (2010). Trade Networks of the East, 3rd to 7th Centuries: The View from Beirut (Lebanon) and Butrint (Albania) (Fine Wares, Amphorae and Kitchenwares). S. Menchelli, S. Santoro, M. Pasquinucci, & G. Guiducci (eds.), *Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry: Comparison Between Western and Eastern Mediterranean LRCW 3*, (pp. 89–114). BAR International Series 2185. Archaeopress.

Şenol, A. K. (2000). *İskenderiye kazılarında ele geçen amphoralar ışığında kentin Roma Dönemi şarap, zeytinyağı, salamura balık ve sos ticareti.* [Unpublished doctoral dissertation]. University of Ege.

Şenol, A. K. (2003). *Marmaris Müzesi ticari amphoraları.* T.C. Kültür ve Turizm Bakanlığı Yayınları.

Şenol, A. K. (2009). AETAM'de bulunan amphoraların tipolojisi. A., K. Şenol (ed.), *AETAM (Arslan Eyce Taşucu Amphora Müzesi)'da bulunan ticari amphoralar ve Akdeniz'de ticaretin izleri,* (s. 100-319). Silifke.

Şenol, A. K. (2015). Smyrna kazılarında 2007-2011 yılları arasında bulunan ticari amphoralar. A. Ersoy (ed.), *Smyrna/İzmir kazı ve araştırmaları. I. çalıştay bildirileri* (s. 243-256). Ege Yayınları.

Şenol, A. K. (2018). *Commercial amphorae in the Graeco-Roman Museum of Alexandria. Études Alexandrines Vol. 44*, (AmphorAlex 7). Alexandrie.

Şenol, A. K. (2019). Ceramic production on the Karian Chersonesos. W. Held (ed.), *Die Karische Chersones vom Chalkolithikum bis in die byzantinische Zeit Beitrage zu den Surveys in Loryma und Bybassos, Forschungen auf der Karischen Chersones Band 1, (s.* 93–118). Eigenverlag des Archäologischen Seminars der Philipps-Universität Marburg.

Sezgin, Y., Şenol, A. K., & Cankardeş-Şenol, G. (2022). *İzmir Arkeoloji Müzesi ticari amphoraları*. Ege Yayınları.

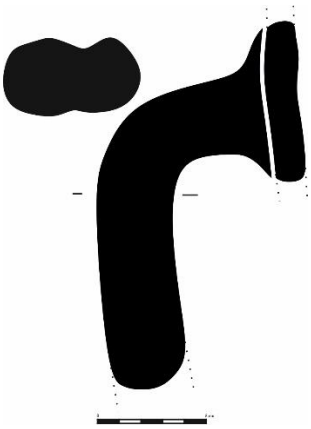
Strabon. *Geographika* (Kitap XII, XIII, XIV) (Çev. A. Pekman). Arkeoloji ve Sanat Yayınları.

Tomber, R. S. (1996). Provisioning the desert: Pottery supply to Mons Claudianus. D. M. Bailey (ed), *Archaeological Research in Roman Egypt*, *Journal of Roman Archaeology Suppl. 19*, 39–49.

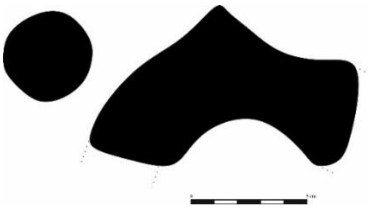
Whitbread, I. K. (1995). *Greek transport amphorae: A petrological and archaeological study. The British School at Athens, Fitch Laboratory Occasional Paper 4*. David Brown Book Company.

Figures

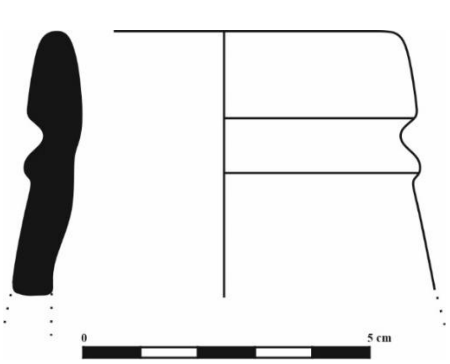
Fig 1. *Excavation of the Zeytin Pazarı*



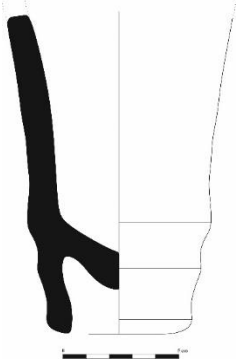
Catalog No. 1



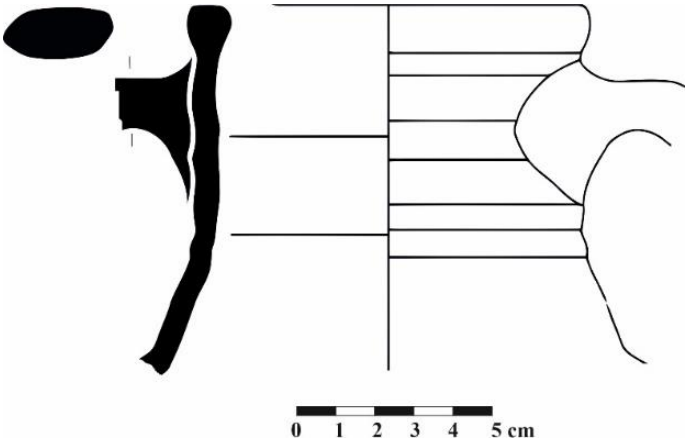
Catalog No. 2



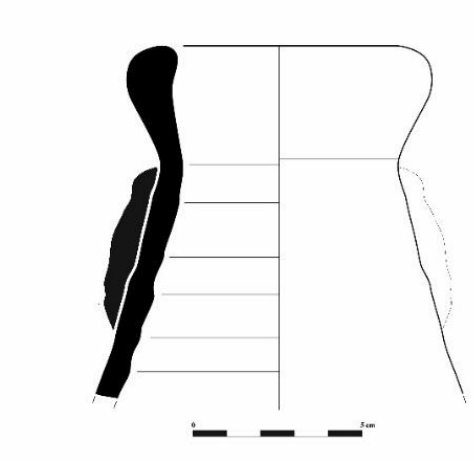
Catalog No. 3



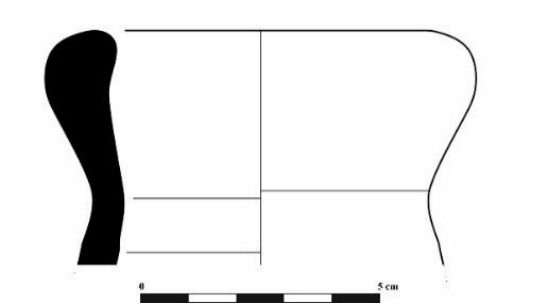
Catalog No. 4



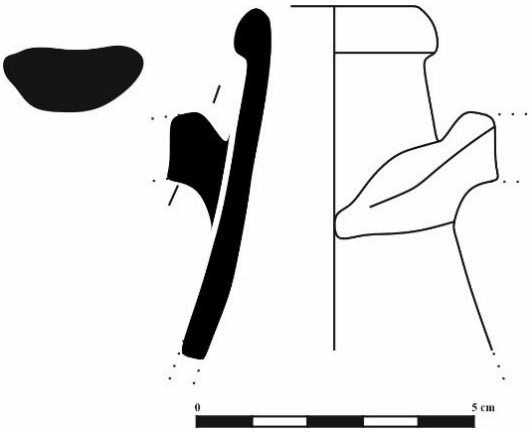
Catalog No. 5



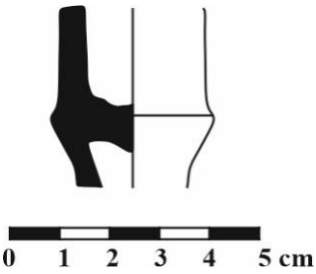
Catalog No. 6



Catalog No. 7



Catalog No. 8



Catalog No. 9

OANNES
2025, 7(1) March

Research Article DOI: 10.33469/oannes.1555446

Lekythoi Recovered from The Necropolis of Kyme/İDÇ

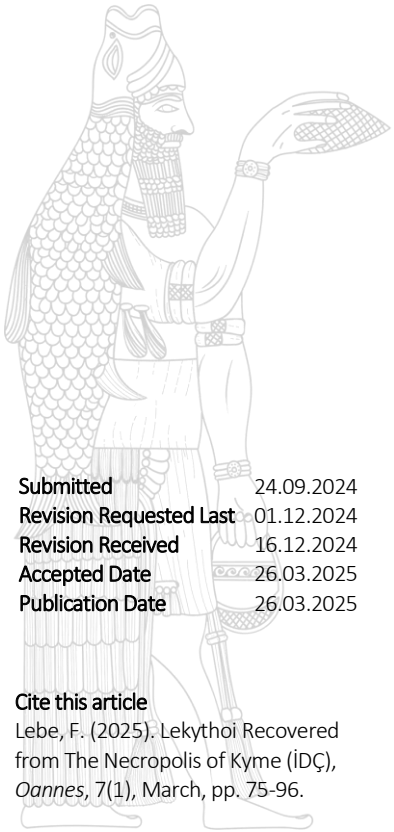
Fuat LEBE
Corresponding Author

Independent Researcher
ffuatlebe@gmail.com

Abstract

A total of 32 Lekythoi recovered from the İDÇ necropolis of Cyme Ancient City constitute the subject of this study. All of the Lekythoi were recovered from a total of 29 graves. These graves are of 5 different types: carved cist, roof tile, simple earth, stone cist, and urne graves. Among these graves, mostly inhumation burials, only one is a secondary cremation urn burial. Various burial gifts accompany the Lekythoi within most graves. On the other hand, they may also be found as the sole items in some graves. All of the lekythoi are of the squat Lekythoi type in form. Nevertheless, the decoration repertoire of the lekythoi is quite diverse. The lekythoi within the scope of the study are divided into five sub-groups according to these decorative features. Group 1: "Net Patterned," Group 2: "Palmette Patterned," Group 3: "Banded," Group 4: "Figured," and Group 5: "Undecorated." The study's main objective is to determine the typology of the graves in which the Lekythoi were found and the types of burial practices. Another aim is to assess the groups formed based on the form and decoration characteristics of the lekythoi. Generally, the evaluated samples are dated between the 5th and 4th century BC. The Lekythoi subjected to the study were tried to be evaluated holistically in line with these objectives. In this way, it is aimed to contribute to the data accumulated in the literature.

Keywords: *Lekythoi, Necropolis, Graves, Cyme, Burial Customs*



Submitted	24.09.2024
Revision Requested Last	01.12.2024
Revision Received	16.12.2024
Accepted Date	26.03.2025
Publication Date	26.03.2025

Cite this article
Lebe, F. (2025). Lekythoi Recovered from The Necropolis of Kyme (İDÇ), *Oannes*, 7(1), March, pp. 75-96.

Genişletilmiş Özet

Aiolis Bölgesi'nin en önemli kentlerinden biri olan Kyme, günümüzde ağır sanayi kuruluşları arasında kalmıştır. Bölgede artan sanayileşme ile özellikle 2000 yılından sonra yoğun kurtarma kazıları gerçekleştirilmeye başlanılmıştır. Bu çalışmalar sonucunda Kyme'nin doğu ve güney nekropolleri olarak değerlendirebileceğimiz birçok nekropolis ortaya çıkarılmıştır. Elbette bir bütün olarak değerlendirilmesi gereken bu nekropolislerden biri de İDÇ Nekropolisi'dir. İDÇ Nekropolisi, Kyme'nin 1200 m güneybatısına konumlanmakla birlikte kentin güney nekropolleri arasında yerini almaktadır. Bu alanda ilk çalışmalar 2007 yılında başlamış olup 2008 yılından sonra kurtarma kazıları dönüştürülmüş ve bu çalışmalar 2011 yılının sonuna kadar düzenli bir şekilde devam etmiştir. Bu çalışmalar arasında özellikle 2008-2011 yıllarında ise birçok farklı tipte mezar ile buluntular ortaya çıkarılmıştır. İDÇ Nekropolisi'nde buluntuların çoğu mezarlardan ele geçmiş olmasının yanı sıra azımsanmayacak derecede buluntu ise mezar dışından ele geçmiştir. Bu buluntular ışığında ise Nekropolisin MÖ 7. yüzyıldan itibaren kullanılmaya başladığı, özellikle MÖ 4.-3. yüzyıllarda yoğunlaştığı ve sonrasında MÖ 2. yüzyıla kadar devam ettiğini söylemek olanaklıdır. Oldukça çeşitli ve zengin buluntulara sahip olan Nekropolisin en önemli buluntu gruplarından birini de çalışmamıza konu olan lekythoslar oluşturmaktadır.

Bilindiği üzere lekythoslar, Antik Dönemde günlük hayatta parfüm veya yağ gibi sıvı ürünlerin saklanması için sıklıkla kullanılmaktadır. Ölü gömme gelenekleri açısından da ayrı bir öneme sahip olan lekythoslar, günlük kullanımının yanı sıra mezar hediyesi olarak da yaygın bir şekilde karşımıza çıkmaktadır. İDÇ Nekropolisi'nde mezarlardan ele geçmiş olan lekythoslar bunun en iyi örneklerinden biridir. Nekropoliste 29 adet mezardan toplam 32 adet lekythos ele geçmiştir. Bu sayı ile Nekropolisin yoğun buluntuları arasında yer almaktadır. Çoğunluğu farklı tipteki inhumasyon mezarlar olmak üzere sadece bir örnek, kremasyon (ikincil) urne mezar hediyesi olarak bırakılmıştır. Genellikle mezar içerisinde ele geçmiş olan lekythoslar arasında sadece bir tanesi mezar dışı hediye olarak bırakılmıştır. Lekythosların, mezar içerisindeki konumları farklılık göstermektedir. Aynı şekilde lekythos ile ele geçmiş olan diğer buluntuların çeşitliği de dikkat çekicidir. Lekythos konteksli mezarlarda ele geçmiş olan diğer mezar hediyeleri; pişmiş toprak buluntular (seramik, figürin), metal buluntular (takı, sikke, strigilis, tıp ve kozmetik, kesici ve delici aletler, objeler), kemik buluntular (astragaller), diğer buluntular (deniz kabukları) gibi geniş bir yelpazeye sahiptir. Genel anlamda lekythoslar ile ele geçmiş olan buluntular ve mezar içerisindeki buluntu konumları, ölen bireyin aile fertleri veya yakınlarının tercihlerine göre şekillenmiş olmalıdır. Bunun yanı sıra lekythos kontekstli mezarların sahiplerine yönelik antropolojik analizler yapılamamıştır. İlk tespitlere göre yetişkin bireyler yoğun olduğunu, bebek veya çocuğa ait mezarların az sayıda olduğunu belirtmek olanaklıdır. Buna göre lekythosların belirli bir yaş grubuna göre bırakılan bir mezar hediyesi olmadığını belirtmek mümkün görünmektedir.

Nekropoliste ele geçmiş olan lekythosların tamamı form olarak bodur lekythos tipindedir. Form açısından lekythosların çoğunluğu uyumluluk göstermektedir. Ancak bazı örneklerde farklılıkların bulunduğunu belirtmek gereklidir. Boyut olarak tam olarak korunmuş örneklerin yükseklikleri 5,2 cm ile 11,5 cm, dip çapları 2,2 cm ile 4,8 cm, ağız çapları ise 1,7 cm ile 3,6 cm arasında değişkenlik gösterebilmektedir. Kil analizleri yapılmamış olan lekythoslar için ilk tespitlere göre genellikle kaliteli kilden üretilmiş, sık dokulu bir yapı sergilemektedir. Ayrıca kilin çoğunlukla kum olmak üzere mika ve taşçık katkılı olduğunu belirtmek olanaklıdır. Hamur renkleri ise kırmızı ve kahverenginin farklı tonları ile pembe arasında değişkenlik göstermektedir. Çalışma içerisindeki örneklerin gruplandırılmasında form özelliklerinden ziyade temel kriter olarak bezeme unsurları dikkate alınmıştır. Buna göre lekythoslar; Ağ Bezemeli, Palmet Bezemeli, Bant Bezemeli, Figürlü ve Bezemesiz olmak üzere 5 ayrı grup altında değerlendirilmeye tabi tutulmuşlardır. Bezeme özelliklerine göre incelenen bodur lekythosların tarihlendirilmesinde en belirleyici unsurların başında elbet mezar kontekstleri gelmektedir. Bunun yanı sıra çalışma içerisindeki lekythosların özellikle Batı Anadolu, Kıta Yunanistan ve Adalar ile farklı merkezlerdeki benzerleriyle birlikte değerlendirilmesine özen gösterilmiştir. Bu kapsamda İDÇ Nekropolisi'ndeki lekythosları hem mezar konteksleri hem de form ve bezeme unsurlarıyla paralel örneklerine göre MÖ 5. yüzyıl ile MÖ 4. yüzyıl içerisinde değerlendirmek mümkün olmuştur.

Aiolis Bölgesinde, özellikle Kyme çevresinde, son dönemde yapılan çalışmalarla birlikte literatüre yeni verilerin girişi sağlanmıştır. Ancak geneline bakıldığında hala ciddi bir yetersizliğin bulunduğunu belirtmek mümkündür. Kyme'nin güney nekropolleri arasındaki İDÇ Nekropolisi, farklı mezar tipleri ve zengin buluntularıyla önemli bir arkeolojik kaynak niteliği taşımaktadır. Bu buluntular arasındaki lekythoslar ise hem form ve bezeme özellikleri ile hem de Kyme'nin ölü gömme geleneklerini değerlendirmemiz açısından ayrı bir öneme sahiptir. Lekythoslar ile ilgili çalışmalarda genellikle müzelere farklı yollarla kazandırılmış örneklerin değerlendirilmesi şeklinde karşımıza çıkmaktadır. Bunun yanı sıra kısmen de olsa kazı alanlarında birçok farklı buluntuyla birlikte değerlendirildiği çalışmalarda bulunmaktadır. Bu çalışmada yer alan lekythosların mezar konteksterinde yer alması açısından gerek ölü gömme gelenekleri gerekse form ve bezeme özellikleriyle birlikte bütüncül şekilde değerlendirilmiştir. Bu durum bodur lekythosların kullanıldığı dönem içerisindeki kısmi form değişimlerini görmeyi mümkün kılmıştır. Ayrıca bezeme unsurlarındaki benzer ve farklı yanlarının bir arada görülebilmesine olanak tanımıştır. Bu anlamda İDÇ Nekropolisi gibi kurtarma kazılarından ele geçmiş olan lekythosların arkeoloji dünyasına tanıtılmasının yanı sıra konuyla ilgili literatürde biriken çalışmalara katkı sağlayabileceğini söylemek mümkündür.

Introduction

The İDÇ Necropolis is one of the southern necropoleis of Cyme (Fig.1), which is the metropolitan city of the Aeolis Region (Strabon, 2020, III, VI). The İDÇ Necropolis is located approximately 1200 m southwest of the ancient city of Cyme. It is located within the boundaries of parcel 68 in Çakmaklı Village, Aliağa District, İzmir Province (Çırak & Kaya, 2011; Lebe, 2022; Lebe, 2024). Excavations at the site began in 2007 and concluded in 2011. Among these works, especially in 2008-2011, a total of 618 graves and 965 finds were unearthed. Lekythos are also one of the intensive finds groups recovered from the graves in the Necropolis. A total of 32 lekythoi, all recovered from the graves unearthed between 2008-2011, are the subject of this study.[1]

The main objective of the study is to determine the typology of the graves, in which the lekythoi were found and the types of burial practices. Additionally, the study seeks to evaluate the role of the variety of contextual finds within the burial tradition. Another aim is to assess the groups formed based on the form and decoration characteristics of the lekythoi. Accordingly, the lekythoi were dated through comparisons with both their context and with examples from different centres. In this context, the introduction of the lekythoi recovered from a rescue excavation to the archaeological world is particularly important.

Lekythoi in the Burial Tradition of the İDÇ Necropolis

The lekythos (λήκυθος) is of particular importance in terms of burial customs (Kurtz 1975, 1 and onwards; Şahin, 1996, pp. 143-167; Rupp, 1980, pp. 524-527). Specifically in Athens, around 487-480 BC, the ban imposed by Solon on funerary stelai, aimed at limiting the use of marble (Şahin, 1996, p. 143), was a revolution for the use of lekythoi. During this period of prohibition, white lekythoi were used in place of marble grave stelai due to their colour. Lekythoi were also used as oil or ointment containers, as well as an offering for the dead (Richter & Milne, 1935, p. 14).

In the İDÇ Necropolis, a total of 32 lekythoi were recovered from 29 graves. Among these graves, which are mostly inhumation burials, only one is a secondary cremation urn burial. A total of 25 lekythoi were recovered from these graves, 22 of them in carved cist graves (Grave Nos: 22, 26, 60, 62, 92, 99, 101, 105, 110, 172, 199, 255, 258, 309, 317, 370, 433, 437, 442, 445, 506, 507). 3 lekythoi were found in 3 tile graves (Grave Nos: 261, 311, 495), 2 lekythoi in 2 simple earth graves (Grave Nos: 296, 496), 1 lekythos in a sarcophagus (Grave No: 369) and 1 lekythos in an urn (Grave No: 20) (Fig.2).

It can be stated that there is no uniformity in the positions of the lekythoi within the graves. 8 of them were placed on or beside the right shoulder of the individuals, 2 on the left shoulder, 6 beside the skull of the individuals, 6 on the torso, 4 at the feet, 2 beside the right arm, 1 beside the left arm, 1 beside the right and 1 beside the left leg of the individuals. Among these, only Cat. No. 10 was recovered 35 cm southeast of Grave No. 20. Considering the above data, the lekythoi were probably left at locations determined by the relatives of the deceased.

The lekythoi are accompanied by a variety of burial gifts within the graves. However, they may also be found as the sole items in some graves (Grave Nos: 20, 60, 311, 317, 370, 437, 496). The lekythoi are frequently found alongside a substantial number of bronze and silver coins. Terracotta finds include amphoriskoi, kantharoi, handled vessels, oinochoai, unguentaria and figurines. Bronze and gold jewellery (diadems, earrings, composite wreaths), bronze tools (needles, probes, medicine tubes, rings, nails), bronze mirrors, iron tools (strigiles, knives, nails) and lead objects are among the metal finds. Astragalus bones and seashells are additional grave goods found alongside the lekythoi.

It is possible to talk about a general anthropological analysis for some of the skeletons recovered in the İDÇ Necropolis (Dinçarslan, 2017; Alpagut, 2011, pp. 233-235). However, there is no clear anthropological analysis of the individuals buried in 29 graves where the Lekythos were recovered. Therefore, the gender and age of the deceased could not be determined. However, preliminary findings indicate that the majority were adults. The

[1] All of the lekythoi evaluated within the scope of the study were evaluated in my doctoral thesis titled “Kyme Antik Kenti İDÇ Nekropolü ve Buluntuları” prepared in 2024. In this study, the evaluations have been reconsidered.

presence of infant and child graves is also noteworthy. Based on these data, it would be difficult to state that the lekythoi were preferred according to the gender or age of the deceased.

Typology and Dating

The lekythos (λήκυθος) is generally preferred for storing liquid products such as perfume or oil and is frequently used in daily life (Richter & Milne, 1935, pp. 14-15; Sparkes & Talcott, 1970, pp. 150-151). Lekythoi may appear in various forms (Sparkes & Talcott, 1970, pp. 150-155, Fig. 11, Pls. 38-48, Nos. 1097-1146; Haspels, 1936; Richter & Milne, 1935, pp. 14-15). However, all 32 lekythoi recovered from the İDÇ Necropolis are classified under squat lekythoi. The general form characteristics of this type of lekythoi are a ring base, a flattened oval body, pronounced shoulders, a short cylindrical neck and a conical rim (Richter & Milne, 1935, p. 15; Sparkes & Talcott, 1970, pp. 151, 153-154). The upper part of the rim is flat. A vertical handle is attached from the neck to the body. The decoration repertoire of the lekythoi is quite diverse. The lekythoi within the scope of the study are divided into five sub-groups according to these decorative features. Group 1: "Net Patterned", Group 2: "Palmette Patterned", Group 3: "Banded", Group 4: "Figured" and Group 5: "Undecorated".

Group 1: Net Patterned Squat Lekythoi

The squat lekythoi represented by Cat. Nos: 1-10/ Fig. 3-12 constitute this group. In terms of general form, they are consistent with the characteristics of squat lekythoi mentioned above. However, there are minor differences in form among some lekythoi. Cat. Nos. 1 (Fig.3) and 3 (Fig.5) have shorter and narrower necks compared to the others. There are also variations in the dimensions of the lekythoi, which are relatively small. The heights of the lekythoi range from 5,2 cm to 11.3 cm. The bottom diameters range from 2.2 cm to 4 cm, while the rim diameters vary between 2.2 cm and 3.6 cm. Although clay analyses were not performed, it is possible to state, based on observations, that they are generally sand tempered. Overall, the lekythoi in the group have a reddish-yellow clay colour with no tonal differences.

The most distinctive feature of this group is the asymmetrical net-patterns covering the body from neck to base. This group is also referred to as the Bulas group (Bulas, 1932, pp. 388-398; Görkay, 2020, p. 357). However, some examples have different characteristics. Particularly Cat. Nos. 1 (Fig.3), 3 (Fig.5) and 10 (Fig.12) are decorated with dots in cream or white paint placed at the intersections of the net-patterns, extending from the neck to the base. Cat. Nos. 1-4 (Fig.3-6) and 7-8 (Fig.9-10) show an additional glaze applied using the dipping method, extending from the rim to the area where the handle and neck meet. The colours of the glaze are generally black with some shifting toward reddish-brown tones.

Similar example dating to the first half of the 4th century BC in terms of form and decoration are found in the necropolis of Habaş, one of the eastern necropolises of Kyme (Atila et al., 2015, p. 24, Res. 7, M71). In addition, outside the ancient city of Kyme, this type of lekythos dated to the 4th century BC are found in a wide geographical area such as Emporion (Almagro, 1953, p. 36, Lam. IV. No. 1-4), Kerameikos (Kovacsovics, 1990, Taf. 30, No.1/16,1; Knigge, 1991, p. 41, Fig. 39), Kerch (Bouzek, 1990, p. 154, Pl.10, No .4), Mylasa (Kızıl, 2009, p. 424, Res. 29), Olynthos (Robinson, 1933, pp. 181-185, Pl. 146-147, No. 474-504; Robinson, 1950, pp. 162-165, Pl.107, No.164-171, Pl.108, No. 172-179), Samothrace (Dusenbery, 1998, p. 480, No. XR-4), Sinope (Görkay, 2020, pp. 361, 392-394, Att:133-143), Teos (Foça, 2019, p. 82, Kat. No. 158) and the Konya Archaeological Museum (Öz & Abay, 2022, p. 73, Fig.2, No. 4, Kat. No. 8). Considering the parallel examples and the grave finds this type of lekythos can be dated to the first half of the 4th century BC.

Group 2: Palmette Patterned Squat Lekythoi

This group is represented by eight examples (Cat. Nos. 11-18/ Fig.13-20). The general form characteristics are typologically consistent. However, there are minor differences in the form of some lekythoi. The lekythoi represented by Cat. Nos. 12 (Fig.14) and 17 (Fig.19) have short and narrow necks. The heights of the lekythoi in this group range from 5.2 cm to 11.5 cm. The bottom diameters vary between 2.4 cm and 4.4 cm and the rim diameters between 1.7 and 3.4 cm. The clay colours mostly range from reddish-yellow to pink. The clay is tempered with mica and sand.

Squat lekythoi with simple palmette decorations are common in 4th century BC graves (Kurtz & Boardman, 1971, p. 102). The most prominent common feature of this group is the presence of palmette patterns in red figure technique on the body. However, due to damage, the palmette pattern is only partially preserved in Cat. Nos. 12-13 (Fig.14-15) and 18 (Fig.20). In Cat. No. 14 (Fig.16) the palmette pattern is half-preserved. In Cat. No. 11 (Fig.13), where the palmette pattern is fully preserved, the letter "Λ" is also visible on the body. The entire group is coated with black and dark red glaze over a slip. However, in Cat. Nos. 13-14 (Fig.15-16) and 16 (Fig.18), the glaze is only partially preserved.

Examples of such decorated squat lekythos dating to the 4th century BC can be found in many places. The closest similar examples are found in the İDÇ Necropolis excavated in 2007 (Küçükgüney & Altun, 2009, p. 71, Fig. 4B/d- 4C/f) and in the Habaş Necropolis (Atila et al., 2015, p. 24, Fig. 7, M58). They appear to have been widely used across a broad area including Athenian Agora (Shear, 1970, pp. 215-216, Pl. 57, No: D6-D7), Emporion (Almagro, 1953, pp. 36-37, Lam. IV. No. 7-11), Eridanos (Schlörb Vierneisel, 1966, pp. 61, 65-67, Beil. 46, No. 3, No. 8-126/2, No. 9-110/2, 111, 120,122; Knigge, 1966, pp. 121, 127, Beil. 67, No.1/1, Beil. 70, No.1/2), Kerameikos (Kovacsovics, 1990, Taf. 29, No. 5/ 30,1-27,1-10,1-11,1-20,1, Taf. 30, 16,2; Knigge, 1991, p. 41, Fig. 39), Cnossos (Coldstream, 1999, p. 328, Pl. 26, No.7), Olynthos (Robinson, 1933, pp. 173-179, Pls.141-144; Robinson, 1950, pp. 150-156, Pls.103-106, Nos. 98-132), Parion (Aydın-Tavukçu, 2006, pp. 75, 215, Lev. 36, Res. 112, Kat. No.76, Çiz. 22), Rhodes (Jacopi, 1929, pp. 157, 158, Fig. 150, No. 6715), Samothrace (Dusenbery, 1998, pp. 174, 175, No. S111-3, S112-1, p. 450, No. H10-A), Sinope (Görkay, 2020, pp. 361, 389-392, Att: 111-130), Smyrna (Norling-Tuna, 1998, pp. 174, 186-187, Abb. 4, Taf. 16, No. 54-55), Tarsus (Alkaç, 2006, pp. 64, 74, Kat. No: 7-8) and Troy (Blegen et al., 1958, p. 280, Pl. 316, No. 37.947). Based on parallel examples and grave contexts the lekythoi in this group are evaluated within the 4th century BC.

Group 3: Banded Squat Lekythoi

This group is represented by eight examples (Cat. Nos: 19-22/Fig. 21-24). The general form characteristics are typologically consistent. However, some minor differences in form can be observed in some of the lekythoi. Cat. No. 19 (Fig.21) has a narrower and more flattened body whereas Cat. No. 20 (Fig.22) has a longer and wider body. The body of Cat. No. 22 (Fig.24) is slightly widened from the shoulder to the base and is distinguished from the others by its flared and rounded rim. The heights of the lekythoi in this group are almost uniform and vary between 6.1 cm and 7.9 cm. The bottom diameters range from 3.5 cm to 4.8 cm, while the rim diameters vary between 2.2 and 2.8 cm. The clay colours mostly vary between reddish- yellow and red. The clay is tempered with mica and sand.

The common feature of this group is the presence of band patterns on the body. These are mostly in the form of two or three rows of thick bands near the shoulder or on the body. Additional motifs can also be seen within these band patterns. It is observed that all the lekythoi have a black glaze. However, especially Cat. No. 20 (Fig. 22) and Cat. No. 22 (Fig. 24) have some abrasions.

Cat. Nos. 19, 20, 21 (Fig. 21-22-23) were recovered from grave no. 92. These lekythoi feature two or three rows of reserved bands in red-figure technique on their bodies. Cat. No. 19 (Fig. 21) has two rows of reserved bands on its body. An additional row of black-glazed running-dog pattern was applied on the lower band. Similar lekythoi with this type of decoration, dated to the second half of the 5th century BC and the first quarter of the 4th century BC, can be found in various places such as Athens (Sparkes & Talcott, 1970, p. 315, Pl. 38, No. 1123-1124), Emporion (Almagro, 1953, p. 87, Fig. 61, No. 28, Lam. III. No.8), Eridanos (Schlörb-Vierneisel, 1966, p. 36, Beil. 29, No. 2) and Olynthos (Robinson, 1950, p. 242, Pl. 167, No. 399). Cat. No. 20 (Fig.22) has three parallel rows of band decoration on the body. Additionally, a double dot decoration was diagonally applied on the central band. A similar example in terms of decoration and form is found in Olynthos (Robinson, 1933, p. 180, Pl. 145, No. 466). Cat. No. 21 (Fig.23) has two parallel rows of thick band decoration on the body. However, there is no other ornamentation within these band decorations. Squat lekythoi of this type of decoration are observed at sites such as the Athenian Agora (Sparkes & Talcott, 1970, p. 315, Pl. 38, No. 1125), Eridanos (Knigge, 1966, p. 127, Beil.70, No.1/3; Schlörb-Vierneisel, 1966, pp. 37, 49, Beil. 38, No. 5/69, Beil. 40, No. 3/2), Kerch (Bouzek, 1990, p. 154, Pl.10, No. 2), Olynthos (Robinson, 1933, p. 180, Pl. 145, No. 464-465) and Rhodes (Laurenzi, 1936, p. 45, Fig. 28).

Cat. Nos: 19, 20, 21 (Fig. 21, 22, 23) were recovered from the same grave and are similar in form. However, there are minor differences in their decorative treatment. Given these characteristics and considering both parallel examples and the grave context, it would be appropriate to date them to the late 5th and early 4th centuries BC.

Cat. No. 22 (Fig. 24) differs from the other examples in this group in terms of form and decoration. It has two rows of band decoration near the shoulder and two rows near the base. No comparable examples with similar decorative treatment were found. Considering the period of use of the graves and the level at which it was found, Cat. No. 22 (Fig. 24) can be dated to the late 5th and the early 4th centuries BC.

Group 4: Figured Squat Lekythoi

This group is represented by a single example (Cat. No. 23/ Fig. 25) recovered from grave 172, at the level of the left shoulder of the individual. In terms of form, it has a flaring ring base, flattened globular body, short cylindrical neck, conical mouth and a flat rim. A vertical handle emerging from the neck joins the body. The clay is tempered with sand and the fabric is reddish-yellow. The height of the lekythos is 6.9 cm, the bottom diameter is 3.5 cm and the rim diameter is 2.8 cm. Its dimensions are consistent with the squat lekythoi in this study.

Unlike other examples, the body of the lekythos features a depiction of the head of Hermes painted in red figure technique. The figure is shown in profile and wears a winged cap. Part of his hair is visible at ear level beneath the cap. Facial details are partially visible. The eyes of the figure are disproportionately large and subtly detailed. The head of Hermes is bordered with a band decoration at the lower edge. Aside from the Hermes' head, the lekythos is entirely glazed in black and dark red. However, there is some damage both on the surface of the vessel and the figure.

Similar examples of lekythoi decorated with a Hermes' head are found in various places such as Eridanos (Schlörb-Vierneisel, 1966, p. 36, Beil. 28, No. 1), Kerch (Bouzek, 1990, p. 152, Pl. 8, No. 1), Samothrace (Dusenbery, 1998, p. 445, No. H7-2) and Germany (Kenner, 1942, p. 45, Taf. 31, No: 13). According to parallel examples, squat lekythoi with this type of decoration were used between the second half of the 5th century BC and the beginning of the 4th century BC. Based on similar examples and the grave context Cat. No. 23 (Fig. 25) is dated to the second half of the 5th century BC.

Group 5: Undecorated Squat Lekythoi

This group is represented by a total of 9 pieces under Cat. Nos. 24-32 (Fig. 26-34). The common feature of the squat lekythoi in this group is the lack of decoration. In general, the height of the lekythoi varies between 5.2 cm and 8.8 cm. The base diameters vary between 2.2 cm and 3.7 cm and the rim diameters between 1.9 cm and 3 cm. The clay colours mostly range from reddish yellow to very light brown. The clay is usually sand, and grit tempered. The glaze tones vary between light red, reddish-yellow and black. Overall, most of this group is fully preserved. However, only the body of Cat. No. 31 (Fig. 33) is preserved while Cat. No. 32 (Fig. 34) retains only the conical rim fragment. The similarities and differences of the lekythos in this group are as follows.

The first examples under this group are represented by Cat. Nos. 24, 27 and 31 (Fig. 26, 29, 33). The common characteristic of this type of squat lekythoi is their entirely black glazed body. However, in Cat. No. 24 (Fig. 26) the underside of the base is reserved. Cat. No. 27 (Fig. 29) was found in multiple fragments and has been restored. Despite this, some fragments are still missing from the body. Cat. No. 31 (Fig. 33) retains a body fragment with traces of glaze. In terms of form, Cat. Nos. 24 (Fig. 26) and 27 (Fig. 29) have a ring base and a flattened, bulbous body. The shoulder is pronounced with a smooth transition from body to shoulder. They have short cylindrical necks, conical mouths and flat rims. A vertical handle emerging from the neck, just below the conical rim, is attached to the body. This type of lekythos is found in the necropolis of Habaş (Atila et al., 2015, p. 26, Res. 15), the Athenian Agora (Sparkes & Talcott, 1970, p. 316, Pl. 38, No. 1137), Eridanos (Schlörb-Vierneisel, 1966, pp. 40, 66, Beil. 38, No. 5/78, Beil. 46, No. 2) and Olynthos (Robinson, 1933, p. 180, Pl. 145, No. 467-468; Robinson, 1950, p. 243, Pl.167, No. 403-404). Cat. Nos. 24 (Fig. 26) and 27 (Fig. 29) can be dated to the late 5th and early 4th century BC when compared with similar examples.

However, Cat. No. 31(Fig. 33) is dated to the end of the 4th century BC and the first half of the 3rd century BC according to the grave context.

Cat. Nos: 25, 26, 28 (Fig. 27-30) generally have a short, flattened, globular body with a flat ring base. The shoulder is pronounced with a smooth transition from body to shoulder. They have short cylindrical necks with conical rims. The vertical handle emerging from the neck is attached to the body. Cat. Nos. 25 (Fig. 27) and 28 (Fig. 30) have slightly conical bodies, tapering from the shoulder to the base. Cat. No. 25 (Fig. 27) is covered with matte black glaze in places while Cat. No. 28 (Fig. 30) shows traces of dark red glaze. This type of lekythos, generally dated to the 4th century BC, is found in Athens (Sparkes & Talcott, 1970, p. 316, Pl. 38, No. 1140), Batı Liman (Konak-Tarakçı & Selçuk, 2011, pp. 190, 197, Res.12; Foça, 2020, p. 204, Fig. 9/10), Eridanos (Schlörb-Vierneisel, 1966, p. 85, Beil. 55, No. 4) and Samothrace (Dusenbery, 1998, pp. 181, 183, No. S120-1). Based on these parallels, these lekythoi can be dated to the 4th century BC.

Cat. Nos. 29 (Fig. 31) and 30 (Fig. 32) stand out in this group with their different forms. Cat. No. 29 (Fig. 31) is among the finds from grave no. 261. It has a flaring, rounded rim, short cylindrical neck, bulging body expanding towards the base and a ring base. The vessel has broken handles; handle marks can be seen at the connection points on the rim and body. Traces of black and dark red glaze are preserved in places on the body. A partially similar example in terms of form was found in the Athenian Agora and is dated to 450-425 BC (Sparkes & Talcott, 1970, p. 314, Pl. 38, No. 1120).

Cat. No. 30 (Fig. 32) was recovered from the foot of the individual in grave no. 199. It is the other example which is different in form. It has a conical base, bulging globular body, short cylindrical neck and flaring, rounded rim. A handle emerging from the neck connects to the body. There is no decoration on the surface of the vessel; however, some traces of glaze are preserved. Similar early examples in terms of form can be found in Corinth (Blegen et al., 1964, pp. 263, 266, Pl.64. No.400/3, Pl.66, No. 408-4) and Olynthos (Robinson, 1950, pp. 241-242, Pl.167, No. 398). However, based on grave finds, Cat. No. 30 (Fig. 32) is appropriately dated to the 4t^{h} century BC.

The last example of this group is Cat. No. 32 (Fig. 34). It was found in grave 495 along with a terracotta unguentarium. Only the conical rim fragment of the lekythos was recovered. Evaluated in the context of the grave finds, it is dated to the end of the 4th century BC.

Conclusion

The variety of graves with lekythos finds in the İDÇ Necropolis is remarkable. It is possible to encounter lekythoi in both inhumation (carved cist, roof tile, simple earth and sarcophagus) and cremation/urn graves in the necropolis. It is observed that no specific grave type was preferred for the lekythoi used as votive offerings. Their placement as grave offerings seem to be rather related to the burial customs of the period. At the same time, no clear anthropological analyses of the graves with lekythos contexts could be conducted. Preliminary analyses indicate a predominance of adult graves. However, they were also occasionally left in children's graves. Therefore, the lekythoi were not exclusively left for individuals of a certain age.

Considering the position of the lekythoi in the grave no unity can be mentioned. Therefore, the positions of the lekythoi must have been determined by the family or relatives of the deceased. On the other hand, the other finds recovered from the graves with lekythos contexts are varied. Lekythoi were mostly found alongside silver or bronze coins. In children’s graves, they were found with terracotta figurines. Moreover, there are graves where lekythoi were found with strigiles. In daily life, lekythoi were used for storing liquid products such as perfumes or oils. Regardless of this, it is remarkable that the associated grave finds are varied. In this context, it is possible to state that lekythoi were produced solely as grave gifts.

The clay analyses of the lekythoi have not been carried out but observations suggest that they were generally produced from high quality clay. The clay is mostly sand tempered, with some examples partially tempered with mica and grit. According to the Munsell soil colour catalogue the colour of the fabric varies widely including hues such as reddish yellow, pink, light red or red, very light brown, light reddish-brown. However, mainly two colours stand out: reddish-yellow and pink. On the other hand, the surfaces of the lekythoi were coated with glaze in black and red tones, except for the decorated areas.

All the lekythoi are of the squat lekythos type. It can be stated that the form characteristics of the majority are consistent. However, examples with different characteristics also exist (Cat. No. 29-30/ Fig. 31-32). The lekythoi within the scope of the study were evaluated in terms of decoration rather than form. Accordingly, they are divided into five sub-groups. These are Group 1: "Net Patterned", Group 2: "Palmette Patterned", Group 3: "Banded", Group 4: "Figured" and Group 5: "Undecorated". The lekythos in the study are evaluated within the 5th century BC and the 4th century BC in terms of both grave contexts and similar examples.

In conclusion, there are in-depth studies on the lekythoi showing different form characteristics in the ancient period. However, it is possible to state that these studies are still insufficient. In addition, most of these studies include examples that were brought to museums in different ways that are not related to each other. The holistic evaluation of the lekythoi in this study is of great importance in terms of its contribution to the literature. In this way, it was possible to see the partial differences in the forms and the diversity in the ornamental repertoire of the squat lekythoi from the 5th-4th century BC. It also provides important data for our understanding of the burial customs of Kyme.

Ethics Committee Approval: Ethics committee approval is not required.
Peer-review: Externally peer-reviewed.
Conflict of Interest: The author has no conflicts of interest to declare.
Financial Disclosure: The author declared that this study has no financial support.

Catalog

Cat. No: 1 (Fig. 3)
Excavation Inv. No: ABN-2/2008 Inv. 40
Grave No. 26
Dimensions: H: 5,5 cm; D. B.: 2,2 cm; D. R.: 2,2 cm
Clay: Reddish Yellow (7.5 YR 7/6)
Description: Fully preserved (Group 1)
Parallels: Almagro, 1953, p. 36, Lam. IV. No. 1-4; Atila-Korkmaz, et al., 2015, p. 24, Res. 7, M71; Bouzek, 1990, p. 154, Pl. 10, No. 4; Dusenbery, 1998, p. 480, No. XR-4; Foça, 2019, p. 82, Kat. No. 158; Görkay, 2020, pp. 361, 392-394, Att: 133-143; Knigge, 1991, p. 41, Fig. 39; Kızıl, 2009, p. 424, Resim 29; Robinson, 1933, p. 181-185, Pl. 146-147, No. 474-504; Robinson, 1950, p. 162-165, Pl. 107, No.164-171, Pl. 108, No. 172-179; Öz-Abay, 2022, p. 73, Fig. 2, No. 4, Kat. No. 8.
Date: First half of the 4th century BC.

Cat. No: 2 (Fig.4)
Excavation Inv. No: AIP-1/ 2009 Inv.41
Grave No. 60
Dimensions: H: 8,1 cm; D. B.: 3,4 cm; D. R.: 3 cm
Clay: Reddish Yellow (7,5 YR 7/6)
Description: It is fully preserved except the minor damages on the mouth (Group 1)
Parallels: See Cat. No:1
Date: First half of the 4th century BC.

Cat. No: 3 (Fig.5)
Excavation Inv. No: AIG-5/ 2009 Inv.32
Grave No. 62
Dimensions: H: 5,2 cm; D. B.: 2,4 cm; D. R.: 2,3 cm
Clay: Light Red (2.5 YR 7/6)
Description: The neck had broken and later they were restored (Group 1)
Parallels: See Cat. No:1
Date: First half of the 4th century BC.

Cat. No: 4 (Fig.6)
Excavation Inv. No: AMD-1/2009 Inv.72
Grave No. 105
Dimensions: H: 9,3 cm; D. B.: 3,9 cm; D. R.: 3 cm
Clay: Pink (5 YR 7/4)
Description: The part of the neck and body are not preserved and later restored (Group 1)
Parallels: See Cat. No:1
Date: First half of the 4th century BC.

Cat. No: 5 (Fig.7)
Excavation Inv. No: AML-1/ 2009 Inv.81
Grave No. 110
Dimensions: H: 7 cm; D. B.: 2,8 cm; D. R.: 2,6 cm
Clay: Reddish Yellow (5YR 6/8)
Description: It is fully preserved except the minor missing on the body (Group 1)
Parallels: See Cat. No:1
Date: First half of the 4th century BC.

Cat. No: 6 (Fig.8)
Excavation Inv. No: BHV-1 / 2010 Inv.188
Grave No. 433
Dimensions: H: 7,2 cm; D. B.: 3 cm; D. R.: 2,5 cm
Clay: Reddish Yellow (5 YR 7/6)
Description: Fully preserved (Group 1)
Parallels: See Cat. No:1
Date: First half of the 4th century BC.

Cat. No: 7 (Fig.9)
Excavation Inv. No: BIR-2/2011 Inv.7
Grave No. 445
Dimensions: H: 9,1 cm; D. B.: 3,5 cm; D. R.: 2,9 cm
Clay: Reddish Yellow (7,5 YR 7/6)
Description: Fully preserved (Group 1)
Parallels: See Cat. No:1
Date: First half of the 4th century BC.

Cat. No: 8 (Fig.10)
Excavation Inv. No: BAH-1/2010 Inv.28
Grave No. 296
Dimensions: H: 11,3 cm; D. B.: 4 cm; D. R.: 3,6 cm
Clay: Reddish Yellow (5YR 6/8)
Description: The neck, body and handle had broken and later they were restored. Also the part of the neck and mouth are not preserved (Group 1).
Parallels: See Cat. No:1
Date: First half of the 4th century BC.

Cat. No: 9 (Fig.11)
Excavation Inv. No: BJZ-1/2011 Etd.54
Grave No. 469
Dimensions: H: 6 cm (Korunan); D. B.: 2,8 cm
Clay: Red (2,5 YR 5/6)
Description: The part of the neck and mouth are not preserved (Group 1).
Parallels: See Cat. No:1
Date: First half of the 4th century BC.

Cat. No: 10 (Fig.12)
Excavation Inv. No: ABC-3/2008 Inv.37
Grave No. 20
Dimensions: H: 6,4 cm (Korunan); D. B.: 3,1 cm
Clay: Reddish Yellow (7.5 YR 7/6)
Description: The part of the neck and mouth are not preserved (Group 1).
Parallels: See Cat. No:1
Date: First half of the 4th century BC.

Cat. No: 11 (Fig.13)
Excavation Inv.No: ALT-3/ 2009 Inv.65
Grave No. 99
Dimensions: H: 5,8 cm; D. B.: 2,4 cm; D. R.: 2,5 cm
Clay: Reddish Yellow (5 YR 7/6)
Description: Fully preserved. (Group 2).
Parallels: Alkaç, 2006, p. 64, 74, Kat. No, p. 7-8; Almagro, 1953, p. 36-37, Lam. IV. No. 7-11; Atila & Korkmaz, et al., 2015, p. 24, Res. 7, M58; Aydın Tavukçu, 2006, p. 75, 215, Lev. 36, Res. 112, Kat. No. 76, Çiz. 22; Blegen & Boulter, et al., 1958, p. 280, Pl. 316, No. 37.947; Coldstream, 1999, p. 328, Pl. 26, No. 7; Dusenbery, 1998, p. 450, No. H10-A; Görkay, 2020, p. 361, 389-392, Att, p. 111-130; Jacopi, 1929, p. 157, 158, Fig. 150, No. 6715; Kovacsovics, 1990, p. Taf. 29, No. 5/ 30,1-27,1-10,1-11,1-20,1, Taf. 30, 16,2; Küçükgüney & Altun, 2009, p. 71, Res. 4B/d- 4C/f; Knigge, 1966, p. 121, 127, Beil. 67, No. 1/1, Beil. 70, No. 1/2; Knigge, 1991, p. 41, Fig. 39; Norling Tuna, 1998, p. 174, 186-187, Abb.4, Taf. 16, No.54-55; Robinson, 1933, p. 173-179, Pls.141-144; Robinson, 1950, p. 150-156, Pls.103-106, Nos. 98-132; Shear, 1970, p. 215-216, Pl. 57, No, p. D6-D7; Shear, 1970, p. 215-216, Pl. 57, No, p. D6-D7; Schlörb Vierneisel, 1966, p. 61, 65-67, Beil. 46, No. 3, No. 8-126/2, No. 9-110/2, 111, 120, 122.
Date: 4th century BC.

Cat. No: 12 (Fig.14)
Excavation Inv. No: ASV-2/ 2009 Inv.190
Grave No. 199
Dimensions: H: 5,2 cm; D. B.: 2,4 cm; D. R.: 2 cm
Clay: Reddish Yellow (7,5 YR 7/6)
Description: It is fully preserved except the minor damages on the bottom. (Group. 2)
Parallels: See Cat. No: 11
Date: 4th century BC.

Cat. No: 13 (Fig.15)
Excavation Inv. No: AVS-11/2009 Inv.231
Grave No. 255
Dimensions: H: 7 cm; D. B.: 3 cm; D. R.: 2,4 cm
Clay: Reddish Yellow (7,5 YR 7/6)
Description: It is fully preserved except the minor damages on the mouth. (Group 2)
Parallels: See Cat. No: 11
Date: 4th century BC.

Cat. No: 14 (Fig.16)
Excavation Inv. No: BBD-1/2010 Inv.57
Grave No. 309
Dimensions: H: 9,2 cm; D. B.: 2,7 cm; D. R.: 3,1 cm
Clay: Pink (7,5 YR 7/4)
Description: Fully preserved. (Group 2).
Parallels: See Cat. No: 11
Date: 4th century BC.

Cat. No: 15 (Fig.17)
Excavation Inv. No: BES-1/2010 Inv.136
Grave No. 370
Dimensions: H: 9 cm; D. B.: 3,4 cm; D. R.: 1,7 cm
Clay: Reddish Yellow (5 YR 7/6)
Description: It is fully preserved except the minor damages on the mouth. (Group 2)
Parallels: See Cat. No: 11
Date: 4th century BC.
Cat. No: 16 (Fig.18)
Excavation Inv. No: BMA-1/2011 Inv.84
Grave No. 506
Dimensions: H: 11,5 cm; D. B.: 4,4 cm; D. R.: 3,4 cm
Clay: Reddish Yellow (7,5 YR 7/6)
Description: It is fully preserved except the minor damages on the mouth. (Group 2)
Parallels: See Cat. No: 11
Date: 4th century BC.

Cat. No: 17 (Fig.19)
Excavation Inv. No: BMB-1/2011 Inv.85
Grave No. 507
Dimensions: H: 5,9 cm; D. B.: 2,5 cm; D. R.: 2 cm
Clay: Pink (7,5 YR 8/4)
Description: Fully preserved. (Group 2).
Parallels: See Cat. No: 11
Date: 4th century BC.

Cat. No: 18 (Fig.20)
Excavation Inv. No: BER-4/2010 Inv.112
Grave No. 369
Dimensions: H: 10,7 cm; D. B.: 4,2 cm; D. R.: 3,1 cm
Clay: Pink (7,5 YR 8/4)
Description: Fully preserved. (Group 2).
Parallels: See Cat. No: 11
Date: 4th century BC.

Cat. No: 19 (Fig.21)
Excavation Inv. No: ALF-3/2009- Inv.60
Grave No. 92
Dimensions: H: 7,1 cm; D. B.: 4,8 cm; D. R.: 2,8 cm
Clay: Reddish Yellow (5 YR 7/6)
Description: Fully preserved. (Group 3).
Parallels: Almagro, 1953, p. 87, Fig. 61, No. 28, Lam. III. No.8; Robinson, 1950, p. 242, Pl. 167, No. 399; Sparkes & Talcott, 1970, p. 315, Pl. 38, No. 1123-1124; Schlörb Vierneisel, 1966, p. 36, Beil. 29, No. 2.
Date: Late 5th and early 4th centuries BC.

Cat. No: 20 (Fig.22)
Excavation Inv. No: ALF-4/ 2009- Inv.61
Grave No. 92
Dimensions: H: 7,9 cm; D. B.: 4 cm; D. R.: 2,7 cm
Clay: Reddish Yellow (5 YR 7/8)
Description: The neck and handle had broken and later they were restored. (Group 3)
Parallels: Robinson, 1933: 180, Pl. 145, No. 466.
Date: Late 5th and early 4th centuries BC.

Cat. No: 21 (Fig.23)
Excavation Inv. No: ALF-6/ 2009 Inv.62
Grave No. 92
Dimensions: H: 6,1 cm; D. B.: 3,5 cm; D. R.: 2,4 cm
Clay: Light Red (2,5 YR 6/8)
Description: It is fully preserved except the minor missing on the body. (Group 3)
Parallels: Bouzek, 1990, p. 154, Pl. 10, No. 2; Knigge, 1966, p. 127, Beil. 70, No. 1/3; Laurenzi, 1936, p. 45, Fig. 28; Robinson, 1933, p. 180, Pl. 145, No. 464-465; Sparkes & Talcott, 1970, p. 315, Pl. 38, No. 1125; Schlörb Vierneisel, 1966, pp. 37, 49, Beil. 38, No. 5/69, Beil. 40, No. 3/2.
Date: Late 5th and early 4th centuries BC.

Cat. No: 22 (Fig.24)
Excavation Inv. No: BBE-1/2010 Inv.37
Grave No. 311
Dimensions: H: 7,4 cm; D. B.: 3,8 cm; D. R.: 2,2 cm
Clay: Red (2,5 YR 6/6)
Description: The body had broken and later they were restored. (Group 3)
Date: Late 5th and early 4th centuries BC.

Cat. No: 23 (Fig.25)
Excavation Inv. No: ARK-1/2009 Inv.134
Grave No. 172
Dimensions: H: 6,9 cm; D. B.: 3,5 cm; D. R.: 2,8 cm
Clay: Reddish Yellow (5 YR 7/6)
Description: It is fully preserved except the minor damages on the mouth and body. (Group 4)
Parallels: Bouzek, 1990, p. 152, Pl. 8, No. 1; Dusenbery, 1998, p. 445, No. H7-2; Kenner, 1942, p. 45, Taf. 31, No, p. 13; Schlörb Vierneisel, 1966, p. 36, Beil. 28, No. 1.
Date: Second half of the 5th century BC.

Cat. No: 24 (Fig.26)
Excavation Inv. No: ABG-1/2008 Inv.38
Grave No. 22
Dimensions: H: 6,2 cm; D. B.: 2,9 cm; D. R.: 2,4 cm
Clay: Very Light Brown (10 YR 8/4)
Description: Fully preserved. (Group 5).
Parallels: Atila & Korkmaz, et al., 2015, p. 26, Res. 15; Sparkes & Talcott, 1970, p. 316, Pl. 38, No. 1137; Robinson, 1933, p. 180, Pl. 145, No. 467-468; Robinson, 1950, p. 243, Pl. 167, No. 403-404; Schlörb Vierneisel, 1966, p. 40, 66, Beil. 38, No. 5/78, Beil. 46, No. 2.
Date: Late 5th and early 4th centuries BC.

Cat. No: 25 (Fig.27)
Excavation Inv. No: AVV-1/2009 Inv.235
Grave No. 258
Dimensions: H: 6,8 cm; D. B.: 2,8 cm; D. R.: 2,7 cm
Clay: Reddish Yellow (5 YR 7/6)
Description: Fully preserved. (Group 5).
Parallels: Dusenbery, 1998, p. 181, 183, No. S120-1; Foça, 2020, p. 204, Fig. 9/10; Sparkes & Talcott, 1970, p. 316, Pl. 38, No. 1140; Konak Tarakçı & Selçuk, 2011, p. 190, 197, Res.12; Schlörb Vierneisel, 1966, p. 85, Beil. 55, No. 4.
Date: 4th century BC.

Cat. No: 26 (Fig.28)
Excavation Inv. No: BBM-1/2010 Inv.60
Grave No. 317
Dimensions: H: 5,2 cm; D. B.: 2,2 cm; D. R.: 1,9 cm
Clay: Reddish Yellow (5 YR 7/6)
Description: Fully preserved. (Group 5).
Parallels: See Cat. No: 25
Date: 4th century BC.

Cat. No: 27 (Fig.29)
Excavation Inv. No: BIC-1/2011 Etd.5
Grave No. 437
Dimensions: H: 8,8 cm; D. B.: 3,7 cm; D. R.: 3 cm
Clay: Reddish Yellow (5 YR 7/6)
Description: The body and neck had broken and later they were restored. Also the part of the body and bottom are not preserved (Group 5).
Parallels: See Cat. No: 24.
Date: Late 5th and early 4th centuries BC.

Cat. No: 28 (Fig.30)
Excavation Inv. No: BIK-3/2011 Inv.39
Grave No. 442
Dimensions: H: 7,4 cm; D. B.: 3 cm; D. R.: 2,8 cm
Clay: Reddish Yellow (7.5 YR 7/6)
Description: Fully preserved (Group 5).
Parallels: See Cat. No: 25
Date: 4th century BC.

Cat. No: 29 (Fig.31)
Excavation Inv. No: AYC-1/2009 Inv. 243
Grave No. 261
Dimensions: H: 6,1 cm; D. B.: 3,1 cm; D. R.: 2,4 cm
Clay: Reddish Yellow (7,5 YR 6/6)
Description: The handle and part of the mouth are not preserved (Group 5).
Parallels: Sparkes-Talcott, 1970: 314, Pl. 38, No. 1120.
Date: 450-425 BC

Cat. No: 30 (Fig.32)
Excavation Inv. No: ASV-4/ 2009 Inv.192
Grave No. 199
Dimensions: H: 7,5 cm; D. B.: 2 cm; D. R.: 2,2 cm
Clay: Light Red (2,5 YR 7/6)
Description: Fully preserved (Group 5).
Parallels: Blegen & Palmer, et al., 1964, p. 263, 266, Pl.64. No.400/3, Pl.66, No.408-4; Robinson, 1950, p. 241-242, Pl.167, No. 398.
Date: 4th century BC.

Cat. No: 31 (Fig.33)
Excavation Inv. No: ALV-2/ 2009 Etd. 69
Grave No. 101
Dimensions: H: 3 cm (Preserved); D. B.: 4,5 cm
Clay: Light Reddish Brown (5 YR 6/4)
Description: Mouth and neck were not preserved. (Group 5).
Parallels: See Cat. No: 24
Date: The end of the 4th century BC and the first half of the 3rd century BC (According to the context)

Cat. No: 32 (Fig.34)
Excavation Inv. No: BLJ-1/2011 Etd.121
Grave No. 495
Dimensions: H: 2,6 cm (Preserved); D. R.: 4,1 cm
Clay: Light Reddish Brown (5 YR 6/4)
Description: Only the mouth and part of the neck preserved. (Group 5).
Date: The end of the 4th century BC.

References

Alkaç, E. (2006). Tarsus Müzesinde Bulunan Bir Grup Lekythos, *Olba* XIV, 57-74.

Almagro, M. (1953). *Las Necrópolis de Ampurias*, *Vol.1*, Barcelona.

Alpagut, A. (2011). İskeletlerin Antropolojik Analizi, 19. *Müze Çalışmaları ve Kurtarma Kazıları Sempozyumu,* (pp.233-235), Ankara: TC. Kültür Varlıkları ve Müzeler Genel Müdürlüğü Yayınları.

Atila, C., Korkmaz, E., Gürman, B. (2015). Kyme Doğu Nekropolü Mezar Tipleri. E. Okan, C. Atila (Eds), *Prof. Dr. Ömer Özyiğit'e Armağan -Studies in Honour of Ömer Özyiğit,* (pp. 13-29). Ege Yayınları.

Aydın-Tavukçu, Z. (2006). *Parion Nekropolü 2005 Yılı Buluntuları*, [Unpublished doctoral dissertation], Atatürk Üniversitesi.

Blegen, C. W., Boulter, C. G., Caskey, J. L., Rawson, M. (1958). *Troy Settlements VIIa, VIIb and VIII, Vol. V, Part: 1*-2, Princeton University Press, Princeton.

Blegen, C. W., Palmer, H., Young, R. S. (1964). *The North Cemetery, Corinth*, Vol. XIII, New Jersey.

Bouzek, J. (1990). *Studies of Greek Pottery in the Black Sea* Area, Prague: Charles University.

Bulas, C. (1932). Étude sur une classe de vases à décor en forme de réseau ou d'écailles, *Bulletin de Correspondance Hellénique* 56, 388-398.

Coldstream, J. N. (1999). Knossos 1951-61: Classical and Hellenistic Pottery From The Town, *Annual of the British School of Archaeology*, Vol. 94, 321-351.

Çırak, N., & Kaya, S. (2011). 2009 İDÇ Nekropolü Kurtarma Kazısı. *19. Müze Çalışmaları ve Kurtarma Kazıları Sempozyumu* (pp. 217-232). Ankara: TC. Kültür Varlıkları ve Müzeler Genel Müdürlüğü Yayınları.

Dinçarslan, S. (2017), *İzmir Demir Çelik Limanı ve Batılimanı İskeletlerinin Paleoantropolojik Analizi,* [Unpublished doctoral dissertation], Ankara Üniversitesi,

Dusenbery, E. B. (1998). *Samothrace: The Nekropoleis and Catalogues of Burials*, Princeton University Press, Princeton.

Foça, S. (2019) *Teos Batı Nekropolisi: Mezar Tipolojisi ve Buluntular*, [Unpublished doctoral dissertation], Dokuz Eylül Üniversitesi.

Foça, S. (2020). Kyme (Aiolis) Batı Liman Nekropolisi'nden Klasik ve Hellenistik Dönem Mezarlar, *TUBA-AR*, 27, 195-216.

Görkay, K. (2020). Corinthian, Attic Black Figure and Red Figure Pottery from Sinope. *Anadolu/Anatolia, 46*, 347-353.

Haspels, C. H. E. (1936). *Attic Black Figured Lekythoi,* E. De Boccard, Paris.

Jacopi, G. (1929). *Scavi Nella Necropoli Di Jalisso 1924-192*8, Clara Rhodos Vol. III, Bergamo.

Kenner, H. (1942). *Corpus Vasorum Antiquorum. Deutschland V (Wien I): Wien*, Universitat, und Wien, Professor Franz v. Matsch, Münich.

Kızıl, A. (2009). "1990-2005 Yılları Arasında Mylasa'da Kurtarma Kazıları Yapılan Mezarlar ve Buluntuları Üzerinde Genel Bir Değerlendirme", *Die Karerund die Anderen, Internationales Kolloquium an der Freien Universitat Berlin*, Ed. Frank Rumscheid, Bonn, pp. 397-461.

Knigge, U. (1966). Eridanos Nekropole II. Gräber, *AM-81*,112-135.

Knigge, U. (1991). *The Athenian Kerameikos, History- Monuments- Excavations Athens*, German Archaeological Institute in Athens, Athen.

Konak-Tarakçı, S. & Selçuk T. (2012). Batı Liman 1205 Parsel Kurtarma Kazısı 2011. *21. Müze Çalışmaları ve Kurtarma Kazıları Sempozyumu* (pp. 185-198). Ankara: TC. Kültür Varlıkları ve Müzeler Genel Müdürlüğü Yayınları.

Kovacsovics, W. K., (1990). *Die Eckterasse an der Graberstrasse des Kerameikos*, Berlin.

Kurt, D. C. & Boardman, J. (1971). *Greek Burial Customs*, Cornell University Press, Ithaca, New York.

Kurtz, D. C. (1975). *Athenian White Lekythoi: Patterns and Painters*, Clarendon Press, Oxford.

Küçükgüney, Z. & Altun, P. T. (2009). İDÇ Liman Kurtarma Kazısı (İzmir İli, Aliağa İlçesi, Çakmaklı Köyü, Kendirci Mevkii, 613 ve 68 Parsellere Ait. *17. Müze Çalışmaları ve Kurtarma Kazıları Sempozyumu* (pp. 53-75). Ankara: TC. Kültür Varlıkları ve Müzeler Genel Müdürlüğü Yayınları

Laurenzi, L. (1936). Necropoli Ialisie, (Scavi Dell'Anno 1934), *Clara Rhodos*, Cilt. VIII, Bergamo, 7-206.

Lebe, F. (2022). "Kyme İDÇ Nekropolisi'nden Bir Mezar Konteksti", *Ege Üniversitesi Edebiyat Fakültesi Yayınları Arkeoloji Dergisi*, XXIX, (2), 143-163.

Lebe, F. (2024). *Kyme Antik Kenti İDÇ Nekropolü ve Buluntuları*, [Unpublished doctoral dissertation], Dokuz Eylül Üniversitesi.

Nörling Tuna, Y. (1998). Die attisch-rotfigurige Keramik aus Alt-Smyrna, *Istanbuler Mitteilungen*, 48, 173-191.

Öz, C. & Abay, N. (2022). Arkaik ve Klasik Dönem'e (MÖ VI-IV. yüzyıl) Ait Siyah ve Kırmızı Figürlü Bir Grup Lekythos, *Mediterranean Journal of Humanities*, 69-78.

Rıchter, G. M. A. -Milne, M. J. (1935). *Shapes and Names of Athenian Vases*, New York.

Robinson, D. M. (1933). *Mosaics, Vases, and Lamps of Olynthus Found in 1928 and 1931, Excavations at Olynthus, Vol. V,* Baltimore.

Robinson, D. M. (1950). *Vases Found in 1934 and 1938, Excavations at Olynthus, Vol. XIII,* Baltimore.

Rupp, D. (1980). Altars as Funerary Monuments on Attic White Lekythoi, *AJA*, 84 (4), 524–527.

Schlörb-Vierneisel, B. (1966). Eridanos-Nekropole, I. Gräber und Opferstellen hS 1-204. *Mitteilungen des Deutschen Archäologischen Instituts, Athenische Abteilung*, 81, 4-11.

Shear, T. L. Jr. (1970). The Monument of the Eponymous Heroes in the Athenian Agora, *Hesperia*, 39 (3), 145-222.

Sparkes, B. A. & Talcott L. (1970). *Black and Plain Pottery of the 6th, 5th, 4th Centuries B.C.* Princeton: The Athenian Agora, Vol. XII, Part:1-2.

Strabon, (2000). *Geographika Antik Anadolu Coğrafyası*, trans. Adnan Pekman, Arkeoloji ve Sanat Yayınları, İstanbul, XIII.

Şahin, N. (1996). Beyaz Lekythos'lar Işığında Klasik Devirde Atina'da Ölüm İkonografisi ve Ölü Kültü, *Ege Üniversitesi Edebiyat Fakültesi Yayınları Arkeoloji Dergisi*, 4, 143-167.

Appendices

Fig.1: General view of Kyme and the İDÇ Necropolis (Google Earth and Map)

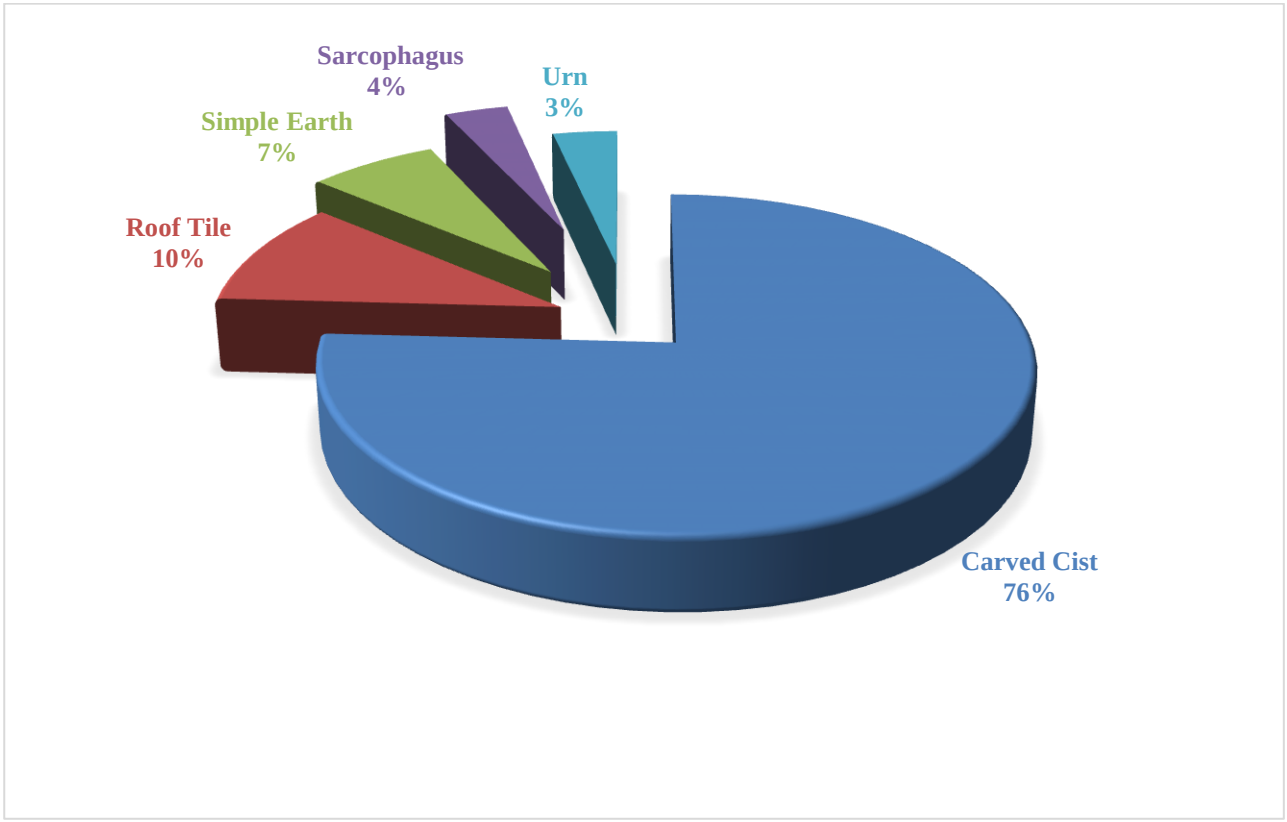


Fig.2: Graves with Lekythos Finds

Fig.3

Fig.4

Fig.5

Fig.6

Fig.7

Fig.8

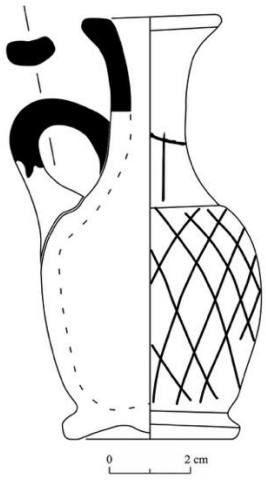


Fig.9

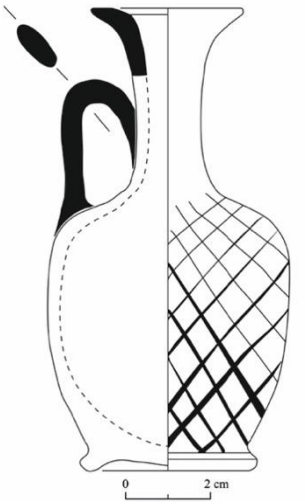


Fig.10

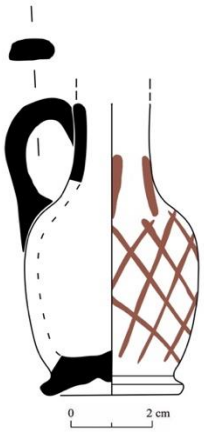


Fig.11

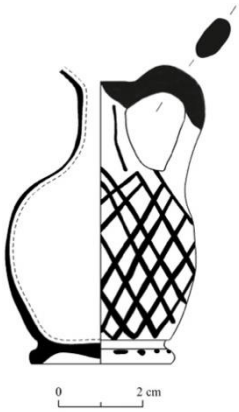


Fig.12

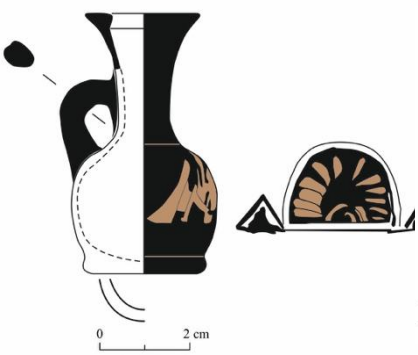


Fig.13

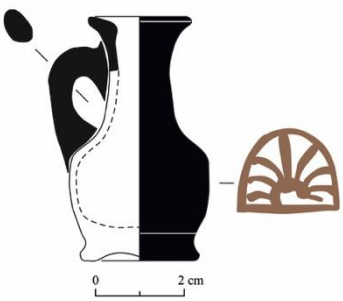


Fig.14

Fig.15

Fig.16

Fig.17

Fig.18

Fig.19

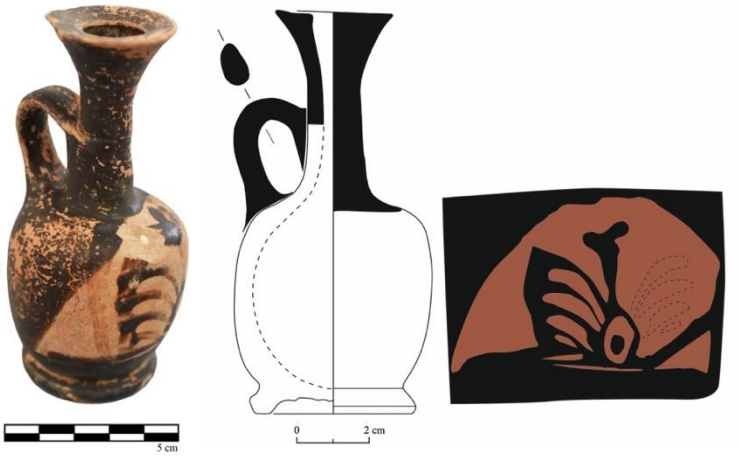


Fig.20

Fig.21

Fig.22

Fig.23

Fig.24

Fig.25

Fig.26

Fig.27

Fig.28

Fig.29

Fig.30

Fig.31

Fig.32

Fig.33

Fig.34

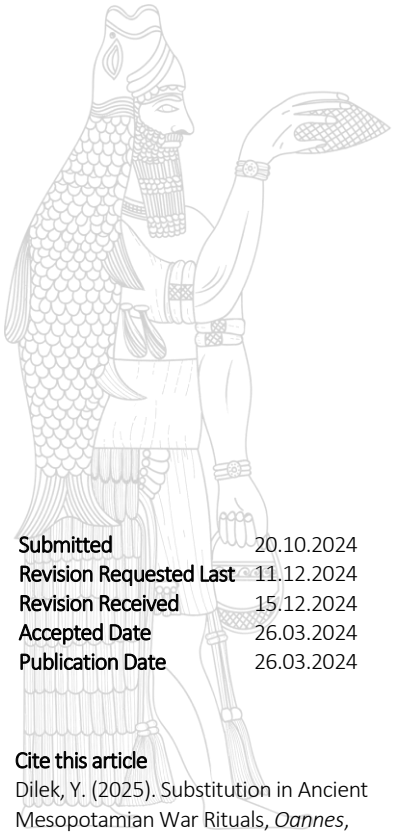
OANNES
2025, 7(1) March

Research Article DOI: 10.33469/oannes.1570728

Substitution in Ancient Mesopotamian War Rituals

Yeşim DİLEK
Corresponding Author

Department of Social Anthropology, Ankara Haci Bayram Veli University, Faculty of Letters, Ankara, Türkiye.
yesim.dilek@hbv.edu.tr



Abstract

Ritual performance has its own set of beliefs. In particular, ritual in the broadest sense, performative behavior that is accepted as normal and not identified as such, or external conduct are the means by which the generative matrix of ideology is produced. From significant social and political gatherings to everyday actions by individuals, these rituals take many forms. War is another ritualized human habit. It is a set of practices that require a lot of preparation and design before the war action. In order to decide on the best course of military action and whether to go to war, the gods had to be consulted and enlisted in ancient Mesopotamia. Every phase of war, from peacetime to hostilities and from the demands of a military campaign to the return to daily life, is marked and facilitated by rituals. In some war rituals substitutes are used, such as clay figurines or animals, to symbolize the enemy. Then, these items or animals become the target of violence. Substitution is a way that the royal power is asserted. It is the pious king who is favored by the gods and enforcing divine justice who will ultimately beat the enemy, and success is always certain. The aim of this study is to draw attention to the practices of substitution in the war rituals of Ancient Mesopotamian New Assyria and Babylon period in the light of sample war ritual texts.

Keywords: *Ancient Mesopotamia, War, Violence, War Ritual, Substitution.*

Submitted	20.10.2024
Revision Requested Last	11.12.2024
Revision Received	15.12.2024
Accepted Date	26.03.2024
Publication Date	26.03.2024

Cite this article
Dilek, Y. (2025). Substitution in Ancient Mesopotamian War Rituals, *Oannes*, 7(1), March, pp. 97-107.

Genişletilmiş Özet

Belirli bir yerde ve belirli bir durum çerçevesinde gerçekleştirilen, önceden belirlenmiş bir olay veya gelişim seyrine sahip, özellikle dini anlamda herhangi bir faaliyet en geniş anlamıyla ritüel olarak kabul edilmektedir. Ritüel hem modern hem de eski toplumlarda mevcut olan hem dini hem de seküler uygulamaları içeren insan toplumunun hayatının her alanına tezahür etmiştir. Ritüeller, kutsal eylemin kıyafet ve eşyaların kullanılması, taşınması, işaret edilmesi, eylemleştirilmesi, rol yapılması, şarkı söylenmesi, dua okunması gibi çok çeşitli törensel yönlerini içerir. Bu bağlamda, savaş da bir başka ritüelleşmiş insan alışkanlığıdır.

Savaş önceden planlanmış, amaçlı bir eylemdir. Bu nedenle, savaşı uygarlığın diğer bazı kurumları ve gelenekleriyle aynı ışık altında görmek mümkündür. Eski toplumlarda savaşlar sadece insanları değil inançları doğrultusunda ilahi güçlerinde müdahalesini, işaretlerini, desteğini ve katılımını içeren eylemler olarak düşünülmüştür. Bu toplumlarda tanrıların savaşa katıldığı ve sonucun nihayetinde ilahi bir kararla belirlendiği düşünülmüştür. Savaş ilahi bir imtihan olarak görülmüştür ve kökenlerinin de ilahi emirden geldiğine inanılmıştır. Diğer birçok topluma yakın bir şekilde, ilahi iradeye uygun olarak eski Yakın Doğu halkı savaşın ağır sonuçlarıyla uzlaşmak için mitolojiye ve dine başvurmuştur. Eskiçağ toplumları için, tanrıları adına kozmik düzeni savunan ölümlü bir hükümdarın yetkiyi tanrılardan alarak savaş açarken adil ve yasalara uygun hareket ettiği yazılı metinlerden görülmektedir.

Eski Mezopotamya'da siyasi ve dini eylemler tek bir gerçeklik altında bir araya gelmekteydi. Dolayısıyla, kralın tüm siyasi eylemleri, özellikle de savaşlar, hüküm süren kozmik ideoloji ve dünya görüşü tarafından gerekçelendirilir ve bu bağlamda önem verilirdi. Savaştan önce ya da savaş sırasında tanrıların krala göksel kehanet ve çeşitli fiziksel işaretler şeklinde sinyaller gönderdiğine inanılırdı bunların anlamı ancak yetenekli kahinler tarafından ritüel gözlemler yapıldıktan ve ilgili makamlara danışıldıktan sonra anlaşılırdı. Kral ise kehanet yoluyla elde ettiği ilahi emirleri yerine getirmek için savaş açar, kültleri ve tapınakları korur ve ayinler düzenlerdi. Bu düşünce tarzında başarı, tanrıların kralı desteklediği anlamına gelirken başarısızlık da tam tersi bir anlama gelmekteydi. Kraliyet yazıtlarının aksine, savaştan önce ya da savaş esnasından bahseden savaş ritüel metinleri neredeyse hiç tarihsel bilgi ya da düşmanın tasvirini içermediği dikkat çekmektedir. Bu ayrıntı eksikliği nedeniyle savaş idealize edilebilir ve kaos ve düzensizliğe karşı kozmik mücadelenin bir devamı olarak görülebilir, bu da savaş ayinlerinin çeşitli bağlamlarda uygulanmasını mümkün kılar.

Eski Mezopotamya toplumlarında Sümerlerden başlayarak Akad Asur ve Babil yönetimlerinde asıl amacın savaşta galibiyet kazanmak ve düşmanı bertaraf etmek olduğu için savaş ritüel metinlerini kozmik devamlılık olarak görmek mümkündür. Mezopotamya hükümdarı, ilahi savaşçı rolünü tekrarlayarak bu mücadelede yer almışlardır. Tanrılar, kralların savaşlarını yürüten, destekleyen ve zaferi kazandıran asıl figürlerdi. Galibiyet, tanrılar tarafından onaylandığı için, savaş esnasında ve süreç boyunca işlenen her türlü şiddet sorgulanamaz ve bu durum savaşın meşrulaştırılması için önemli bir faktör olarak görülmüştür. Çivi yazılı belgelerden elde edilen bilgilere göre, askeri seferler düzenlenmeden önce ve esnasında gerçekleştirilen çeşitli ritüeller vardır. Bu ritüellerde düşmanın iç yağından yapılan ve başları arkaya dönük olarak tasvir edilen heykellerle sembolize edildiği görülmektedir. Heykellerin bu şekilde tasvir edilmesinin nedeni, düşmanın yenilgisinden sonra kaçışını betimlemektir. Bu uygulamalarda heykelin önüne kralın kendisi değil, aynı adı taşıyan ve kral gibi giyinmiş vekillerden biri oturtulurdu. Buradaki amaç, insanlar tarafından gerçekleştirilen ancak tanrılara toplu kurban sunma kavramıyla özdeşleşen savaşlar sırasında kralların karşılaşacağı tehlike ve sıkıntıları bertaraf etmekti.

İkame ritüelleri, benzerlik yasasından türetilen empati büyüsü ilkesine dayanır. Bu yöntemde, ulaşılamayan soyut kötülük ritüel olarak heykele ya da canlıya aktarılır ve heykele somut olarak zarar vererek kötülükten kurtulmak amaçlanır Düşmanın yerine koyulan bir nesne ya da bir hayvan önceden kral tarafından öldürülerek ya da yok edilerek savaş esnasında olası tehlikeleri önceden yok etmek amaçlanmıştır. Savaş ritüellerinde uygulanan vekil tehlike ve felaketleri ortadan kaldırarak kralın hayatını kurtarmakla sorumluydu. Yeni Asur ve Babil dönemlerine ait PBS I/2, 106 = CBS 1516, Ki 1904-10-9, 18 (BM 98989), K 6207 + K 6225 (BBR 57) ritüellerinde düşmanı tasvir etmek için yerine konulan sembollerin kullanıldığı görülmektedir. Bu ritüellerde düşman genellikle nesne ya da hayvan olarak betimlenmiş ve düşman bir insana yüklenmemiştir. Savaş sırasında beklenen şiddeti öngören prosedürlerin bu figürlere uygulandığı anlaşılmaktadır. Düşmana karşı kraliyet gücünü sergileyen ve Mezopotamya kralını savaş esnasında koruyan bu ritüeller hem saldırgan hem de önleyicidir. Kralın gücünün hem etkili hem de kapsamlı olduğunu ve tanrıların onu koruduğunu ifade ederler. Öte yandan, düşman çaresiz ve kolayca yenilebilir olarak sunulur. Kralın askerleri için, yerini alma ritüeli ile düşman yerine geçen objeler ve hayvanlara karşı gösterilen yok etme eylemi güveni artırır ve doğru davranış için bir örnek oluşturur. Hükümdar ve ordusunun savaş esnasında uyguladıkları şiddet, düşmanla olan çatışmalarını bir savunma olarak sunan önceden uygulanan bu ritüellerle meşrulaştırılmıştır. Böylelikle, yerini alan figürlere karşı etkili şiddet kullanımını göstererek, tanrıların da desteği ile hem askerlere hem de halka karşı düşmanın yenilebileceğine ve zafer kazanılacağına dair güçlü inançlar geliştirmişler bulunmuşlar, kralın doğruluğunu teyit etmişler, düşmanı korkutmuşlar ve halkın güvenini artırmışlardır.

Introduction

Any activity especially in the obviously religious sense with a predetermined course of events or development that is carried out in a particular location and within the framework of a specific occasion would be considered ritual in the broadest sense. Rituals include a wide range of ceremonial aspects of the sacred act, such as using clothes and items, bearing, gesturing, moving, acting, singing, reciting prayers, and so on. The ritual includes both the phrasing and the activity. That is, the things spoken and done during a ritual reflect the dual nature of a ritual, which is both action and words (Riva, 2020, p. 220).

Ritual is a deeply communicative act with performative and social components that transmit a richness of meanings (Tambiah, 1979, p. 1979). In ritual, nothing happens by accident. Regardless of how well or poorly it is written and delivered, its message is intended for human, divine, or other supernaturals. The transmission of the message is influenced by audiences, both actual and imagined. It is important to distinguish between the mechanisms involved in message transmission and reception. Ritual is a performance that is always defined by contrast, conditional, and provisional (Bell, 2009, pp. 91-92). Bell (2009) stated that ritual is the practices that adapt the system of symbols to play, brighten and concretize them and that ritual creates a force that unites two symbols; one is the conceptual worldview and the other is the creation value system. Furthermore, ritual as performance provides a complementarity between abstract and conceptual categories and the cultural selectivity of ritual.

Ritual performance creates its own ideological base. The production of the generative matrix of ideology specifically occurs through external conduct, ritual in the widest sense, or performative behavior that is perceived as part of everyday life and is not recognized as such (Bahrani, 2008, p. 69). A universal component of human society, ritual encompasses both holy and secular acts that are found in both contemporary and historical cultures. These rituals range from large-scale social and political events to individual daily behaviors. War is another human behavior enmeshed in ritual (Riva, 2020, p. 219).

War can be described as organized violence. Therefore, it is possible to see war in the same light as certain other institutions and customs of civilization. As Bahrani states that some time ago, in the early twentieth century, war was initially described as a sort of organized, controlled, and even ritualized violence (Bahrani, 2008, p. 9). In ancient times, the gods participated in war and the outcome was ultimately decided by divine decree.

War was seen as a divine trial and its origins came from divine command. As Levtow (2014) states the conduct of warfare in the Ancient Near East can be characterized as the planning of purposeful harm in ceremonialized social settings. In this way, warfare was similar to the religion of the sacrificed temple in that it was a unique theater of operations where social hierarchies under control carried out specified practices that were thought to influence the structure and destiny of communities. Similar to the worship of sacrifice temples, ceremonial responsibilities were ascribed in many contexts of Ancient Near Eastern warfare (pp. 39–40)

Close to numerous other societies, in accordance with the divine will the ancient Near Eastern people resorted to mythology and religion to reconcile with the severe results of warfare. For the ancients, a mortal ruler defending cosmic order on behalf of his gods would act justly and lawfully when waging war. Political and religious action came together under their one reality. Thus, all of the king's political actions, particularly wars, were justified and given significance by the reigning cosmic ideology and worldview (Melville, 2016, p. 219).

According to Weippert's analysis (1972) of the Assyrian sources, the phrase *holy war* refers to the belief that the gods decide on conflicts by signs such as omens, that they are present during military campaigns by means of heavenly standards, and that in the original sources, the gods are considered to be the actual combatants. The result was a theological interpretation of the earthly conflict, suggesting that the army is led by the gods, that the warriors are their property, and that the adversaries of the army are their enemies (pp. 476-484). Galter (1998) recognizes that the intricate relationship between religion and politics in Mesopotamia may make it unnecessary to refer to Assyria as being in a holy war (p. 89-94). In this sense, every function of the king was sacred. The king's role's sacred and profane components were inextricably linked (Ataç, 2010, pp. 113-24). The Assyrian ruler was considered the gods' human agent, invested by the

deity's grace with the power to rule and at the same time also his head priest, leading him religious as well as political authority (Radner, 2018, p. 5).

In Assyria, as a successor of ancient Mesopotamian kingship ideology a rebellion against the king was seen to be a violation against the deity since it was perceived as an act of defiance against the god's designated representation within Assyria. In the same way, it was considered disrespectful to the god of Mesopotamia for a ruler from another state to show animosity or declare war against Assyria. In each case, the rebel or enemy king was punished for a heinous crime that he had done (Pekşen & Topaloğlu, 2024, p. 22). As in written documents the king and divine relationship can be found on the rock reliefs and stelaes of Neo-Asyyrian period.[1] Scribes used a specific set of adjectives and titles in their descriptions of gods and kings, for example, terms such as 'strong king', great king, king with no equal etc. were employed not necessarily because of the territorial extent of the Assyrian Kingdom but rather as a requirement of the language of correspondence (Köroğlu, 2018, pp. 162-163).

As Galter (2022) mentioned that the self- image of Assyrian king as a warrior reflects the ideology of Assyrian war ideology. Ashurnasirpal's II lengthy inscription from the Ninurta temple in Kalhu is the example. There the king is called "heroic warrior, fearless in battle, trampler of all enemies, establisher of victory over all lands, capable in combat, foremost in battle, conqueror of cities and highlands, exalted and merciless hero. In other texts he is described as 'strong one' and as 'martial king'. He boasts in a self-praise: "I am a hero, I am a warrior, I am a lion, I am a man". This is paralleled by the almost exclusive use of the first person singular in the narrative sections of the military accounts: "I mustered my chariot-troops", "I marched", "I besieged, conquered and defeated", "I massacred many of them" and finally "I razed, destroyed and burnt their cities (109-110).

War Rituals in Ancient Mesopotamia

Before or during the warfare it was believed that the gods sent the king signals in the form of heavenly omina and various physical indications, the meaning of which was only known by skilled observers after they had performed ritual observation and consulted the relevant quantities (Rochberg, 2004, p. 44–97). For his part, the king waged war, maintained cults and temples, and carried out rites in order to carry out the divine commands gleaned through divination. In this way of thinking, success meant the gods were supporting the king so failure meant the opposite. War, in its widest sense, was thus given cosmic meaning and turned into a ritualized activity, an *ordalic procedure* by which the king and his army appeased the gods (Melville, 2016, p. 209). While meticulous military preparation undoubtedly assisted in defeating adversaries, Schwemer (2007) claims that in this case, the gods ultimately decided who would win. The king may carry out a number of additional rites to make sure the gods backed his cause, but before going into combat, oracles were consulted to confirm that his decisions had the blessing of the gods (p. 29).

As Bahrani (2008) putforwards the conduct of war was identified by the Mesopotamians as a ritualized organization characteristic of complex civilizations; they immediately connected it to the formation of the city and, subsequently, the state when these societies came into their own (p. 10-14). Rituals can foster impersonal distance as well as individual identification and participation in the group. It is possible that formalized communication acts as a collective process of legitimizing organized group violence and that rituals, particularly in times of war, play a prominent role as a means of exonerating the individual (Lang, 2020, p. 232).

In contrast to the royal inscriptions including a narrative that precedes the battle, the war rites almost hardly include historical information or the enemy's description. The enemy is conventionally depicted, going by the names *nakru* or *nākiru*[2] (CAD (N), 2008: 189-190). Due to this lack of detail about enemies, the battle can be idealized and seen as a continuation of the cosmic struggle against chaos and disorder, which makes

[1] For the illustration of reliefs and stelae, see: Köroğlu "Anadolu'daki Yeni Asur Dönemi Stelleri ve Kaya Kabartmaları."

[2] The relationship between the Assyrian king and his enemies can be characterized through several keywords. One is the verb *Saḫāpu.* For a detailed analysis of this verb, see Karlsson Mattias's "The Assyrian King and His Enemies According to the Verb Saḫāpu in Assyrian Royal Inscriptions."

it possible to apply the war rites in a range of contexts.[3] Reprising the role of the heavenly warrior the Mesopotamian ruler takes part in this fight. He calls upon the gods, who carry out his battles and whose support ensures his triumph. Since conquest is approved by God, whatever violence committed throughout the process is unquestionable (Lincoln, 2012, p. 86).

As a representative of the divine warrior, the ruler set out to protect Assyria and the entire civilized world against chaos and evil forces on behalf of the divine assembly. His royal responsibilities included this. In order to bring about the ultimate triumph of order over chaos, he had to expand his kingdom and make the god's dominion over the universe a reality. Before the real coronation event, the king had to symbolically reenact Ninurta's battle against chaos, according to a Neo-Assyrian ritual commentary[4] (Galter, 2022, p. 113).

The king and his army are justified in their violent deeds because they ensure the land's abundance by reestablishing order and containing evil. Written historical chronicles, if by that mean accurate and impartial descriptions of an event, are not what the records of war and its rites are. However, they are documentary in that they are first hand accounts of the power structures of antiquity and the ways in which the war machine is fueled by governmental brutality, the biology, the law, omens, and the divine (Bahrani, 2008, p. 206).

According to the information obtained from cuneiform documents, there are various rituals that were performed before military campaigns were organized. In these rituals, it is seen that the enemy was symbolized by statues made of interior fat and depicted with their heads turned backwards. The reason for depicting the statues in this way is to symbolize the escape of the enemy after his defeat. In these rituals, the king himself was not placed in front of the statue, but one of his officers with the same name and dressed like the king. The purpose here was to eliminate the dangers and troubles that the kings would face during the wars, which were carried out by humans but identified with the concept of offering mass sacrifices to the gods. The person who temporarily replaced the king was responsible for saving the king's life by eliminating these dangers and enemies (Akkuş Mutlu, 2014, p. 285; Pekşen, 2016, p. 57).

Substitutions in War Rituals

Substitution rituals are based on the principle of empathy magic derived from the *law of similarity*. In this method, the unattainable abstract evil is ritually transferred to the statue, animal or a person, with the aim of getting rid of the evil by concretely damaging the statue (Butler, 2017, p. 250). Assyrian ideas about representation and reality were linked, in that it was possible to destroy something by destroying an image of it. The reverse was also true. Representation was thought to make things happen, not simply to depict. The making of images had a performative and indexical relation to the thing portrayed, rather than being a mimetic copy of the real world, although it incorporated details of the real, especially in the art of the Neo-Assyrian Empire (Bahrani, 2008, p. 53).

---

[3] Royal rites had a significant social impact and the ability to turn the destruction of battle into something purposeful and constructive. As it is clear war rituals functioned as rites of passage that signified the several phases of soldiers' experiences, thereby reducing the potential disruption to the social order that resulted from their taking up arms, departing from a well-ordered civilized life, engaging in combat, and ultimately coming home. Analyzing the concept of ritual from an anthropological perspective, Arnold Van Gennep conducted a comparative study by observing a large number of rituals and concluded that all rituals follow the same model. Van Gennep observed that rituals develop briefly in three stages. In the first stage, the ritual object (What is referred to here as the 'object' is the original intention, purpose and main factor that is the reason for its transformation and the reason for the practice of the ritual.) is removed from its current existence. In the second stage, the object is caught between two entities. In the final stage, it succeeds in reaching its new existence, that is, the expected state desired for it. This is the first analysis of a ritual process. Van Gennep called these three stages "rites of passage" (Gennep, 1975, pp. 10-11). In later periods, theorists developed this concept and extended it to a wider area as "transformation ritual". Most theorists and experts agree that these steps, which cover the basic practices of ritual, are valid for all rituals and can be adapted to all rituals. For example, Morris Brian, another important anthropological thinker on the subject of religion, argues that this three-step process is strictly applied in a ritual, whether it is a ritual of transformation or not. (Morris, 1987, p. 247).

[4] "The king standing on the war chariot: the king, the hero, the lord Ninurta is he." "The king, (coming) out from the Ekur, wearing the golden crownon his head and sitting on a throne, while they carry him and go to the palace: Ninurta, the avenger of his father, (is he)." (Livingston, 1989, pp. 99–102).

Oppenheim (1977) states that Mesopotamian written sources contain a large number of spell texts and that the most common spells are those defined as sympathy/empathy attraction or substitution. These spells have a wide range of applications, including transmission practices as substitution rituals (p. 180). Oppenheim (1977) also put forwards that sympathy spells, which are practiced for a good purpose, have a system of transferring bad luck to the bad in order to drive away the evil spirit by directing it towards the enemy and to cleanse the person or object from evil. Sympathy spells are based on the relationship between people, animals, objects and plants. This type of belief suggests a theory of communication in which distant, independent and unconnected objects are connected to each other through special methods that create a kind of sympathy bond (p. 180).

Sympathy spells have always been one of the rituals that make the most extensive use of objects in rituals. Since objects in sympathy spells can substitute for countless supernatural powers and even for other objects far away from them, these rituals are based entirely on objects (Butler, 2017, p. 216). Sympathy spells are known to be based on a relationship between animals, humans, inanimate objects and plants that can directly affect each other. This relationship and connection was not random and required certain qualities. As Butler (2017) mentions İn the relationship between gods and objects there were two different aspects of the sympathy relationship; the object represented the power of the god in its entirety, while at the same time the god had to be involved in the order of the ordinary sympathy bond (p. 217). Frazer (1900) put forward the *law of similarity* and explained the relationship of objects to other beings in sympathy spells with the phenomenon of "it takes one to know one". The *similar* was able to dominate over the *similar* and the *similar* could be used to treat, correct and cure a situation. The opposite of this, the *law of opposite*, has also been demonstrated in the same direction but with a different functioning. In this principle, the opposite of something was able to dominate the other thing and make the bad situation disappear (p. 9). It is noteworthy that both laws require substitution.

In Babylon and Assyria the relationship of the signified to the signifier is characterized by a constant shifting between the integral to the real realms. Bahrani mentions that if this shifting between the two realms was made possible by the visual shape of things in the case of words (although iconic signifiers were not privileged), then the realm of visual signification must also take into account encountering things in various ways. Therefore, image and name, and the organic body of a person were all ways of encountering that person. A body double (an organic substitute body for the person), a wax or clay effigy, or a statue of durable materials such as stone or bronze can be likened to the iconic or homophonic substitute signifier, which functions by means of resemblance. Likewise, things related to magical substitution (fragments of attire, fingernails, sand taken from one's footprint) as well as offspring or seed are metonymic extensions of the person (Bahrani, 2003, p. 128)

The king was the commander in chief, the leader of the army, but as mentioned above he followed the decrees of the gods, whose will be made known through omens and oracles. At least one baru-priest marched in the vanguard with the troops, and every military plan was checked against the omens before being put into effect. The omens were taken and corroborated by means of other omens in a series of observations and repetitive queries. The corroborating omens were taken from other forms of portents such as from astronomical observations, from dream interpretation, chance portents, and so on. It is clear that the omens were taken seriously; they were not propagandistic acts for repression or coercion of the people but part of a religious ideology to which the king himself submitted. The same system of belief resulted in the ritual of the substitute king,[5] in which violence and evil were localized into the body of the substitute as scapegoat[6] (Bahrani, 2008, p. 197).

[5] In this distinctively Mesopotamian ritual, the king was provided with a substitute (Sar-pahi) when astronomical omens spoke of an evil fate for the king that would affect the entire kingdom. The substitute king was a citizen carefully chosen for this role by the priests. He was never a prisoner or a slave. He was dressed in the king's regalia and made to submit to a series of ritual incantations naming him as the king in an incantational utterance, and also by means of inscribing the name of the king onto his person. The name was either written onto something that was attached to his garment, or alternatively, the name was written onto something that could be ingested by the substitute. In either case, in order to be incorporated, it appears to have been important that the name was both uttered and written into the body of the substitute king. When the imminent evil finally came, it was expected to leave the previous-real king unharmed, the substitute king having become the decoy that would absorb the evil fate in his place. In some cases, it appears that the substitute was in fact killed as the final part of this ritual, but the texts are unclear on the matter, and the question of sacrificial death remains open (Bahrani, 2008, p. 198). The appointment of a substitute for the king in Late-Assyrian times has been the subject of much discussion. It is clear that when an eclipse occurred which, according to the omen texts, should have resulted in the king's death, a substitute was temporarily put on the throne to die in place of the real monarch, who was thus saved.

These images used in rituals of substitutions are called *şalmu*. *Şalmu* is the Akkadian word used in Assyrian and Babylonian texts to refer to what in our view is a representation. Traditionally, philologists have translated this word variously as statue, relief, monument, painting, and image. More recently, it has been argued that the term image is a more accurate translation of *Şalmu* than one that assumes the word defines a particular type of monument (Morandi, 1988, pp. 105-106). Winter (1992) has further argued against the use of portrait when referring to Şalmu as a representation of a person (p. 36).

Bahrani claims that Akkadian notion of *şalmu*[7] is substitituon than the image because it is a sign representation that takes its place in the realm of the real. Rather than being a copy of something in reality, the image itself was seen as a real thing. It was not considered to resemble an original reality that was present elsewhere but to contain that reality in itself. Therefore, instead of being a means of signifying an original real thing, it was seen as ontologically equivalent to it, existing in the same register of reality (Bahrani, 2003, p. 127). In this sense, it is clearly illuminated by examples of ritual texts on the use of substitution rituals in warfare in ancient Mesopotamia.

The ritual PBS I/2, 106 = CBS 1516[8] which is a Babylonian ritual and incantation aimed at providing protection for the king against the enemy. The sturucture of the ritual features a ceremonial framework that includes an image of flour at both the outset and conclusion[9], complemented by various incantations directed towards deities linked to the establishment of fate.

PBS I/2, 106 = CBS 1516[10]
Obv., 5-8
5 You should make / draw on the ground an image of flour before Šamaš.
6 ...the king...
7 On that image you should cause to stand...
8 You should set up a reed hut for Ea, Šamaš, and Marduk.

In this ritual, the image of flour is created, and offerings are made to the gods who decide fates in a location designated for that purpose. The image of flour that appears in the first and end parts of the ritual may or may not be the same as *zisurrû*[11], the circle of flour that regularly appears in Namburbi rites[12] and magically wards off evil. The image's meaning and operation are not explained in the rite[13]. As the passage is broken it is not identified but it is clear that something is put on the image. The text continues with the

---

The purpose of the present contribution is not to participate in the discussion of the many outstanding problems, but to make available a new text. This custom of substitution is known so far from royal correspondence in which it figures (Lambert, 1958, p. 109).

[6] For example a text of Assur-Nirari V of Assyria (754-745 BC) concerning a treaty with a Syro-Hittite ruler contains evidence of a remarkable ritual that enacts the threat of a curse that will operate if the oath and treaty are broken. The ritual, which is in some sense one of substitution, seems to have been carried out during an animal sacrifice. It has the performative quality of an incantational utterance: "This head is not the severed head of a ram but the head of Mati'ilu ... should Mati'ilu break these agreements, his head should be cut off, just as this head of the ram has been cut off" (Bahrani, 2008, p. 202). It is common to discuss the Mesopotamian ceremony in connection with a Hittite "Substitute king." The Hittite ritual is more like to the Biblical scapegoat, and it has no direct link to the Mesopotamian Substitute king, with the exception of parallels with the šar pūḫi in the ritual mechanics pertaining to substitution (Verderame, 2020, p. 196).

[7] The use of figurines (şalmu) to operate on a person, who is not physically present, is widespread in Mesopotamian rituals; particularly in anti-witchcraft (Maqlû). The use of substitute figurines is also one of the main methods of witchcraft, but it is only indirectly documented in the anti-witchcraft instructions as the cause of illness and in the diagnostic section (Verderame, 2013, p.304).

[8] As Soohoo (2019) explained this ritual was initially copied by Lutz and subsequently published and translated by Ebeling (p.346).

[9] PBS I/2, 106 = CBS 1516 Reverse 27 “He should throw (it) down on the image of flour, which is drawn on the ground.”

[10] Ebeling is used as a sourse in this study.

[11] For detailed information see Dilek, Y. & Turgut, M., (2019). “To Create Sacred Settlements Using “Flour” and “Reed” in Ancient Mesopotamian Religion (p.127).

[12] Most of the well-preserved examples of namburbi rituals from the 8th-6th century BC have been recovered from Nineveh and Assyria. In fact, the language of such texts and the presence of rare documents from Babylonia and the West suggest that the namburbi ritual tradition originated in the vicinity of Babylonia and was used in the region influenced by Neo-Assyrian and Neo-Babylonian civilizations (Çeçen et al., 2020). Detailed information can be find in Caplice, R., (1974) *The Akkadian namburbu Texts: An introducton.*

[13] Ebeling (1949) believes that the picture of flour is a stand-in for the king, but the text makes no mention of this (p. 173).

description of the various attributes of the gods and what they do. From line 21 onwards, the ritual of substitution begins to shape.

21 The one whom the governor opposes / opposed (?)...
22 ...my substitute(?)...
23 For the desire of my heart(?)...
24 ...like the image...
25 Speak and at your command they shall make a supplication.
26 Impose my evil signs...
27 Provide provisions before Sîn and Šamaš.
28 Remove my evil. Establish goodness.
29 It is you who have established the going...
30 Spare my life from distress. Save me from the tomb.
31 In doing battle and combat, let me not come to have a rival.
32 Ea, Šamaš, and Marduk, establish for me help!

This imperative section of the ritual asks the gods to intercede on behalf of the king. It begins by referring to the image mentioned at the beginning of the ritual. This ritual was carried out prior to combat or a military campaign, according to certain specifics in the text. In addition to asking that his life be preserved and that he be rescued "from the tomb," the king also asks that he not face any combat in war or conflict. As it is understood from the text, the king asks for help from the gods for protection by attributing meaning to the substitute before facing his enemies.

In the reverse, the ritual applied by the king to the substitute to protect him from the enemy in battle.

Reverse 24-28.
24 Day and night let me pray to you
25 ...and let me make glorious to the Upper World your great deeds
26 You should say this and the king slaughters a substitute.
27 He should throw (it) down on the image of flour, which is drawn on the ground.
28 He should perform on (it) a tamarisk (purification) / bathing-procedure.
29 Liturgist instructed to act like the king's barber (gallābūtu) and he (with the hair?) should go to the land of the enemy.

The king is meant to throw the substitute[14] upon it at the end of the ritual. Whether the substitute is an actual person or an object, like a clay figurine, is not made clear. The connection between words and ritual actions is an intriguing aspect of this ritual. Its incantations primarily address the king's security and welfare. He specifically calls upon the gods who decide fates and begs them to grant him life and safety. In order to convince the gods to grant him life, the king must ritually sacrifice a substitute. The ruler can achieve victory in combat by securing divine favor by sacrifice, both human and animal. One life representing the enemy substitute is sacrificed in order to protect the king. Its slaughter becomes a sign of the defeat of the enemy.

Another war ritual that substitution action is seen Ki 1904-10-9, 18 (BM 98989). Sections are separated by rulings, and the text is broken at the beginning and the end. Since several sentences are not completely preserved, it is challenging to ascertain the ritual's meaning and organization. Furthermore, the lack of a colophon makes dating the work and pinpointing its precise provenance ambiguous and tentative. Given that it was written in the seventh century BCE and came from Nineveh, it seems likely that Ashurbanipal's library had it. The text was either an original or a copy, but no further versions have been found to date (Schwemer, 2007, p. 30). In the ritual two substitution action draws attention. One is a şalmu object and the other is a pig.

Ki 1904-10-9, 18 (BM 98989)
Reverse 14-26

[14] In the Neo-Assyrian substitute king ritual, Pūḫu refers to the person who took the throne and was slain following the eclipse (Lambert, 1958). But it can also be used to describe clay figurine or other items that are used to represent a person. However, the king's acts toward the substitute are described using the verb "to slaughter," indicating that the pūḫu is a living being.

14 [You should make an image of...] You should cause it to carry a qulmû[15]-axe in its right hand.
15 You should write on its left shoulder "...[o]f the humankind," its name.
16 You should write "...my [enemies]", its name.
17 [You should slaughter a white pig with a dagger.] You should collect its blood in a bowl.
18[The ruler] pours out [the blood of the pig t]o the south, the north, the east (and) the west.
19 The [sk]in of the white pig that was slaughtered...
20 ...[You] should smear (it) (with)...You should place the dagger and the image inside.
21 ...You should seal (it) with clay.
22 [You] should seal (it) [with a seal.] The ruler places his hand on the skin of the pig.
23 He should say: "Turn around! Stay away!"
24 horned] alkali and gypsum [of] his hands...in water...
25 my...] I have [removed] over you.
26 to the bor]der of the land of the enemy he [leaves it].

The liturgist is instructed to create a figurine (ṣalmu) on the tablet's reverse a hatchet (qulmû) in its right hand. The figurine's name is inscribed on both its left and right shoulders, however neither is completely intact. After a white pig is killed with a dagger, the king gathers the blood in a bowl and pours it out to the south, north, east, and west. The figurine and blade are then inserted into the pig's skin after it has been smeared with something. Like a letter, the skin is sealed in clay. Using gypsum and horned alkali, two substances used in purifying rites, the monarch rubs his hands over the pig's skin.

The pig is obviously a transitional item. The color is significant as white could represent purity. (Schwemer, 2007, p. 31). Initially, it is killed and turns into a carrier of the evil that will be used against the adversary. However, because the pig's blood wards off evil, the violent act of killing it also permits the protection of the soil. The king's prosperity and well-being are exchanged for the substitute's life. The pig becomes a symbol of what will happen to the opponent, just as omens, when interpreted by professionals, reveal divine anger. The killed pig is transformed into the envelope containing the emblems of that punishment, which include the same dagger that kills it and the figure holding a hatchet, which will bring the violence against the enemy to life. At last, the pig is driven to a transitional area which is the enemy's territorial border. In order to protect them and maintain their newly gained purity, the evil-bearer is geographically isolated from the monarch and his realm. The violence and bad luck inside the pig will be transferred to the opponent when they come into contact with it.

Another war ritual that involves a substitute is K 6207 + K 6225 (BBR 57) Elat Text IIa. As Soohoo (2019) stated Zimmern edited and published this ritual first. Elat compiled and revised the text in observance of “the day the king (goes?) into combat and battle,” (p. 586). In the final part of the ritual, the substitution of enemy appears.

K 6207 + K 6225 (BBR 57) 11-12
11 You should make an image of the enemy out of tallow.
12 You should tie (it) around with an ulinnu-cord from its front to its back.

As the rite comes to an end, a cord is tied to a tallow-made figure of the enemy (ṣalam nakri). Just like hair or a fingernail might represent a person, this image serves as a substitute. Figures used in other Mesopotamian rituals are made to ward off evil and safeguard a person or home (Gurney, 1935, p. 31-63). The purpose of this ritual is to render the enemy incapable of posing a danger. The portrayal is handled with the same brutality and bindings that a genuine vanquished adversary would receive. A magical rope is affixed to the image's head, and its face is obliterated.

Conclusion

A variety of rituals were carried out both before and during the organization of military expeditions, according to information obtained from cuneiform writings. Statues of the enemy with their heads turned

[15] The word "qulmû" describes a tool used for digging, cutting trees, and hewing stone (CAD (Q) 1982, p. 299-300).

backwards, fashioned from inside fat, were used as symbols at these ceremonies. This arrangement of the statues is intended to represent the enemy's flight following his defeat. One of his officers, who had the same name and wore the king's clothing, was positioned in front of the statue during these rites instead of the king himself. This was done to remove the risks and problems that the kings would encounter during the human-led conflicts, which were associated with the idea of presenting large sacrifices to the gods. It was the duty of the person who took the king's place temporarily to save his life by removing these threats and adversaries.

In war rituals, by symbolizing real opponents while hiding their humanity, the employment of substitutes serves to sanitize violence against actual enemies. The opponent is objectified, rendered helpless, and subjected to violence in the replacement procedures and other war rites. When war rituals use substitutes, they normalize behavior that would otherwise be viewed as severe and portray an idealized view of combat that obscures the messy aspects of the violence connected to conflict. Since the public only sees symbolic violence, the detrimental impacts of war are concealed from them.

The safety of the realm is intimately tied to the well-being of the king. The divinities cannot favor both the king and his rival. Eventually, they determine the destiny of one at the expense of the other. In order to guarantee their benevolence, the expert's proper rituals, involving prayers to soothe their hearts, purification, and sacrifices, need to be performed to persuade them. Evil needs to be contained and neutralized through a performative act involving a slaughtered pig that ritually brings about this reality by being sent away from the royal person and the land he rules.

The practice and intensification of violence are made possible by socialization processes in each of the rituals covered above. To portray the enemy, substitutes are employed. The opponent is dehumanized since they are often objects or animals. Procedures that foresee the violence that is anticipated during war involve these substitutes. When it comes to respectable, well-known authority figures, this social modeling works particularly well. It becomes simpler to use violence in the future as a result of desensitization and the normalization of behavior that would otherwise be considered harmful due to practice and repetition.

The three war rituals that use replacements are marked by and accompanied by violence. By displaying royal might against the enemy and defending the Mesopotamian king from injury, these rites are both offensive and preventive. They convey that the king's power is both effective and extensive, and that the gods look after him. On the other hand, the enemy is presented as helpless and easily vanquished. For the king's men, the brutality toward the substitutes fosters trust and sets an example of proper conduct. The monarch and his army's aggression were justified by these ceremonies, which presented their conflict with the adversary as a defensive. By demonstrating the effective use of violence against the substitutions, they made strong claims that the enemy could and would be vanquished, confirming the king's righteousness, frightening the enemy, and boosting the confidence of his subjects.

Ethics Committee Approval: Ethics committee approval is not required.
Peer-review: Externally peer-reviewed.
Conflict of Interest: The author has no conflicts of interest to declare.
Financial Disclosure: The author declared that this study has no financial support.

References

Ataç, M. A. (2010). *The Mythology of Kingship in Neo-Assyrian Art.* Cambridge University Press.
Bahrani, Z. (2003). *The Graven Image*. University of Pennsylvania Press.
Bahrani, Z. (2008). *Rituals of War: The Body and Violence in Mesopotamia.* Zone Books.
Bell, C. (2009). *Ritual Theory, Ritual Practice*. Oxford University Press.
Butler S. A. L. (2017). *Mesopotamian Conceptions of Dream and Dream Rituals*. University College London, PhD Thesis.
CAD (N), (2008). *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*. John A. Brinkman (Eds.), The Oriental Institute.
CAD (Q), (1982). *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*. John A. Brinkman (Eds.), The Oriental Institute.
Caplice, R. (1974). *The Akkadian namburbu Texts: An introducton.* Undana Publications.

Çeçen, S., Gökçek, L. G. & Akyüz, F. (2020). Marqasi'den Namburbi Ritüeline Ait Bir Tablet: Nisan Ayında Görülen Yılanın Uğursuzluğu. *ArAn*, 14(2), 157-175.

Dilek, Y. & Turgut, M. (2019). *To Create Sacred Settlements Using "Flour" and "Reed" in Ancient Mesopotamian Religion.* 2nd International Congress of Human Studies (p. 121-132). Ankara.

Ebeling, E. (1949). Beschwörungen gegen den Feind und den bösen Blick aus dem Zweistromlande. *Archiv Orientální,* 17 (1), 173-211.

Frazer, J. G. (1900). *The Golden Bough: A Study of Magic and Religion.* Macmillan and Co. Ltd.

Galter, H. D. (1998). Book review of B. Oded, War, Peace, and Empire: Justifications for War in Assyrian Royal Inscriptions. *JAOS,* 118 (1), 89-91.

Galter, H. D. (2022). *Warrior Kings: The Changing Facets of Heroic Kingship in Assyria*. J. Bach, S. Fink (Eds.), The King as a Nodal Point of Neo-Assyrian Identity (p. 107-129). Zaphon.

Gennep A. V. (1975). *The Rites of Passage*, The University of Chicago Press.

Gurney, O. R. (1935). Babylonian Prophylactic Figures and their Rituals. *Annals of Archaeology and Anthropology,* 22, 31–96.

Karlson, M. (2022). *The Assyrian King and His Enemies According to the Verb Saḫāpu in Assyrian Royal Inscriptions.* J. Bach, S. Fink (Eds.), The King as a Nodal Point of Neo-Assyrian Identity (p. 129–161). Zaphon.

Köroğlu, K. (2018). *Anadolu'daki Yeni Asur Dönemi Stelleri ve Kaya Kabartmaları.* K. Köroğlu, S.F. Adalı (Eds.) Assurlular: Dicle'den Toroslar'a Tanrı Assur'un Krallığı (p.162-208). Yapı Kredi Yayınları.

Lambert, W. G. (1958). A Part of the Ritual for the Substitute King. *Archiv für Orientforschung*, 109-112.

Lang, M. (2020). *War and Ritual in Mesopotamia and the Old Testament Societies at War*. Proceedings of the 10th Symposium of the Melammu (p. 229–249). Kassel.

Levtow, N. (2014). *Monumental Inscriptions and the Ritual Representation of War.* B. Kelle, F. R. Ames, J. L. Wright (Eds.). Warfare, Ritual, and Symbol in Biblical and Modern Contexts (p.25–46). Ancient Israel and its Literature.

Lincoln, B. (2012). *Gods and Demons, Priests and Scholars: Critical Explorations in the History of Religions.* University of Chicago Press.

Livingstone, A. (1989). *Court Poetry and Literary Miscellanea*. SAA 3. Helsinki.

Melville, S. C. (2016). The Role of Rituals in Warfare during the Neo-Assyrian Period. *Religion Compass*, 10 (9), 219–229.

Morandi, D. (1988). Stele e statue reali assire: diffusione e implicazione ideologiche. *Mesopotamia.* 23, 105–56.

Morris, B. (1987). *Anthropological Studies of Religion.* Cambridge University Press,

Mutlu, S. A. (2014). Eski Mezopotamya'da Beddua ve Felaketlerden Korunma Ritüelleri. *Gümüşhane Üniversitesi Sosyal Bilimler Elektronik Dergisi*, 9, 278-293.

Oppenheim, A. L. (1977). *Ancient Mesopotamia- Portrait of Dead Civilization.* The University of Chicago Press.

Pekşen, O. (2016). Eski Mezopotamya'daki Savaşlarda Tanrıların Rolü. *History Studies,* 8 (2), 55–68.

Pekşen, O. & Topaloğlu, Y. (2024). A Theocratic Approach to Governance in Ancient Times: Assyrians. *Journal of Academic Research in Religious Sciences,* 24 (1), 09-36.

Radner, K. (2018). *Asur Kenti ve Asur Krallığı Tarihine Genel Bakış.* K. Köroğlu, S.F. Adalı (Eds.), Assurlular: Dicle'den Toroslar'a Tanrı Assur'un Krallığı (p.2-23). Yapı Kredi Yayınları.

Riva, R. D. (2020). *Introduction: War and Ritual" Societies at War.* Proceedings of the 10th Symposium of the Melammu (p. 219–228). Kassel.

Rochberg, F. (2004). *The Heavenly Writing: Divination, Horoscopy, and Astronomy in Mesopotamian Culture*. Cambridge University Press.

Schwerner D. (2007). Witchcraft and War: The Ritual Fragment Ki 1904-10-9, 18 (BM 98989). *Iraq* 69, 29–42.

Soohoo, A. P. (2019). *Violence against the Anamy in Mesopotamian Myth, Ritual and History.* Institute for the Study of the Ancient World New York University, PhD Thesis, New York.

Tambiah S. J. (1979). A Performative Approach to Ritual. *Proceedings of the British Academy*, 65, 113-169.

Verderame, L. (2013). Means of Substitution. The Use of Figurines, Animals, and Human Beings as Substitutes in Assyrian Rituals. *Rivista Studi Orientali Supplemento,* 2, 301-323.

Verderame, L. (2020). *The Substitute King (šar pūḫi): an Assyrian ritual of the first millennium.* J.E. Braarvig, V. Sadovski (Eds.), Ritual Texts and Contexts Philology, Pragmatics and Cultural History (p.195-211), The Norwegian Institute of Philology and Hermes Academic Publishing.

Weippert, M. (1972). Heiliger Krieg in Israel und Assyrien. *ZAW* 84, 460-493.

Winter, I. J. (1992). Idols of the King: Royal Images as Recipients of Ritual Action in Ancient Mesopotamia. *Journal of Ritual Studies,* 6 (1), 13–42.

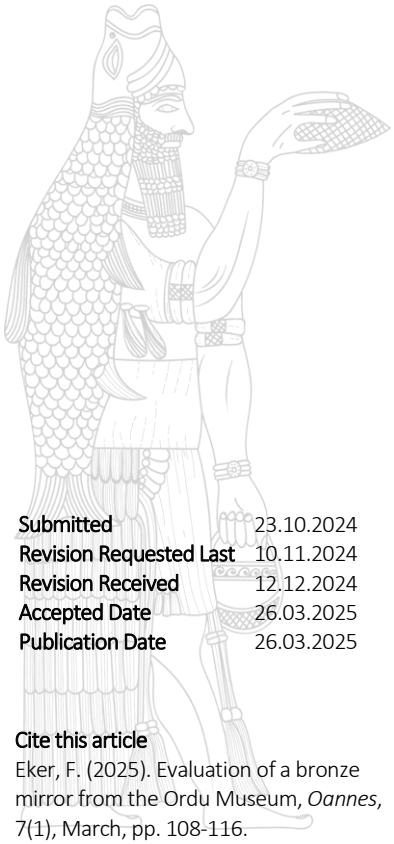
OANNES
2025, 7(1) March

Research Article DOI: 10.33469/oannes.1572306

Evaluation of a Bronze Mirror from the Ordu Museum

Fevziye EKER
Corresponding Author

Department of Art History, Ordu University, Faculty of Arts and Sciences, Ordu, Türkiye.
fevziyeeker@odu.edu.tr



Submitted	23.10.2024
Revision Requested Last	10.11.2024
Revision Received	12.12.2024
Accepted Date	26.03.2025
Publication Date	26.03.2025

Cite this article
Eker, F. (2025). Evaluation of a bronze mirror from the Ordu Museum, *Oannes*, 7(1), March, pp. 108-116.

Abstract

The mirror is the reflection of the truth... It is lie-free... It is mesmerizing...

It is the most beautiful object that does not know what a lie is and reflects what falls on it with all its reality. Human beings, who have always succumbed to their sense of curiosity, first used the water surface with the effort to see their reflection from the early ages and then made mirrors by polishing materials such as obsidian and bronze. Over time, with the discovery and development of glass, they fulfilled their curiosity to see themselves by making mirrors with glazed backs. Mirrors, objects that were not easily accessible to everyone in ancient times, were used by elite people. The fact that mirrors are commonly found as grave finds, as well as being widely embroidered on tomb steles and vases, suggests that mirrors are sacred objects. Mirrors, which are generally an indispensable cosmetic item for women in every period, especially with their ornament and beauty reflection, have also found a symbolic place in myths, history, culture, and literature.

This study will analyze the use, development, and types of mirrors in Antiquity with the bronze mirror preserved in the Ordu Museum. The mirror in the Ordu Museum, which was transferred from the Adana Museum, is a unique artifact, and analogy was used as a dating method. Since the mirrors made of bronze were used for a wide range of dates until the Byzantine period, it was impossible to give a clear date. However, as a similar example, grave finds, which we can generally give short interval dates, were taken as a basis. With the application of this method, we can say that our artifact bears the characteristics of bronze mirrors used in the 5th-4th century BC.

Keywords: *Antiquity, Ordu Museum, Mirror, Beauty, Woman, Reflection.*

Genişletilmiş Özet

İnsanların neredeyse varlıklarından itibaren kendilerini görmemerakını yenmek için kullandıkları kişisel eşyaları arasında önemli bir yeri olan ayna; nesnelerin birebir görüntüsünü yansıtan, arkası sırlı eşyalardır. İnsanların somut olarak dikkatini çektiği gibi simgesel olarak da aynalar edebiyat, kültür, tarih, mitoloji gibi alanlarda da kendine yer bulmuştur. Insanoğlu ilk olarak su yüzeylerini ayna olarak kullanılmış; sonrasında madeni eşyaları parlatıp cilalayarak ayna özelliğini vermişlerdir (Saltuk, 2010). Antik çağdan bu yana kadınlığın simgesi kabul edilen aynaların ilk örnekleri; Çatalhöyük'ün VIB ve V. tabakalarında bulunan ve kutsal alan olarak nitelendirilen mekânlardaki obsidyen aynalardır ve bu aynalar MÖ 6000-5900 yıları arasına tarihlenen kadın mezarlarında ortaya çıkartılmıştır (Çelikbaş, 2016 & Saltuk, 2010). Daha sonra metalin parlatılması ile oluşturulan aynaların kullanımını Mısır Erken Hanedanlar döneminde görmekteyiz. Anadolu ve Akdeniz'de ise Bronz Çağ'da yaygın bir mezar hediyesi olarak karşımıza çıkmıştır (Şahin, 2017). Arkeolojik çalışmalar sonrasında görülmektedir ki, aynalar genellikle mezarlardan özellikle de kadın mezarlarından ortaya çıkarılmaktadır. Bu konu ile ilgili olarak antik dönem duvar resimleri, mezar stelleri ve vazolar üzerindeki kadının elinde betimlenmiş aynalar da kadınların yaygın olarak kullandıkları eşya olduğunu doğrular niteliktedir. Yapılan arkeolojik çalışmalar sonucunda anlıyoruz ki aynalar hem bir süs eşyası hem mezar hediyesi hem de dini ritüellerde kullanılan bir eşya olmuştur. Altın, gümüş veya bronz gibi metallerin parlatılması ile yapılan aynalar, sırlı cam aynaların keşfedilmesine kadar uzun süre kullanılmıştır. Metal veya sırlı cam ile yapılan aynalar yapım teknikleri bakımından farklılıklar gösterse de işlev olarak her daim önemini korumuştur.

Ortaya çıktığı andan günümüze değin aynalar kadınların simgesi durumunda olmuştur. Mısır uygarlıklarında özellikle ölümden sonra yaşamın olduğu inancı ile mezarlara kişisel eşya olarak aynaların konulduğu bilinmektedir. Mısır gibi farklı birçok uygarlıkta da kişisel kullanım eşyaları içerisinde olan dinsel törenlerde kullanılan simgesel bir ürün olarak da önemli bir yere sahip olduğu yapılan araştırmalar sonucunda ortaya çıkarılmıştır. Erken dönemlerde zenginlik ve ihtişamın da göstergesi olan aynalar, maliyeti çok yüksek olduğu için maddi geliri düşük, sıradan insanların satın alıp kullanabileceği bir eşya değildi. Ayna, özellikle süsü ve güzelliği gösterdiğinden kadınların kullandığı bir eşya olarak karşımıza çıkmaktadır. Özellikle arkeolojik kazılarda ortaya çıkarılan kadın mezarlarına ölü hediyesi olarak aynaların konulması, yine vazolar üzerindeki betimler, duvar resimleri, steller vb. üzerine işlenen tasvirlerde aynanın genellikle kadınların ellerinde betimlenmesi kadınların simgesi olma durumunu netleştirmektedir. Mısır uygarlığının değişik metaller kullanarak yaptığı madeni aynaların ardından Sümerler ayna yapımında ilk defa camı kullanmışlardır (Pendergrast, 2019).

Ordu Müzesi'nde korunan ayna, Adana Müzesi'nden devir yolu ile müzeye kazandırılmıştır. 44 envanter numarası ile kayıt altına alınmış olan ayna bronz malzemeden üretilmiş, dairesel formlu, saplı aynalar grubuna girmektedir. Açık yeşil bir patina ile kaplı olan ayna döküm tekniği ile yapılmıştır ve disk şeklindedir. 13,2 cm çapa sahip olan disk şekilli aynanın toplam yüksekliği 17,91 cm. dir. Döküm tekniği ile yapılmış olan ayna dikdörtgen kesitli üçgen formlu sapa sahiptir. Sona doğru daralan metal sapların daha rahat tutulabilmesi için ahşap veya fildişinden yapılmış saplara geçirilmekteydi (Albenda, 1985). Ordu Müzesi örneğinde de sona doğru daralan bronz kısma muhtemelen ahşaptan veya fildişinden yapılmış olan süslü sap eklenerek sonlandırılmış olmalıydı. Ordu Müzesi örneği de bu şekilde ahşap veya fildişi bir sap desteği ile kullanılmış olmalıydı. Yansıyıcı kısmın çevresi kazıma tekniğinde tek yivle sınırlandırılmış, süslemesiz, saplı ayna olarak tanımlamak da doğru olacaktır. Richter (1915), bu tip aynaları "Cyprus (Kıbrıs) Tipi" aynalar olarak adlandırırken, Gjerstad (1935) de, "Cyprus Tipi" aynalar olarak tanımlamakta ve benzer formdaki aynaları "Cypro-Classical I ve II" grubu altında inceleyerek, MÖ 450-400 arasına tarihlendirmektedir.

Yapılan araştırmalar bu tip aynaların MÖ 5. yüzyıldan Orta Çağ'a kadar yaygın bir şekilde kullanıldığı anlaşılmaktadır. Kaynaklarda disk biçimli bezemesiz aynaların Hellenistik ve Roma Dönemi'nde kullanımına devam edildiği bilgisi yer almaktadır (Richter, 1979). Ordu Müzesi örneği incelendiğinde; çap ölçüsü, hafif dış bükey olması, ön yüzün kazıma dairesel bir yiv ile sınırlandırılması ve sap biçimi gibi özelikleri yönünden benzerleri ile karşılaştırıldığında MÖ 5.-4. yüzyıla tarihlemek doğru olacaktır (Lloyd-Morgan, 1981; Tosun, 2001; Tavukçu, 2006; Masyakin, 2009; Çetin, 2015; Çelikbaş, 2016; Şahin, 2018).

Introduction

Mirrors, which have held a significant place among personal belongings used by people to satisfy their curiosity since ancient times, are reflective objects with glazed backs that display exact images. Beyond their practical use, mirrors have also served as symbols in literature, culture, history, and mythology, capturing human attention both tangibly and symbolically. Initially, humanity utilized water surfaces as mirrors, followed by polished metal objects, which were later adapted to function as mirrors (Saltuk, 2010). The earliest known mirrors considered symbols of femininity since ancient times, are obsidian mirrors discovered in the VI B and V layers of Çatalhöyük and sacred areas, particularly in women's graves dated between 6000 and 5900 BCE (Enoch, 2006; Saltuk, 2010 & Çelikbaş, 2016). Mirrors crafted from polished metal emerged during Egypt's Early Dynastic Period and were commonly found as grave offerings during the Bronze Age in Anatolia and the Mediterranean (Şahin, 2017). Archaeological findings reveal that mirrors were frequently unearthed from graves, especially those of women. This is further confirmed by ancient wall paintings, tomb steles, and vases that depict women holding mirrors, indicating their widespread use by women. Archaeological evidence suggests that mirrors served not only as personal ornaments and grave offerings but also played a role in religious rituals. Mirrors made from polished metals such as gold, silver, or bronze remained in use until the discovery of glass-backed mirrors. Although the production techniques of metal and glass mirrors differed, their functional significance has persisted throughout history.

Fig. 1. Çatalhöyük, Early 6th millennium BC, Museum of Anatolian Civilisations (Enoch, 2006, pp. 775–781)

Definition and Development of the "Mirror"

Mirrors, referred to as enoptron in Greek and speculum in Latin, are depicted in various forms of art, including steles, vases, and wall paintings (Kabaağaç & Alova, 1995). According to the Dictionary of Turkish Language Association, a mirror is defined as "polished and glazed glass that reflects light and provides an image of objects," with its Persian equivalent being "ayine ." Meydan Larousse defines a mirror as "a piece of polished metal or a glass plate with a glazed back that reflects an image and is typically framed". Another definition is "glass that reflects light rays and is polished and glazed with metals such as tin, silver, or aluminum".

Since their earliest appearance, mirrors have symbolized femininity. They were frequently placed in graves as personal belongings, particularly in Egyptian civilizations, reflecting the belief in an afterlife. Research has shown that mirrors played a significant symbolic role in religious ceremonies across various civilizations, including Egypt. In early periods, mirrors were also indicators of wealth and status, as their production was expensive, making them inaccessible to people of lower socioeconomic status. Mirrors, often associated with women due to their function in reflecting beauty and adornment, have long been used as symbols of femininity. Archaeological excavations frequently uncover mirrors as grave offerings in women's tombs, and depictions of mirrors in the hands of women on vases, wall paintings, and steles further underscore their connection to womanhood (Prohaszka, 1995). After the Egyptians crafted metal mirrors using various metals, the Sumerians were the first to introduce glass into mirror production (Pendergrast, 2003).

Humans initially used reflections on water surfaces as primitive mirrors. This reflective quality of water can be considered the prototype of the modern mirror (İşler, 2004). Before the discovery of artificial glass, naturally

occurring materials with glass-like properties, such as obsidian, also served as mirrors. Obsidian, known for its transparent or semi-transparent appearance, dark coloration, fragility, and ease of shaping, is the most well-known of these materials. The earliest examples of obsidian mirrors were discovered in the VI B and V layers of Çatalhöyük, which is a site considered sacred, and in women's graves dating back to 6000-5900 BCE (Albenda, 1985; Enoch, 2006; Saltuk, 2010; Çelikbaş, 2016; Sümer, 2017 & Şahin, 2018). Archaeological excavations in the southern cities of Mesopotamia have unearthed metal artifacts resembling mirrors, which date to the late 4th millennium to early 3rd millennium BCE. A notable example is a short-handled disc-shaped mirror found among the Jamdat Nasr findings from around 3000 BCE, providing insight into the use of mirrors during that period (Albenda, 1985). Mirrors dating back to the 2nd millennium BCE have also been discovered in cities of the Western Mediterranean, particularly in female graves in Syria, and one of the earliest examples from this era is a handled bronze mirror (Albenda, 1985). A Hittite tablet from the late 2nd millennium BCE mentions that the buckle and mirror were symbolic of femininity. Additional evidence of mirror use by women is found in a relief from southern Syria, dating to the 1st millennium BCE, currently housed in the British Museum, which depicts a woman standing with a mirror in her hand. Similarly, a relief from Maraş (Orthmann, 1971), dating to the same period, shows a woman holding a baby in one hand and a mirror in the other. Among the notable examples of mirrors from the 8th century BCE onward is a bronze, disc-shaped, undecorated mirror with a sharp edge and a handle, unearthed in Khorsabad, an Assyrian settlement in Iraq (Albenda, 1985). The mirrors from the 1st millennium BCE generally had handles and frames made from various metals. A bronze mirror discovered in a tomb dating to the 6th century BCE during the Gordion excavations is among the significant bronze finds for Anatolia (Albenda,1985).

In the Greek and Roman worlds, mirrors were among the most popular personal items. In ancient Greece, women commonly used bronze discs as mirrors, often decorating the handles with representations of animals, nude young women, or flat relief figures. While the mirrors produced during the 5th–4th centuries BCE resemble those of the late Archaic period, a significant shift occurred in the second half of the 5th century BCE and the 4th century BCE. Although the mirrors produced in the 5th-4th centuries BC resemble the mirrors of the late archaic period, in the second half of the 5th century BC and in the 4th century BC, mirrors began to be produced without handles. Instead of a handle, a cover attached to the mirror with a hinge was added to the mirror, and these mirrors started to be used as a new type of mirror. These covered mirrors became a distinctive feature of the period, with engravings often adorning the inside of the cover or the back of the mirror. Another type of mirror prevalent during this era was the disc-shaped mirror, which could be either decorated or plain. The front surface of these mirrors was polished to provide a clear reflection. These flat bronze disc mirrors continued to be widely used throughout the Hellenistic and Roman periods (Gürler, 2004). In the Roman period, both the use and variety of mirrors expanded significantly. Mirrors from this era, typically made of bronze, included several types: disc-shaped mirrors, rectangular mirrors, covered mirrors, handled mirrors, hand mirrors, and even glass mirrors. Covered and handled mirrors, in particular, saw increased usage during the Roman period. Additionally, long rectangular mirrors were also in use during this time.

In later periods, while metal mirrors remained in use, the first glass mirrors were introduced by the Sumerians. However, as glass glazing techniques had not yet been developed, the Sumerians were unable to produce flat, thin, and shiny glass surfaces. Instead, they crafted small glass mirrors from the glossy surface of the bluish-green glass, roughly the size of the base of a small vessel (Melchior-Bonnet, 2007 & Sivri - Angın, 2021).

Glass, due to its natural shine and reflective properties, became an ideal material for mirror production. The Sumerians framed their glass mirrors with different metals to enhance their durability and aesthetic appeal. Early metal mirrors were favored not only for their durability—being resistant to rust—but also for their superior reflective qualities. In the 2nd century CE, the Romans began producing glass mirrors using black glass, which were used alongside metal mirrors throughout the Middle Ages (DİA,1991).

The first glazed mirrors, appearing in the 13th century, were created by placing silver or lead plates behind glass to improve its reflective properties. In the 16th century, Venetian artisans in Murano developed a high-quality mirror that provided a flawless reflection, yet these mirrors were considered expensive due to the specialized alloy used in their production. Later, these mirrors, renowned for their craftsmanship, became globally sought-after from the 17th century onward and continued to be traded internationally until the 20th century (DİA, 1991).

Circular (Disc-Shaped) Mirrors

This type of mirror consists of a circular, thin, disc-shaped reflective surface, often attached to a stem, which may be either stemless or connected by a triple leaf-shaped joint (Işın, 2007). The stems are frequently embellished with nodes in various shapes (Vessberg – Westholm, 1956; Şahin, 2018). These mirrors, which have diameters ranging from 5 to 20 cm, can have flat, concave, or convex surfaces and are produced using casting techniques, with slightly inward-bent edges. The reflective quality was achieved by polishing the front surface or by coating it with metals such as lead or silver. The frames of these mirrors exhibit different decorative approaches. Some feature a circular groove around the edge that frames the reflective surface, while others are adorned with radial decorations in various shapes (Roth-Rubi, 1977; Taylor, 2008).

Another variant, known as perforated mirrors, features holes around the perimeter of the disc, likely designed for both decorative purposes and practical use, such as holding pins. These perforated designs became particularly common during the Roman period (Gürler, 2004; Çelikbaş, 2020).

Circular-shaped handled mirrors have been produced since the Archaic period. While some mirrors have simple handles, others feature more elaborate decorative elements. These embellishments vary by period, with early examples depicting nude human figures, and later examples featuring figures dressed in contemporary attire. One of the earliest known examples is a mirror handle discovered in Thasos, dating to the late 6th century BCE. In addition to figurative decorations, some mirrors have plain, straight handles, as seen in other examples. This type of mirror is frequently depicted in grave steles or vase illustrations, where the disc is usually proportionally larger than the handle. Mirrors with a simpler, more austere appearance became common during the 5th and 4th centuries BCE. In these examples, the mirror disc was inserted into an arc-shaped slot in the handle and secured by casting lead (Çelikbaş, 2020).

In the 5th century BCE, circular mirrors were commonly transported in wooden boxes, with one lid featuring a circular cutout sized to fit the mirror (Başaran & Kasapoğlu, 2013). Figurative decoration on these mirrors was rare, with the reverse side often adorned with concentric circles. The reflective front surface was typically embellished with a limiting groove or ray-shaped designs (Taylor, 2008; Şahin, 2018). Additionally, some mirrors were entirely flat and undecorated on both sides, while others had perforations around the perimeter. These circular mirrors were widely used from the 5th century BCE through the Byzantine period, offering a broad chronological range. However, more precise dating can be determined through contextual evidence. For example, a plain circular mirror discovered as a grave offering at the Patara Tepecik Necropolis was dated to around 400 BCE based on associated ceramic finds (Şahin, 2018). Similarly, a bronze circular mirror unearthed during excavations at Syria-Deve Mound, now housed in the British Museum, has been dated to the 4th century BCE (Albenda, 1985). Another example is a mirror found in a tomb at Parion, which was also dated to the 4th century BCE based on its archaeological context (Çelikbaş, 2020). Research and archaeological discoveries indicate that this type of mirror was extensively used from the 5th century BCE until the Byzantine period, reflecting its sustained popularity over centuries (Gürler, 2004).

Lid Mirrors

Lid mirrors, which emerged as a distinct type in the latter half of the 5th century BCE, are composed of two closely aligned circular components connected by a hinge system. These mirrors, often adorned with various decorative elements, sometimes feature figurative motifs on the outer surface of the lid. Although rare, there are examples from the 5th-4th centuries BCE of mirrors decorated on both sides. Relief decorations, often depicting female busts in various postures, as well as mythological scenes, were commonly employed (Şahin, 2018). Hellenistic period mirrors continue this tradition, with relief scenes frequently applied to the outer surface of the lid. Additionally, the reverse side of the lid was often embellished with concentric circles, created using engraving techniques.

Lid mirrors, consisting of two pieces with slightly different diameters, were designed to overlap, allowing for dual-sided use (Lloyd & Morgan, 1981; Taylor, 2008). In both covers, concentric circles, produced on a lathe, were utilized as decorative elements. The reflective surfaces were either coated with lead or silver or polished to enhance their reflective properties. Attachments placed on the exterior of the mirrors served as carrying handles. These lid mirrors were extensively used during the Hellenistic period, and smaller, shallower, and thin-walled versions continued to be prevalent during the Roman period (Hayes, 1984; Şahin, 2018).

To provide greater clarity in understanding these types of mirrors, Hayes (1984), classified the various components. He identified the undecorated side as the "reflective face" and the side featuring concentric grooves as the "outer face." He further defined the piece with a vertical lip on the reflective face as the "cover," and the piece with a vertical lip on the side decorated with concentric grooves as the "lower piece." In addition to similar examples (Hayes, 1984), preserved at the Royal Ontario Museum, which date to the Late Hellenistic – Early Roman Imperial Period, other parallels include a mirror from Parion in Anatolia, dated to the second half of the 1st century AD, and another found among grave goods at Patara, dated to the late 1st century BC – early 1st century AD. This type of covered mirror, for which numerous examples can be cited, was in frequent use from the Hellenistic to the Early Roman period (Kasapoğlu, 2012; Başaran & Kasapoğlu, 2013).

Angular (Square-Form) Mirrors

Angular mirrors, characterized by their square or rectangular shapes, were not widely used in antiquity. Their reflective qualities were enhanced by polishing the front surface or by utilizing shiny metals such as lead or silver. In contrast to covered mirrors, the back surfaces of angular mirrors were often left untreated (Işkan & Çevik, 2000). There is limited information regarding the origins of angular mirrors, which emerged as a new type during the Hellenistic period (Lloyd & Morgan, 1977). Examples include an angular mirror from Metropolis, dated to the mid-2nd century BC, and another from Myrina, dated to the early 2nd century BC. (Aybek, Gülbay & Durak, 2016; Treister, 1994).

These artifacts suggest that angular, or square-shaped, mirrors represent a novel form introduced during the Hellenistic period. Additionally, a depiction of a similar mirror on a wall painting from a villa in Pompeii, dated to the 1st century BC, indicates that these mirrors were also in use during the reign of Emperor Augustus. Three angular mirrors, unearthed as part of a grave find in Patara, have been dated between the 2nd century BC, the period when this type of mirror first appeared in Anatolia, and the early 1st century AD, which marks the latest date associated with the grave (Şahin, 2018). Similar examples discovered during excavations in Romania have been dated to the 2nd century AD. The example housed in the Tokat Museum, which lacks decorative elements, is dated to the 1st century AD (Çelikbaş, 2020). Research indicates that the production of angular mirrors, though already rare, diminished significantly after the 1st century AD, with a notable decline by the 2nd century AD (Lloyd & Morgan, 1977).

Bronze Mirror at the Ordu Museum

In antiquity, mirrors were commonly used as cosmetic items by women. Unlike modern mirrors, which use glass as the reflective surface, ancient mirrors were made by polishing metals until the Roman period, when glass became a more widespread material for this purpose. Surviving early mirrors have generally lost their reflective properties as a result of the patina formed due to long-term burial. Bronze was the primary material used for mirrors in the early periods, although examples of gold or silver plating are also known. The bronze mirror preserved in the Ordu Museum was transferred from the Adana Museum, although its provenance is unclear. Due to the lack of contextual information, analogies have been used to estimate its date and origin. The mirror, circular in shape and equipped with a handle, was cast in bronze and is covered with a light green patina. It measures 17,91 cm in total height, with a disk diameter of 13.2 cm. The mirror has a rectangular-sectioned, triangular-shaped handle, and at the point where the handle meets the mirror, the socket appears worn. However, it likely featured volutes, and the handle socket was joined using lead. To facilitate handling, the metal grip, which tapers towards the end, was likely supplemented by wooden or ivory attachments (Albenda, 1985). It is probable that the Ordu Museum's mirror was similarly equipped with such a handle. The mirror itself is undecorated, with a single groove around its reflective surface. Richter (1915) referred to these types of mirrors as "Cyprus Type" mirrors, while Gjerstad (1935), classified similar Cypriot examples under the "Cypro-Classical I and II" group, dating them to between 450-400 BCE. Given that this artifact was likely unearthed in or near Adana, this classification becomes more relevant.

Chavane's typology of mirrors from the D'Amathonte Necropolis provides further insight, as similar examples belonging to the "Circular Plain Mirrors" group were in use from the 5th century BCE through the Byzantine period (Chavane, 1990). While this provides a broad date range, it is crucial to compare such mirrors with grave or contextual findings to arrive at a more precise dating. Since the Ordu Museum's mirror was transferred from

Adana, comparing it to similar Mediterranean-region examples and focusing on whether they were found in graves or other contexts could provide a more accurate date. A comparable mirror from a woman's grave in the Patara-Tepecik Necropolis, which shares the same circular and undecorated form, was dated to 400 BCE based on associated ceramics (Şahin, 2018). Another example from the Tokat Museum, as described by Çelikbaş (2020), is dated to the 5th-4th centuries BCE. Additionally, two mirrors from the 16th century that share similar characteristics with the Ordu Museum piece further underscore the consistency of this form over time.

Similarly, a comparable artifact identified as a disk-shaped flat mirror, unearthed in the Parion Necropolis, has been dated to the 4th century BCE (Çelikbaş, 2016). Bronze, circular-shaped, undecorated mirrors discovered during the Syria-Deve Mound excavations, now preserved in the British Museum and the Isparta Museum, are also similar to the Ordu Museum piece and have likewise been dated to the 4th century BCE (Albenda, 1985; Çetin, 2015). Additional examples from the same period and of similar form have been uncovered in the Dardanos Tumulus, Kelenderis, Adrasan, Lapseki, and Laodikeia (Nurten & Mikhail, 2003; Zoroğlu, 1992; Tosun, 2011; Körpe, 1998; Şimşek, 2011). According to Gürler, this type of disk-shaped, undecorated mirror was widely used from the 4th century BCE through the Byzantine period (Gürler, 2004). A parallel example from Samothrace, similar to the Ordu Museum's disk-shaped, undecorated circular mirror, has been dated to approximately 25 CE (Dusenbery, 1998). Similar mirrors have also been found in contexts from the Flavian Period, confirming that this type was commonly used in the second half of the 1st century CE (Lloyd & Morgan, 1981). Another comparable circular bronze mirror, housed in the Edirne Museum (Baş, 2021), has been dated to the 1st century CE, while a similar example among the bronze artifacts in the Isparta Museum is attributed to the Roman period (Çetin, 2015). Recent research has uncovered an undecorated, disc-shaped mirror from the Hypogeum tomb in the Perre necropolis, which has been dated to the 1st-2nd centuries CE, based on the associated grave findings (Yağız & Doğan, 2023). Similarly, a disc-shaped mirror discovered among tomb finds from Tire-Uzgur Village has been dated to the 2nd-3rd centuries CE by Gürler (2021). Following the research and findings, it is understood that this type of mirror was widely used from the 5th century BC until the Middle Ages. Sources indicate that disc-shaped undecorated mirrors continued to be used in the Hellenistic and Roman Periods (Richter, 1979; Gürler, 2004). When the Ordu Museum specimen is analyzed, it is correct to date it to the 4th century BC when compared with its counterparts in terms of diameter, being slightly convex, the reflective face being bounded by an incised circular groove, and the shape of the handle.

Inventory of Artifacts

Item Name: Circular Shaped Mirror with Handle
Museum Inv. No.: 44
How the Artifact was Brought to the Museum – Date: Transferred from Adana Museum-1996
Dimensions: Diameter: 13,2 cm; Cor. Height: 17,91 cm; Wall: 0,5 cm
Material: Bronze
Technique: Casting
Description: Burnished reflective face limited by a single groove on the outside, rectangular section handle tapering towards the bottom, three-leafed joining addition to the mirror part of the thin handle, light green patina.
Similar Examples: Lloyd-Morgan, 1981, Group G; Riha 1986, p. 117 pl. 2, 8–13; Dusenbery 1998, p. 1033 Cat. No. S224-1; Tosun 2001, p. Fig.11; Tavukçu 2006, p. Cat. No: 18-19; Masyakin 2009, Fig. 5, 2; Çetin 2015, Fig. 4; Çelikbaş 2016, Cat. No: E1; Şahin 2018, Cat. No.: B20.
Date: 5th-4th Century BC

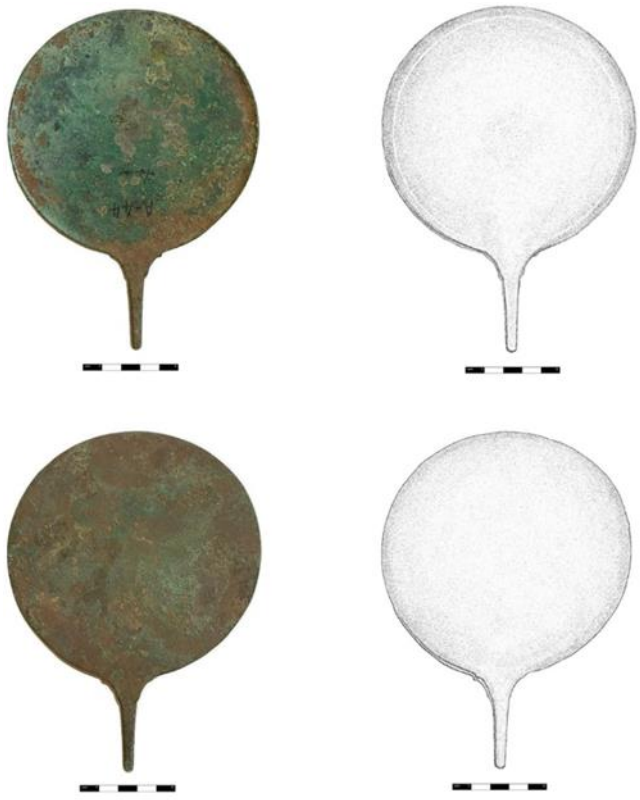


Fig. 2. Dimensional Drawing and Picture of the Mirror at Ordu Museum (Illust. R. Gören)

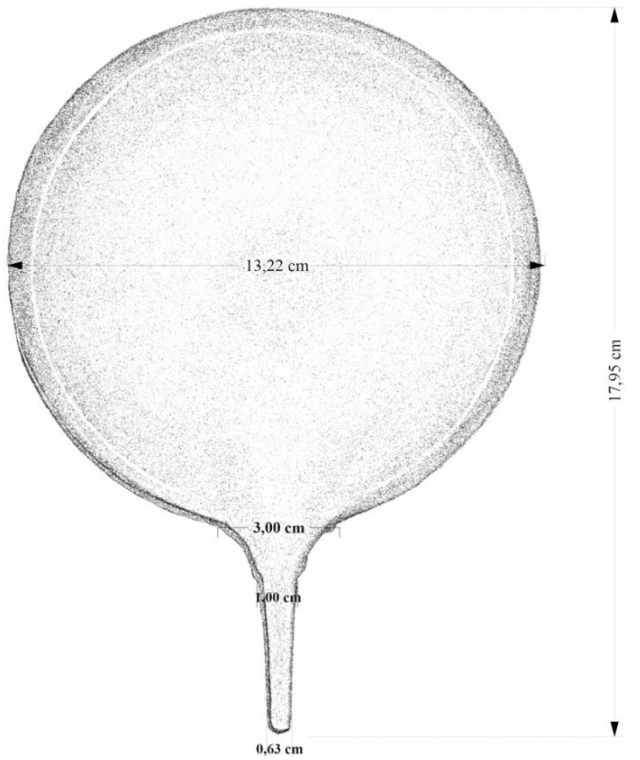


Fig. 3. Dimensional Drawing of the Mirror at Ordu Museum (Illust. R. Gören)

Ethics Committee Approval: Ethics committee approval is not required.
Peer-review: Externally peer-reviewed.
Conflict of Interest: The author has no conflicts of interest to declare.
Financial Disclosure: The author declared that this study has no financial support.

References

Albenda, P. (1985). Mirror in the ancient Near East. *Source Notes in the History of Arts*. *4*(2/3), 5–9.

Aybek, S., Gülbay, O. & Durak, E. (2016). Metropolis'ten bronz aletler, gereçler ve aksesuarlar. *Arkeoloji Dergisi.* 21, 141–168.

Aydın, Tavukçu, Z. (2006). *Parion Nekropolü 2005 Yılı Buluntuları* [Doctoral dissertation, Atatürk University].

Baş, D. (2021). Edirne arkeoloji müzesi'nden bir grup metal buluntu. *Masrop E-Dergi*. *15*(1), 5–40.

Başaran, C. & Kasapoğlu, H. (2013). Parion Kazısı Metal Buluntuları (pp. 126–140). P. Ayter – Ş. Demirci– A. M. Özer (Eds.). *III. ODTÜ Arkeometri Çalıştayı. Türkiye Arkeolojisinde Metal: Arkeolojik ve Arkeometrik Çalışmalar*. ODTÜ Yayıncılık.

Chavane, M. J. (1990). *La necropole d'amathonte tombes 110-385. 4. Les Petitts Objets*. École Française d'Athènes.

Çelikbaş, E. (2016). 2005-2014 *Parion Kazısı Metal (Bronz-Demir-Kurşun) Buluntuları*. [Doctoral dissertation, Atatürk University].

Çelikbaş, E. (2020). *Tokat Müzesi Bronz Eserleri*. Bilgin Kültür Sanat Yayınları.

Çetin, C. (2015). Isparta müzesi'nden bir grup bronz eser. *Pamukkale Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*. 20, 11-31

Gjerstad, E., Lindros, J., Sjöqvist, E. & Westholm, A. (1935). *The Swedish Cyprus expedition: Finds and results of the excavation in Cyprus 1927- 1931*. II. Victor Pettersons Bokindustriaktiebolag.

Enoch, M. J. (2006). History of mirrors dating back 8000 years. *Optometry and Vision Science*, *83*(10), 775–781.

Gürler, B. (2004). *Tire müzesi bronz eserleri*. Ege Yayınları.

Hayes, J (1984). *Greek, Roman and related metalware in the Royal Ontario Museum: a catalog*. Royal Ontario Museum.

Işın, G. (2007). *Patara terrakottaları. Hellenistik ve erken Roma dönemleri, Patara V.1*. Ege Yayınları.

İşkan, H. & Çevik, N. (2000). Patara 1998. *Kazı sonuçları toplantısı*. *21*(2). 91–104.

İşler, E. (2004). *Andre Gide'i Mitlerle Okumak*. Anı Yayıncılık.

Kasapoğlu, H. (2012). Metal eserler (pp. 165-170). C. Başaran (Ed.) *Antik Troas'ın parlayan kenti Parion 1997-2009 yılları yüzey araştırmaları, kazı ve restorasyon çalışmaları*, Ege Yayınları.

Körpe, R. (1998). 1996 Lâpseki kurtarma kazısı (pp. 171-194). *VIII. Müze Kurtarma Kazıları Semineri*, T.C. Kültür Bakanlığı, Anıtlar ve Müzeler Genel Müdürlüğü.

Lloyd-Morgan, G. (1981). *Description of the Collections in the Rijksmuseum G. M. Kam at Nijmegen. Vol. IX. The Mirrors, including a Description of the Roman Mirrors, found in the Netherlands, in other Dutch Museums: The Roman Mirrors*. Ministry of Culture.

Lloyd-Morgan, G. (1977). Mirrors in Roman Britain (pp. 231–252). J. Munby – M. Henig (Eds.). *Roman Life and Art in Britain II*, Bar Brit Ser 41.

Melchior-Bonnet, S. (2007). *Aynanın tarihi*. Dost Kitabevi.

Meydan Larousse, *Büyük Lugat ve Ansiklopedisi* II.

Orthmann, W. (1971). *Untersuchungen Zur Spathethitischen Kunst*. Rudolf Habelt Verlag.

Pendergrast, M. (2003). *Mirror mirror a history of the human love affair with reflection*. Basic Books.

Prohaszka, M. (1995). *Reflections from the dead. The metal finds from the pantanello necropolis at metaponto: A comprehensive study of grave goods from the 5th to the 3rd centuries BC… in Mediterranean archaeology.* 110. Coronet Books Inc.

Richter, G. M. A. (1915). *Greek, Etruscan and Roman bronzes*. The Gilliss Press.

Richter, G. M. A. (1979). *Yunan sanatı*, (trans.: B. Madra), Cem Yayınevi.

Roth-Rubi, K. (1977). Zur typologie römischer griffspiegel, actes des ıiies journées ınternationales consacrées à l'étude des bronzes romains: Bruxelles-Mariemont 27-29 mai 1974. *Bulletin Musées Royaux D'art Et D'historie*. *46*. 31–41.

Saltuk, S. (2010). *Geçmişten günümüze ayna: her alanda ve her anlamda*, Arkeoloji ve Sanat Yayınları.

Sevinç, N. & Treister M. Y. (2003). Metalwork from the Dardanos Tumulus. *Studia Troica*. *13*. 215-260.

Sivri, M. & Angın, Z. (2021). Dünya ve Türk Kültüründe Tarihi, Mitik ve Ekinsel Açıdan "Ayna"nın Yeri. *Folklor/Edebiyat Dergisi*. 27(1). 29-46. doi: https://doi.org/10.22559/folklor.1341

Sümer, N. (2017). Mitolojik ve dinsel bir sembol olarak ayna. *Uluslararası Sosyal Araştırmalar Dergi*si. *10*(2), 1367-1375. Doi: http://dx.doi.org/10.17719/jisr.2017.1986.

Şahin, F. (2018). Patara Metal Buluntuları (pp. 35-41). H. İşkan (Ed.). *Patara V.2*. Ege Yayınları.

Şimşek, C. (2011). *Laodikeia nekropolü (2004-2010 Yılları) katalog*. Ege Yayınları.

Taylor, R. (2008). *The moral mirror of Roman art*. Cambridge University Press.

Tosun, A. (2001). Adrasan-Çavuşköy Kurtarma Kazısı. *12. Müze Çalışmaları ve Kurtarma Kazıları Sempozyumu*. 51-62.

Treister, M. Y. (1996). *The Role of Metals in Ancient Greek History*. Brill.

Türkiye Diyanet Vakfı İslam Ansiklopedisi 1991.

Vessberg, O. & Westholm, A. (1956). Hellenistic and Roman periods in Cyprus, Sce 4.3.

Yağız, K. & Doğan, T. (2023). Perre Nekropolisi'nden Bir Hypogeum Mezar. *Arkeoloji Dergisi*. *XXXI*. 49-69.

Zoroğlu, L. (1992). Kelenderis 1991 Kazısı. *XIV. Kazı Sonuçları Toplantısı*. *2*. 165-180.

Ayna. (2023, May 26). https://sozluk.gov.tr/

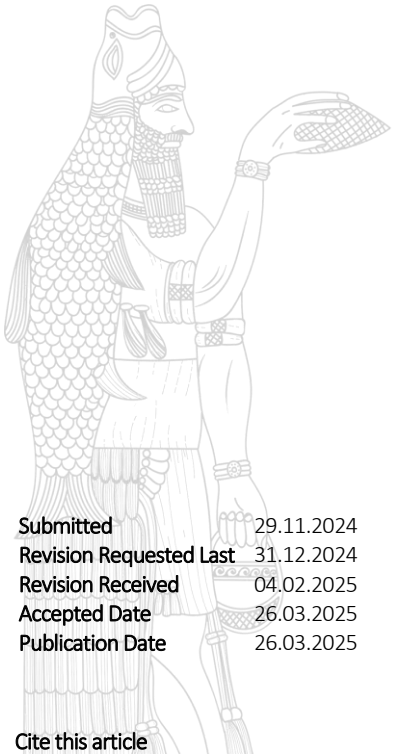
Ayna. (2023, November 29). https://islamansiklopedisi.org.tr/ayna

OANNES
2025, 7(1) March
Research Article DOI: 10.33469/oannes.1593287

Comparative Analysis of Two Battles: Assyrian's Waush and Roman's Ticinus

Murat KILIÇ
Corresponding Author

Department of History, Erzurum Technical University, Faculty Letters, Erzurum, Türkiye.
murat.kilic@erzurum.edu.tr



Abstract

Ancient Mesopotamia is important in history and is considered the cradle of civilizations. However, it is impossible to say that the scientific community recognizes the privilege of this region at some points. One of these important points is the strategies used by ancient Mesopotamia in warfare. So, this study addresses three main questions: First, how the Assyrians developed and implemented their strategy at the Battle of Waush; second, how Assyrian warfare can be compared to Roman and Carthaginian warfare and where the Assyrians' strategizing skills should be placed in the ancient world; and third, an attempt to create a Urartian perspective about Battle of Waush from the source material and comparison with the other battle. For this purpose, the study analyzes the Battle of Ticinus, which took place during the Second Punic War and is very similar in planning, fighting, and retreat, and compares it to the Battle of Waush. In addition, the leadership qualities of Sargon and Hannibal are discussed, and their bold initiatives and command skills are evaluated. In addition, the defeats of both battles and the strategies they planned to implement are carefully analyzed, thus providing an objective assessment of both battles in light of the available data.

Keywords: *Assyria, Battle, Carthage, Sargon, Rome.*

Submitted	29.11.2024
Revision Requested Last	31.12.2024
Revision Received	04.02.2025
Accepted Date	26.03.2025
Publication Date	26.03.2025

Cite this article
Kılıç, M. (2025). Comparative analysis of two battles: Assyrian's Waush and Roman's Ticinus, *Oannes*, 7(1), March, pp. 117-130.

Genişletilmiş Özet

Antik Mezopotamya, medeniyetlerin beşiği olarak adlandırılmıştır çünkü yazı, devletler, imparatorluklar ve dünya tarihini değiştiren bazı önemli gelişmeler bu bölgede ortaya çıkmıştır. Mezopotamya, özellikle Antik Çağ'da tarihin odak noktalarından biri olmuştur. Yakın Doğu, tarihte savaş yapabilen ilk devletlerin ortaya çıktığı bölge olması nedeniyle savaş ve strateji açısından önemli bir yere sahiptir. Ancak bu önemin akademik camiada yeterince fark edildiğini söylemek oldukça zordur. Bu bağlamda literatürdeki boşluğun yeni bakış açıları ve yeni çalışmalarla doldurulması ya da önceki çalışmaların desteklenmesi elzemdir.

Bu çalışmanın temel amacı, Asur kralı II. Sargon'un Yakın Doğu'da Waush Savaşı olarak da bilinen Sargon'un Sekizinci Seferi sırasında Waush Dağı'ndaki Urartu kralı Rusa II'ye karşı uyguladığı stratejilerden birini batılı bir örnekle karşılaştırmak ve batılı bir stratejistle arasındaki doğrudan farklılıkları ve benzerlikleri ortaya koymaktır. Karşılaştırma için seçilen stratejist, Afrika'da doğmuş olmasına rağmen Avrupa tarihi üzerindeki etkisi nedeniyle Avrupa ve hatta dünya tarihinin en önemli komutanlarından biri olarak kabul edilen Kartacalı Komutan Hannibal'dir. Hannibal, strateji açısından bir "benchmark" olarak kabul edilebilir. Hannibal'den yaklaşık 500 yıl önce Asur kralı Sargon'un da Hannibal'inkine benzer bir strateji uygulamış olması dolayısıyla Asur'un stratejisinin ne kadar gelişmiş olduğu çalışmanın vurgulamak istediği temel noktalardan biridir.

Öte yandan, Waush Savaşı Asurlular tarafından Asur İmparatorluğu'nun bakış açısıyla yazılmıştır. Bu nedenle Tanrı Aşur'a Mektup ya da Sargon'un Sekizinci Seferi olarak adlandırılan belge, tarihsel bir analiz yapılmadan objektif olmaktan uzaktır. Bu çalışmada Waush Savaşı ile Ticinus Savaşı karşılaştırılacak ve Urartu perspektifinden bir strateji oluşturulmaya çalışılacaktır.

Çalışmanın ilk hedefi, Asurluların Waush Savaşı'ndaki stratejilerini nasıl tasarladıkları ve uyguladıklarını, antik belgeler ve çeşitli modern çalışmalar ışığında yapmaktır. Çalışmanın üzerinde durduğu bir diğer nokta ise, Antik Çağ'da Akdeniz ve çevresinde yaşayan toplumları inceleyen ve savaşları detaylı bir şekilde anlatan tabletlerden ziyade kitaplara yazılmış metinler üzerinde çalışan akademisyenlere, bir Asur savaşını Roma ve Kartaca savaşlarıyla karşılaştırabilecekleri bir analiz ortaya koymaktır. Böylece Asur'un stratejisinin antik dünyada nereye konumlandırılması gerektiğine dair bir fikir sunmaktır. Çalışma ayrıca arka planda Sargon ve Hannibal'in liderlik vasıflarını da tartışmaktadır. Öte yandan hem Waush hem de Ticinus'ta mağlup olan komutanlar ve uygulamayı planladıkları stratejiler, her iki muharebenin de eldeki veriler ışığında objektif bir değerlendirmesini yapmak ve mağlup komutanların kabiliyetlerini ortaya koymak amacıyla dikkatle analiz edilmiştir.

Çalışmanın en önemli bulgusu, Asur kraliyet yazıtlarının, tarihteki diğer belgelerde sıklıkla olduğu gibi, propaganda içerikli olduğu ve bu çalışma gibi karşılaştırmalı çalışmalarla daha gerçekçi bir bakış açısı oluşturulabileceğidir. Belgeler her ne kadar propaganda içerikli olsa da bazı savaşların anlaşılmasını kolaylaştıran önemli bir tarihsel gerçekliği de barındırmaktadır. Özellikle Sargon'un Waush Savaşı ilk aşamasında yaptığı saldırının tıpkı Ticinus'ta olduğu gibi rakibi dağıttığı ve aslında savaşın geri kalanının propaganda çerçevesinde şekillendiği anlaşılmaktadır. Ticinus Savaşı'nın gösterdiği gibi Sargon'un ilk saldırısından sonra Urartu ordusu dağılmış ve artık savaşmanın bir anlamının kalmadığı taktiksel bir durum ortaya çıkmıştır. Urartu kralı Rusa kurtarabildiği askerlerle savaş alanından çekilmiştir. Özellikle Sargon'un metninde Urartu merkezindeki askerleri esir aldığı bilgisinin yer alması bu bulguyu destekleyen en önemli ifadedir. Sargon'un Asur ordusunu karşılayan ilk asker grubundan önemli sayıda askeri esir alması, bu birliğin Asur ordusunu oyaladığı ve diğer birliklerin geri çekilmesini sağladığı şeklinde yorumlanabilir.

Diğer taraftan Asur belgelerindeki propoganda kısmının en dikkat çekici yanı, Asur kralının Rusa'yla yaptığı savaştan daha çok, özellikle Muşaşir gibi önemli yerlerin Asur'un eline geçmesi ve Urartu'ya verilen zararların metinde yer almasıdır. Bunu da hem propaganda içeriği hem de Urartu devletinin devlet olma erkini yitirdiği iması ile belgelere aktarmaktadır. Bu durum ise bu belgeye sadece propaganda içeriği katmanın çok ötesinde Asurluların savaşı sadece maddi boyutuyla değil manevi boyutuyla da idrak ettiğinin tartışmasız bir delilidir. Onlar için askerleri öldürmek, düşman esir almaktan ziyade, düşmanın manevi güç aldığı bir psikolojik dayanak noktasını yok etmenin daha önemli olduğunu göstermektedir. Bu da Asur'un psikolojik savaş boyutunun bir diğer önemli göstergesidir.

Çalışmanın ilk sonucu, Eski Yakın Doğu'da Asur İmparatorluğu'nda kullanılan savaş stratejilerinin son derece karmaşık ve sofistike olduğunu göstermektedir. Çünkü savaş stratejisi, akademisyenler tarafından etraflıca incelenmiş olan bir komutanın, Hannibal, stratejisine benzemektedir. Benzer bir sonuç Urartu için de çıkarılabilir, çünkü savaşı kaybetmenin nedeni Urartu ordusunun beceriksizliği ya da taktiksel yetersizliği değil, Asur ordusunun üstünlüğüdür.

Öte yandan vasallar her iki savaşta da önemlidir ve Yakın Doğu'daki savaş çalışmalarında genellikle arka planda görülseler de genel olarak savaşlarda önemli bir rol oynarlar. Bu bakımdan, yerel vasalların küresel siyaset üzerindeki etkisi bu tür çalışmalarda bazen çok önemli bir faktör haline gelmektedir. Bu durum her iki savaş için de tespit edilebilir bir realite olarak karşımıza çıkmaktadır.

Waush ve Ticinus savaşları arasındaki çarpıcı bir diğer ortak nokta, her iki mağlup liderin de son derece başarılı bir kaçış stratejisi kullanmış olmalarıdır. Özellikle coğrafyanın son derece etkili bir şekilde kullanıldığı bu savaşlar Antik Çağ'da strateji çalışmaları için son derece seçkin örnekler olarak kabul edilebilir. Uygulanan bu strateji sayesinde mağlupların en az galip gelen komutanlar kadar başarılı stratejistler oldukları anlaşılmaktadır.

Introduction

The ancient Near East has been coined as the cradle of civilization because writing, states, empires, and other essential developments emerged in this region. Mesopotamia is the focal point of history, especially in the Ancient Age. The Near East has a significant place in terms of warfare and strategy, as it is the region that created the first states capable of waging war in history (Winter, 1985, pp. 11-15; Ferril, 1997, pp. 41-43; Guilaine & Zammit, 2008, pp. 1-5). Creating a state or an empire without a proper army or battles is not possible. So, if there is a state such as Sumerians or an empire such as Akkadians, there must be battles or wars. Creating a state or empire cannot be possible without war, and war cannot be created without a strategy; this makes the Ancient Near East an essential place in terms of strategy. However, it is not possible to say that this privileged place of the Near East in history is sometimes adequately recognized. Even sometimes deliberately ignored by some academics, such as (Parker, 2022, p. vii).

This study's primary motivation and originality is that the strategic and military success of the states and empires in the Near East has been discussed in many studies by prominent authors, and it has been determined that very successful strategies were applied (Hamblin, 2006). In this study, the aim is to compare one of the strategies applied in the Near East by the Assyrian king Sargon II against the Urartian king Rusa II in the Battle of Waush with a Western example and thus to reveal the direct differences and similarities between a strategist from the west. The strategist selected for comparison is Hannibal, who is considered one of the most important commanders of strategy in European and even world history. Theodore Dodge Ayrault describes Hannibal as the "Father of Strategy" (Ayrault, 1893, p. 633). Hannibal has a distinguished place in history regarding his ability to devise and execute strategy. Thus, Hannibal can be considered a "benchmark" in strategy (Dupuy, 1969). It is one of the issues that the study wants to emphasize that the Assyrian king Sargon implemented a similar strategy to Hannibal's about 500 years before Hannibal, so it is easy to assume how advanced Assyrian strategy was. For the compare with the Battle of Waush is chosen to analyze the Assyrians' capacity to strategize is the Battle of Ticinus, which took place in 218 BC in Hannibal's attack on Italy to bring Rome to its knees and to eliminate the humiliation suffered by his state during the First Punic War (Gabriel, 2011, p. 18).

Another objective is to obtain a narrative of the battle from the Urartian perspective, comparing it with other battles from a one-sided document dictated by Sargon. Text is found in Nimrud and is named Sargon's Letter to the God Ashur or Sargon's Eight Campaign is the most essential information source of the Battle of Waush (RINAP, Sargon II, 065; Kravitz, 2003; Dezso, 2021, p. 26). This document also shows that connection between religion, strategy and warfare (Pekşen, 2016, pp. 61-65). However, it was written by Assyrians from the perspective of the Assyrians. The document is, therefore, far from being objective without a historical analysis. So, the Ticinus Battle provides a fundamental background for comparison. This article will try to create a strategy from the Urartian perspective by comparing it with the Battle of Ticinus.

There is a significant similarity between the Waush and the Ticinus battles. While these similarities are almost identical at the strategy and planning stage, this resemblance also bears significant similarities in putting the strategy on the battlefield. So, while Urartu and Rome were in an advantageous position in terms of time and geography in the battles, both victorious Sargon and Hannibal could turn the enemy's plan in their favor thanks to a good plan and armies with superior discipline and training. From this point of view, comparing these two battles, it is aimed to provide a new perspective on the Battle of Waush by addressing two battles between Assyria and Carthage in which a similar strategy was used and to make it easier for those who study the European Greco-Roman Mediterranean to understand the battle strategies and tactics of the Assyrians. Mainly because the battles written on tablets do not provide sufficient detail, and it is impossible to compare them with their Western counterparts. However, in this study, two battles similar to twins are compared to each other, and new comparative data has been revealed, especially for those who study Mediterranean civilizations, that can be considered comparing apples to apples. The study provides essential answers to understanding Assyria's strategic capability and aims to fill a significant gap in where Assyria's capacity to strategize should be positioned. And discuss the level of the Assyrians' perception of strategy by comparing it with a good example.

When we look at the sources used in the study, Sargon's Letters the Gods is the primary source of the Battle of Waush (RINAP, Sargon II, 065; Kravitz, 2003). On the other hand, modern studies such as Çilingiroğlu (1997), Carey (2005), Dezsö (2021), Grekyan (2010), and Smith (1994) contribute to the understanding of the Battle of Waush clearly. On the other hand, one of the most critical points to bear in mind is that this letter is propaganda and contains several contradictions (Çilingiroğlu, 1977, p. 243; Kravitz, 2003, pp. 89-92). However, despite that fact, it still contains enough detail to allow inferences to be made about the strategy of the battle (Dezsö, 2021, p. 28). In terms of strategy, Urartian sources record their successes in very short and formulaic sentences such as "He defeated Aššur-nērārī, son of Adad-nērārī, king of the land Aššur" (eCUT A, 09-02). In addition, Urartian sources do not provide any information about the battle since they do not record defeats, and the battle was a heavy Urartian defeat.

On the Roman side, important writers such as Polybius, Titus Livius, Appianus, and other Roman historians focused on the Second Carthage War. On the other hand, modern studies are abundant about the Second Punic War Studies. Historians have discussed the Ticinus Battle for many years, and much has been written on them, such as Lazenby (1998), Lancel (1999), and Hoyos (2003).

Historical Outlines of the Battles

Before comparing the battles, it is essential to outline how they were fought. In this context, briefly summarizing the Battle of Waush and Ticinus would be better.

Battle of Waush

A strategic analysis of the Battle of Mount Waush, which represents an important breaking point in Assyrian-Urartu relations, reveals that various events triggered the war. The first of these stimuli is the heavy defeat of the Urartians against the Cimmerians, which played an essential role in the process that led to the battle (SAA, V, 75). Sargon, who knows what happened in the Urartian lands through an effective spy network, was informed about the Cimmerian victory (SAA, V, 75; SAA, V; Toptaş, 2020, p. 39).

Intelligence reports from different places confirmed that most of the Urartians' top military officials had been killed or captured and that their army was disorganized (Melville, 2016, p. 211). This situation shows they were vulnerable to Assyrian attacks, and an opportunity arose for Assyria. However, the Assyrian king Sargon did not choose to attack Urartu directly and preferred to move against Andia and Zikirtu, the Mannea territories. Here, the Assyrian king followed an indirect strategy (Hart, 2012; Çiğdem & Kılıç, 2025, pp. 7-8). The primary motivation was to break the Urartian coalition against Assyria and to secure the East by convincing other Urartian vassals through Mannea that the Urartians could no longer protect them. This can be considered a 'divide and conquer' strategy. On the other hand, Urartians could still intervene in Zikirtu and its vicinity despite their defeat by the Cimmerians, which can be seen as evidence that they were still powerful (Çilingiroğlu, 1977, p. 236).

Finally, Sargon began, and after a march of about 290 kilometers, Sargon II reached Mount Waush Modern Sahand, East of Lake Urmia near present-day Tabriz (Çilingiroğlu, 1977, p. 242; Melville, 2016, p. 130). As Sargon stated in his letter to the god Ashur, Rusa sent an envoy to Sargon to respond to his challenge at Waush Mountain (RINAP, Sargon II, 065). Rusa took a fighting position vis-à-vis Sargon and deployed his army before the Sargon. Rusa seems to have developed a strategy to maximize the impact of geography, as we saw in the later Persian Battle of Granicus (Hammond, 1980, pp. 75-88). Rusa, commanding an army fresh from defeat and had lost important commanders and allies, may have relied as much on geography as on his army.

Formation of the Assyrian army was "*With only my personal chariot and the horsemen that go at my side and never leave me in either hostile or friendly territory, the contingent of Sîn-aḫu-uṣur, I fell upon him Rusâ like a fierce arrow, inflicted a defeat on him, and turned back his attack*" (RINAP, Sargon II, 065). After Sargon's attack, his brother Sîn-aḫu-uṣur followed the king. This unexpected and powerful attack on the center of the Urartian army, where the Urartian royal guard was located, apparently disrupted the battle formation of the Urartian Army (Dezsö, 2021, p. 28). In fact, it can be stated that the expression "like a furious arrow" mentioned by the king in the text actually has a share of truth and that a terminologically known as "shock tactic" is applied (Phifer, 2012, p. 162). Thanks to this tactic, the Assyrian army gained a significant advantage at the beginning of the battle. It disrupted the battle order of the Urartian army with a hazardous shock maneuver.

In some battles, once the order of battle is broken, there is little an army can do. Even though the battle continues, the victor and the vanquished have already been determined. Even famous Roman author Frontinus proposes a strategic approach to this kind of strategic situation and names the strategy as *"On letting the enemy escape, lest, brought to bay, he renews the battle in desperation"* (Frontinus, II, 6). At this point, the use of cavalry by two different strategists can give us more accurate ideas. In the battle of Cannae, Hannibal attacked the soldiers in the center after the cavalry he placed on the flanks had finished the duty of driving out Roman cavalry. In this context, as Dezsö states, sometimes, a direct attack of cavalry on infantry does not yield the desired results (Dezsö, 2021, p. 28), which suits well in the Cannae. However, Alexander the Great is another example of the strategic use of cavalry. Alexander the Great used cavalry to create an opening in the enemy center, as he did, especially at the Battle of Issus 333 BC (Warry, 2003, pp. 30-39) or Hannibal's tactic in the Battle of Ticinus 218 BC. However, unlike the previous tactic, this one directly impacts the outcome, and if the desired break in the enemy ranks is caught, there is nothing the enemy army can do.

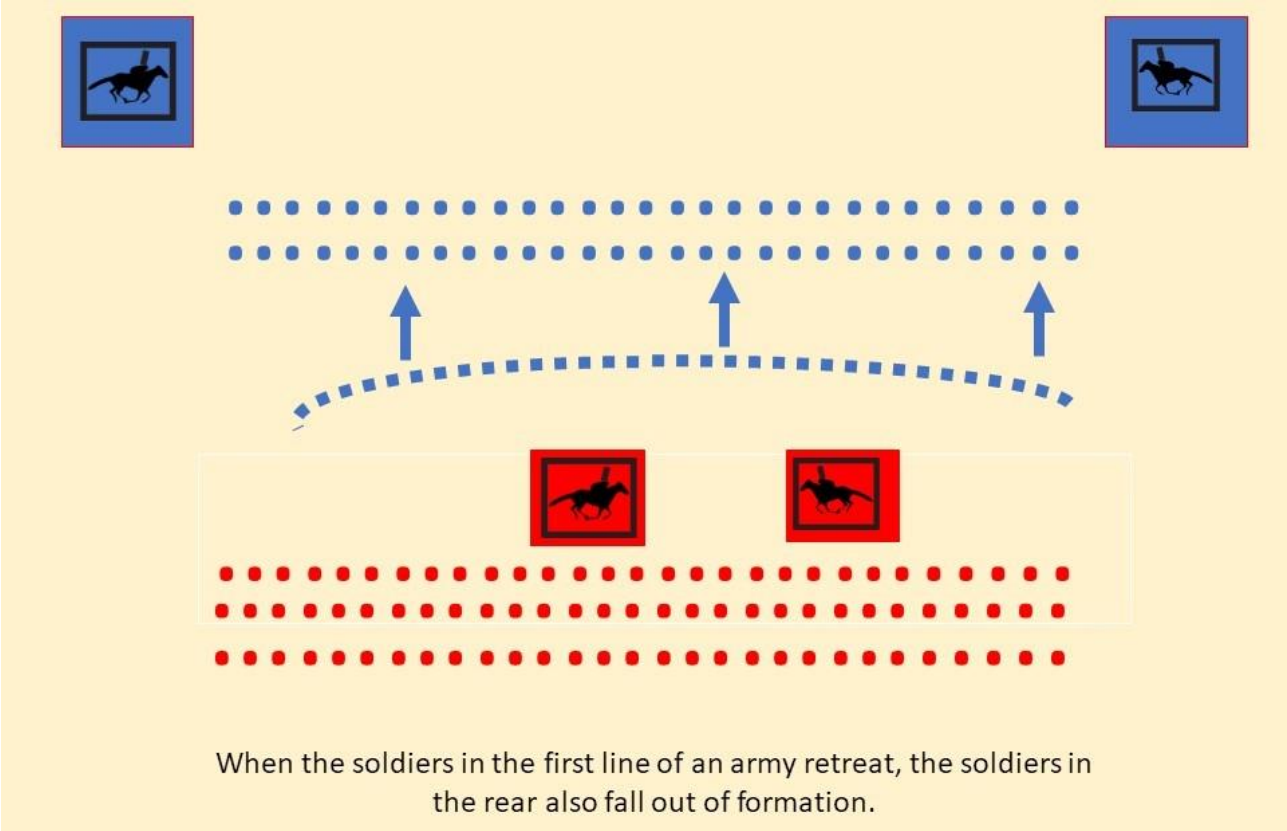


Fig. 1: *A tactical plan of panic retreat.*

On the other hand, this cavalry attack should be evaluated not only in terms of its physical but also in terms of its psychological impact. The most crucial aim of the Assyrian emperors, who exhibited a fierce attitude both in art, literature, and on the battlefields, was psychological, and the policy of fear was one of their most important instruments (King and Litt, 1915; Belibtreu, 2022, pp. 52-58). When we evaluate this situation in terms of the aforementioned cavalry attack, the rest of the battle no longer makes strategic sense. Because an army in battle is like a living organism, a lost limb cannot be replaced, and the army remains disabled. The battle is lost, especially if these defeated troops are defeated without causing any significant damage to the enemy side. With this attack, Sargon not only broke the Urartian center line but also crushed the Urartian army's hope of victory, and a flight must have probably begun to survive against the most powerful army of the period. One of the main problems in this flight is that soldiers fleeing from the front lines would have disorganized the soldiers in the rear. As a result of the successful attack tactics, the Urartian king left the battlefield, and the battle was over. In the meantime, it is necessary to mention Mittati of Zikirtu, who had an essential share in the occurrence of the war. Mittati could have fled the battlefield by sacrificing his own soldiers. However, it can be inferred that Mittati died here by fighting, probably courageously, against Sargon (Melville, 2016, 133).

Battle of Ticinus

The battle of Ticinius in 218 BC is the first battle in Italy in the Second Punic Wars. Hannibal's journey began in Spain and ended five months later, in November 218 BC, when he landed on the Po Plain. Carthaginian Army ambushes by the Allobroges cut his numbers almost in half. On the other hand, starvation, untimely snow, dangerous passes, and food lost to marauding Celts left the Carthaginian army in a challenging situation, even though it finished the journey (Polybius, III, 56; Lazenby, 1999, p. 48).

Roman Consul Publius Scipio wanted to stop Hannibal, who had lost half of his army in ambushes in the Alps and had landed in hunger and misery on the Po plain, as soon as possible before he advanced further into Italy. Publius Scipio crossed the Po River and marched westward to find Hannibal. Hannibal was searching for the Roman Army, so to the right bank of the river were the Carthaginians, and to the left were the Romans. Finally, two armies meet, ready for the first battle. The battle occurred near the Ticinus Ticino River, a tributary of the Po River west of present-day close to Pavia (Livy, XXI, 45).

Both commanders had to enter the battle immediately to obtain a decisive result. Hannibal's army formation is as follows: Heavy cavalry is in the center, and Numidian cavalry is distributed on both flanks. So, Publius Scipio placed the cavalry in the front with the support of the light infantry (Polybius, III, 65).

However, an unexpected event happened at the beginning of the battle, and Carthaginian cavalry swiftly attacked the Roman ranks. Cavalry charge and first movement was so fast, Hannibal's cavalry attacked the Roman light infantry before the Roman light infantry could even throw their spears. As a result of this sudden attack by the cavalry of the Carthaginian army, the Roman light infantry was forced to retreat and became inactive. When the Numidians on the flanks defeated the cavalry of the Roman army on the opposite side and attacked the center of the Roman army, the Roman army dispersed and began to flee. Because the situation had shown that it was no longer possible for the Roman army to win without cavalry to protect the flanks, the defeat of the Roman cavalry now meant that the battle was lost for the Roman army (Livy, XXI, 45).

Not all army units took part in this battle near the Ticinus River. On Hannibal's side, only cavalry was involved in the battle, while on the Roman side, only light infantry and cavalry took part. Rome's heavy infantry retreated without even engaging in any combat. Here, Scipio has prepared an escape plan (Lazenby, 1999, 53). Scipio, whose cavalry dispersed in the face of Hannibal's fast and effective maneuvers, put Plan B into practice. Scipio withdrew his army, realizing the futility of fighting anymore with the loss of cavalry and not wanting to inflict more casualties. This retreat was so fast that the soldiers in charge of destroying the bridges so that Hannibal's army could not cross were captured by Hannibal. In this battle, Hannibal fell upon the Roman army "like a furious arrow," as Sargon said, and forced the enemy army to retreat with an effective tactical maneuver. Another remarkable common point of the battle is that Scipio, like Rusa, was unable to pack up his camp, and everything in the camp fell into Hannibal's hands (Livy, XXI, 46).

Comparison of Two Battles

In this section, when we consider the objectives of Sargon and Hannibal on the battlefield, similarities and differences in the by under the following headings. In both battles, four important keys shaped the fights: the role of the vassals, wearing out the enemy, choosing remote battlefields, relying on the season, and creating escaping points on the geography.

Armies and Their Power at the Time of Battles

To understand both battles, it is necessary to analyze the situation of the army and the state. Assessments made without analyzing the situation of the Assyrian and Carthaginian armies will be incomplete. In this context, it is necessary to briefly provide information about the situation of the victorious Assyrian and Carthaginian armies, which are the focus of this article.

When we evaluate the Assyrian army from the perspective of its strength at the time of the war, the picture is quite clear. The Assyrian army gained momentum, especially thanks to Tiglath III Pileser's military reform and the king's energetic nature (Dezsö, 2012, p. 23). Afterward, during the reign of Sargon II, the state had the most powerful army, which had war experience in almost every region, was at the top in terms of weapon technology, and could be aware of every move of the enemy with the intelligence organization it established (Melville, 2016,

p. 82). At the same time, it had a large number of vassals due to its power in the region, and thanks to its economic power, it had tactically effective means, such as chariots or cavalry, but beyond the reach of its rivals, both in terms of training and the supply of horses and equipment. For these reasons, we have briefly summarized that the Assyrian army was the best of its period in almost all aspects, such as politics, economy, experience, and tactics. In this context, the Assyrian Empire was experiencing one of its most potent periods during the reign of Sargon II. Thanks to Sargon II's highly skillful, courageous, and risk-taking nature as a leader, the Assyrian army was in an unrivalled position in the Near East.

When we consider the situation of the Carthaginian army during Hannibal's Battle of Ticinus, Carthage, which was defeated in the First Punic War, was also shaken by a Mercenary Revolt. However, Hannibal's father, Hamilcar, strengthened the state by finding new economic areas in Spain and preparing for a new war (Hoyos, 2007, p. 61). Despite his young age, Hamilcar's son Hannibal proved his mettle at the Battle of Tagus (Ayrault, 1893, pp. 153-157). However, the Carthaginian army was in a slightly different situation than the Assyrians, as Rome had defeated it 35 years earlier and had suffered heavy casualties in the Mercenary Revolt. However, Hamilcar's leadership qualities created a good army and an exceptional leader, Hannibal. Since the information about the Carthaginian army comes from Roman sources, some information is missing. In this context, it is quite difficult to fill in the information here. Especially the fact that the African heavy infantry in Hannibal's army at the Battle of Cannae wore the clothes of the Roman soldiers killed at the Battle of Lake Trasimene may indicate that the Carthaginian army was not at the peak of equipment like the Assyrian army. Apart from that, however, it would not be wrong to consider the Carthaginian army one of the period's best armies (Goldsworthy, 2001, p. 53).

The main difference between the two armies is that Sargon was a king while Hannibal was a commander. Because while a commander is only obliged to fulfill the wishes of the state or the duties assigned, the powers of an Assyrian king are almost unlimited. The reflection of this on tactics is that while a king can use as many military or economic resources as he wants, a commander has to be content with only what is allocated to him. As a matter of fact, Carthage's failure to support Hannibal after the Battle of Cannae and the resulting defeat shows how important this factor was. In terms of leadership, Hannibal is an important enough person to leave a distinguished mark in world history. In summary, the Carthaginian army had a well-trained army and a good commander, but it had limitations, especially as it was in enemy territory without timely help.

Briefly explaining the situation of defeated armies, the Urartians and Romans are similar. Although the Urartian army suffered a heavy defeat from the Cimmerians and was in a challenging situation, it still did not leave its allies alone against Assyria (Çilingiroğlu, 1977, p. 236). However, information about the Urartian army is very limited as the sources come from Assyria. On the other hand, in the Roman army, the commander Scipio came from Spain and gathered soldiers from the region. These soldiers were not the main army, but there is no need to discuss them at length here. After Scipio's defeat, Sempronius Longus, the other consul of 218 BC, came along with the rest of the army and suffered a heavier defeat against Hannibal in the Battle of Trebia (Lancel, 1999, pp. 92-95). In this context, the state of the armies of the defeated powers is weak in terms of influencing the course of the war. In general, the victors of both battles had almost absolute power and effective strategy at every moment of the battle.

Role of the Vassals in the Battles

The role of the Vassals in both battles was crucial, and Sargon built his strategy through vassals and wanted to send the message that Urartu's power in the region was over. Therefore, the Assyrian king did not attack Urartu directly and pursued an indirect strategy through vassals. It seems that for both kings, the most reasonable course of action for the confrontation was to engage in an indirect war rather than a direct one. The two armies met in the lands of the vassals, some 300 kilometers away from both capitals. The king of Assyria sees the situation from a perspective similar to that of the king of Urartu. He did not find it wise to attack Urartu directly, and instead of attacking the root first, he thought that the solution lay in destroying the vassals first and acted accordingly.

A similar situation is also valid for Rome because Rome experienced the Gallic Disaster in 387 BC, and the Celts advanced as far as Rome, receiving the most significant result of the centuries-long struggle. The noncontinuous fights lasted about 150 years, with Rome reaching the ultimate goal and reaping its most significant rewards in the

battle near the Adda River in 223 BC and defeating and intimidating the Celts (Polybius, II, 32, 33). However, the arrival of Hannibal, merely five years later, changed the balance against Rome. Scipio did not want to let these gains go to waste, so Scipio took immediate action. For this reason, Scipio had to accept an immature battle to prevent Hannibal from gaining more power and gathering supporters here (Rosenberger, 2003, p. 365).

As we have briefly summarized, the power struggle over vassals affected both battles' time, geography, and strategy. Kings Sargon, Rusa, consul Scipio, and commander Hannibal built their strategies around the vassals.

Choosing the Battlefield

When we examine the choice of the battlefield of Rusa of Urartu, we see a place that was chosen very wisely. Mount Waush, where the battle took place, is in the vicinity of Tabriz in present-day South Azerbaijan – Iran (Çilingiroğlu, 1977, p. 242; Melville, 2016, p. 130). However, the main reason for this choice is that Assyria's primary target in the war was Zikirtu and vassals, so Sargon chose a kind of proxy war. This geography, as preferred by Rusa, was perfect for distracting the Assyrian army. The reason for this is that Sargon had to move eastward after leaving his capital; at the same time, the cost of the war increased, the army wore out, and most importantly, the "war season" suitable for battle or siege going to Urartu geography narrows (Zimansky, 2003, pp. 75-80). So even if the Urartian army was defeated at a distance of roughly 300 kilometers from the capital city of Tushpa, the Assyrian army would have to march a couple of hundred kilometers and cross a geography woven with a network of large and small fortresses until it reached the capital, a situation clearly in favor of Urartu. In short, Russia secured the capital by fighting the war in today's Iran. Sources on wars do not generally mention defeats, but sometimes defeats become inevitable; states fall into difficulties and settle for the lesser of two evils in order to avoid the worst. Such defeats can sometimes be as successful and meaningful as victories. When we analyze it strategically in-depth, it can be said from the available data that Rusa of Urartu was a highly skilled strategy master because the Urartian king successfully manipulated the Assyrians and directed them to another target. This strategy is called the "indirect approach" by Hart and is defined as engaging the enemy indirectly rather than attacking them directly (Hart, 2012, pp. 1-7). This strategy also plays a vital role in The Art of War, written around 600 BC and considered by its author, Sun Tzu, as "the key to victory" (Sun Tzu, V, 5).

The first goal Rusa accomplished was to tire the Assyrian army by forcing the enemy to choose a long route. The second objective was to break the army's motivation to fight. The expression "The exhausted troops of the god Aššur, who had already come a long journey and were tired and weary, had had to cross innumerable remote mountains that were difficult to ascend and descend, and they were thus in poor condition" in the text is remarkable (RINAP, Sargon II, 065). From this expression, it can be interpreted that the army was tired or that its physical and moral strength required to fight had declined. In this context, it can be stated that Rusa's preferred geography meets his expectations.

To tire the enemy, Urartu King Rusa must have been aware that after this defeat of his army, Assyria would try to turn this weak situation of the Urartians into an opportunity. Afterward, he tried to direct Assyria's attention to a different region. He did this through his vassals in the region and prevented Assyria from directly attacking Urartu by starting a rebellion in the region. The same is valid for the Urartu, for they had come as far as the Assyrians, too. However, it would be right to assume that they moved more quickly than the Assyrian army, probably because they had to cross their own vassal's land.

The Carthaginian army, on the other hand, was in a worse situation than the Assyrian army. Although the roads Sargon crossed were difficult, they were neither as dangerous as the Alps nor exposed to two large ambushes by the Celtic tribe Allobroges that could destroy an army. Almost half of the Carthaginian army lost their lives while crossing the Alps, either in attacks or due to lack of supplies (Polybius, III, 53-57). This situation reveals the gravity of the unfavorable situation that the army went through. However, in the war between Carthage and Rome, Rome used geography. The main advantage of the battlefield chosen by Rome is that it allows for an escape strategy.

When we take into account the factors that may affect the outcome of the war before starting the battle plans, both the Assyrian army commanded by Sargon and the Carthaginian army commanded by Hannibal were able to come to the battlefield after a long and exhausting journey. As seen in Sargon's letter to the God Ashur, the Assyrian army was exhausted by long marches, had to overcome countless mountains, and was disadvantaged.

If we compare the situation of these two armies, long marches wore both of them out, and the soldiers in the army reached the battlefield by experiencing great physical and mental difficulties before the battle. In this context, Sargon and Hannibal, the attackers in both battles, were disadvantaged when the army was about to start the battle.

Timing and Surprise Element: Blitzkrieg

Timing is one of the elements of war and often one of the most important keys to success (Sun Tzu, V, 13). Sun Tzu says about timing in war: "The quality of decision is like the well-timed swoop of a falcon which enables it to strike and destroy its victim." Timing is one of the most critical elements of battles and wars.

Both the Battle of Mount Waush and the Battle of Ticinus are case studies in which timing decided the fate of the battle. Timing has a significant place in planning and implementing both battles. Because both Sargon and Hannibal successfully used the elements of surprise and timing in these battles. On the other hand, Sargon's expression "like a furious arrow" can be translated to a modern strategy roughly as Blitzkrieg. The Germans used this strategy during World War II, which was formed by combining the German words blitz lightning and krieg war. The most important feature of this strategy is to organize the entire strength of the army and quickly destroy the enemy's fortifications with a fast, powerful, and unexpected attack (Reilly, 1940, p. 254).

Sargon II's statement in the Battle of Waush is quite remarkable. From this, it is understood that the Urartian king attempted a challenge against the Assyrian King Sargon. However, we can understand from his tactical and geographical choice that Rusa did not set out on the battlefield for victory. As we have mentioned before, the geography was chosen in a way that would not allow the Urartian army to be surrounded or prevent the total destruction of the army. It is clear from the study of war strategy that in places like straits and gorges, only a limited portion of the army can fight, regardless of the size of its combatants. As a matter of fact, Allen and Muratov, who have studied Eastern Anatolia and Caucasus geography and warfare, support this statement (Allen & Muratov, 2010, p. 7). In such a situation, the Assyrian King Sargon II, who was disadvantaged in the strategy, found a solution against the Urartian battle plans.

Sargon II attacked suddenly and powerfully without waiting for the enemy to form a complete line or battle formation before the battle. Moreover, probably the most elite troops of the Assyrian army were assigned to this maneuver, and these experienced and elite troops must have created a great shock effect on the vanguard units of the Urartian army. As a matter of fact, it is seen that the Urartian army was unprepared for this strategy, and its resistance was broken in a short period of time, resulting in a domino effect. Thus, the elements of timing and surprise prepared the ground for the defeat of the Urartian army (RINAP, Sargon II, 065; Dezsö, 2021, p. 28).

When we analyze the Battle of Ticinus in terms of Blitzkrieg, two armies met on the banks of the Ticinus River, one of the tributaries of the Po River. But here, Hannibal, like Sargon, used timing as a tactical element and attacked the vanguard of the Roman army commanded by Scipio. This attack took place so quickly that even the vanguard units of Rome had not yet fully taken their places on the battlefield. In this context, the Roman cavalry and light infantry did not offer any resistance against the Carthaginian cavalry, which was almost upon them and dispersed (Lancel, 1999, pp. 82-85).

In the Battle of Mount Waush, the Assyrian texts show that the geography chosen by Rusa was not conducive to bringing the entire army or fully deploying to the battlefield (RINAP, Sargon II, 065). In contrast, on the Roman side, although geography allowed it, the Roman consul Scipio probably soon realized that it would be suicidal to continue the battle due to the loss of the cavalry part of the Roman army in the first phase of the battle and withdrew rest of it (Livy, XXI, 46; Lancel, 1999, pp. 82-85).

In both of the battles we have analyzed, timing was used effectively by the victorious commanders, creating a domino effect in the defeat of the opponent. The elements of timing and surprise constitute one of the most important commonalities of both battles.

Creating An Escaping Point

The famous Chinese commander Sun Tzu defines geography as one of the most essential elements of war. He even advises that if a commander and his army do not use geography effectively, he should prevent the enemy

from doing so (Sun Tzu, X). Battles are always risky, and one can never know in advance who will win, so losing must be calculated as much as the strategy in battle because losing an entire army means abandoning territorial dominance to the enemy. In this context, it is essential to devise an alternative strategy to establish a defensive resistance in another region in case the battle is lost.

Urartians, the Assyrian kings' main rival, used geography the most in their strategy due to their location in a mountainous area. Geography was chosen very carefully, especially the vanquished, with extreme caution (Zimansky, 2003, pp. 75-80).

The point Rusa chose for the battleground was a narrow mountain pass and did not allow the Assyrian army to use specific tactics such as pincer movement (RINAP, Sargon II, 065). So, it will bring some strategic advantages. One of these strategic advantages is that due to the limited geography, the limited number of soldiers of the armies can enter the battle, thus preventing the effective use of Assyria's army, which is quite advanced in combat experience. Another advantage of this chosen region is that it provides reaction time. In other words, it gives the army fighting each other in the strait time to escape or to bring new troops into the battle, depending on the situation. Another tactical advantage is that the risk of attacking the army from the rear or flanks is minimized. However, the biggest advantage of such a geography is that it eliminates the possibility of the army surrounding and destroying the army as Hannibal did at Cannae (Goldsworthy, 2021, p. 145). In addition, if the cavalry of the Assyrian army, which is advantageous both tactically and in terms of equipment, defeats the Urartian cavalry, the main column of the army will be vulnerable from the sides and rear, or most crucially, it can be surrounded. In addition, the possibility of the Urartian army withdrawing from the battlefield on foot would be eliminated, and the Urartian army would suffer more significant casualties.

Fig. 2: *Mt. Sahand is a stratovolcano, and an aerial view shows that it is the perfect battleground for escaping strategy. (NASA, STS74-708-25)*

When we analyze the Battle of Waush in the context of the escape plan, it has already been mentioned that Urartu King Rusa entered the battle cautiously. If Sargon struck a blow, which is highly obvious, it would destroy the Urartian army here, and there would be no power left to stop the Assyrian army. Thus, after a possible defeat, the Urartian king probably considered the scenario in which his state and people would survive the damage. Rather than massacring his army as Hannibal did to the Roman army at the Battle of

Cannae after his resistance was broken, it is a more reasonable strategy to prepare a suitable escape plan and to get his defeated soldier out of a chaotic battle alive. This is because the Assyrian army would not be able to move quickly in an environment where a large part of the Urartian army was still alive and organized, and could face an ambush at any moment. We see this example, especially in the campaigns of Shalmaneser III. Although Urartian King Aramu was defeated many times and its capital was destroyed, the Urartian threat could not be ended (RIMA, III, 20).

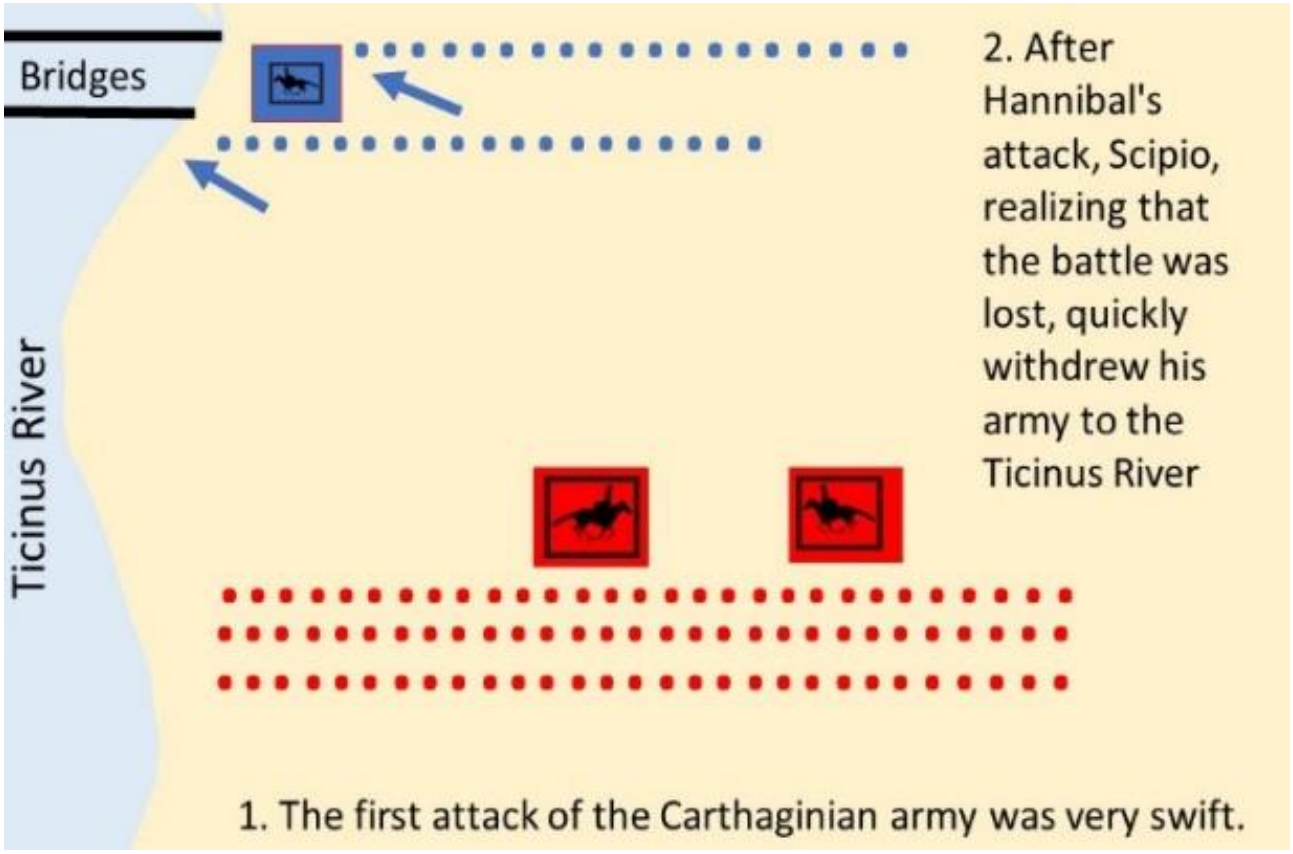


Fig. 3: *Escaping strategy of Battle of Ticinus.*

The escape strategy of the Battle of Mount Waush was quite successful. After the first attack of the Assyrian army under the command of Sargon, the direction of the battle changed significantly; after this change in favor of the Assyrian army, the Urartian king and his army probably realized at some point that the battle could not turn in favor of Urartu and took action. The rest of the army must have withdrawn immediately after the Assyrian army's successful attack. At this point, one of the noteworthy points in Sargon's account is the looting of the royal tent of the Urartian King Rusa (RINAP, Sargon II, 065). This point is open to serious speculation due to insufficient objective sources. Any commander with combat experience knows that the first target of the Assyrian army in a sudden attack would be the looting of the king's camp because this would mean that the battle was lost to the enemy. This raises the question of whether Rusa could have set up his camp at a point where the Assyrians would have been targeting it as a primary focus and then simply withdrew his army. Although it is very difficult to make definitive judgments, the Urartian king withdrew a considerable part of the army from the battlefield. The most substantial evidence for this claim is that if the Urartian army had suffered a heavy defeat here, its vassals in other regions could have been mobilized by Assyria to end Urartian sovereignty.

On the other hand, the Battle of Ticinus's escape strategy is also remarkable. There is a slight difference, however, in that the advantage is on the side of Rome, the defending side. Ticinus River, used as a geographical obstacle, plays an essential role in the escape strategy. However, as if to support the above claim, despite all his advantages, Scipio, the commander of the Roman armies, planned an escape strategy before the battle with the Carthaginian army, which was in a terrible situation. Scipio planned to take the army across the bridges built over the Ticinus River, one of the tributaries of the Po River, in case of defeat

and to prevent Hannibal from following by destroying the bridges. Since the resistance of the cavalry and light infantry was broken in the first attack, Scipio immediately led his army across the bridges built over the Ticinus River, and this retreat was so fast that the soldiers in charge of destroying the bridges after the Roman army crossed, they were captured by Hannibal's army. But it's important to underline that the Roman army managed to withdraw most of its troops without suffering further and heavy casualties.

Victory

The Battle of Mount Waush and the Battle of the Ticinus are tactically significant and remarkable battles. Analyzing both victories from a common point of view can be summarized under the following points. Both victorious armies had extremely good battle discipline and successfully applied the theoretical strategy on the battlefield. In this context, it can be inferred that the victorious armies had basic features such as equipment, chain of command, and training and were highly successful. Among the victorious armies, both Sargon and Hannibal applied a highly successful strategy and managed to render the enemy army unable to continue the war with successful and quick maneuvers. It is also understood that the casualties of the victorious armies were low (Lazenby, 1998, pp. 52-53; Lancel, 1999, pp. 83-85; Dezso, 2021, pp. 26-30).

Both battles were tactically similar to the Blitzkrieg tactics used during World War II. Especially in the Waush Battle, it is determined that the Assyrian army was more similar to the blitzkrieg concept as they entered the camp of the Urartian king Rusa. It is seen that the Assyrian army succeeded in splitting the Urartian army, which used the surrounding geography as a defense element, from the center, and this situation contributed to the tactical elitism of the battle. Because such a tactic can only be achieved by an army with a high combat capability, in case of failure, the soldiers of the attacking army would be surrounded and destroyed by the opposing army.

Another essential point in evaluating the wars is to analyze their political consequences. If we evaluate both battles in terms of Sargon and Hannibal, who were victorious in both battles, it is seen that the war tactically produced similar results. One of the first consequences of these victories was the dissolution effect on the vassals in the region. After the Battle of Waush, Urartu's vassals, especially in the south, came under direct Assyrian threat, and even the Temple of Musasir, which was extremely important for Urartu, was destroyed (Çilingiroğlu, 1977, pp. 236-250; Melville, 2016, p. 136; Elayi, 2017, p. 144). More interestingly, Sargon's Letter to God is more concerned with the capture of Musasir and the plight of Rusa than with the war (Kravitz, 2003, p. 92). Thus, Urartu suffered severe damage both military and spiritually. The looting of the cult center of its god was perhaps a more significant loss for Urartu than the battle itself.

On the other hand, the Battle of Ticinus had a political outcome similar to that of the Battle of Mount Waush. Since the battle was fought in Northern Italy, where the Celts were located, Hannibal's victory greatly impacted them. The Celtic power, which had peaked in Italy with the Gallic Disaster, gradually declined after that, and only a limited area in Northern Italy was left to be dominated. Celtic tribes such as the Boii and Insubres, who had long lost territory to Rome, as well as other tribes in the region, saw Hannibal as a leader with the power to save them from Rome. In other words, both battles initiated a significant political change in the region (Polybius, III, 68-73; Lazenby, 1998, pp. 52-53; Lancel, 1999, pp. 83-85).

Conclusion

The results of this study, which compares two battles between Assyria and Rome, should be analyzed from various perspectives. Since the Battle of Ticinus is covered in great detail in the primary sources, it would be unrealistic to draw new conclusions or claim anything new about Ticinus. In this context, evaluating the study results through the Waush Battle instead of Ticinus, which was used in the study as a benchmark, would be more accurate.

The first result of the study shows that the war strategies practiced in the Ancient Near East in the Assyrian Empire were extraordinarily complex and advanced. It should also be noted that strategy is not only an intellectual activity but also requires skilled soldiers and commanders to implement these ideas. Based on this data, the Assyrian army was extremely well organized, had a high level of maneuverability, and had capable commanders who could devise world-class strategies.

A similar reality can be said for Urartu because the fact that they lost the battle is more because the Assyrian army was much better. Apart from that, the fact that they were still willing to fight for their allies against Assyria despite the Cimmerian defeat shows how broad the Urartian political perspective was. Rusa also tried to use an elegant strategy but was defeated because his opponent was superior. Rusa's escape strategy was also extremely important and deserves even a separate study.

Assyrian royal inscriptions had propaganda content, and a more realistic perspective can be created through comparative studies, as in this study. Although the documents contain propaganda, they also contain a crucial historical reality, making it easier to understand some battles. In particular, we can state that Sargon's attack at the beginning of the war dispersed the opponent, just like in Ticinus, and the rest of the battle was more propagandistic. The detail supporting this finding is capturing a significant part of the Urartian elite troops guarding the center. It seems very unlikely that the front-line soldiers could have survived such a fast-paced and "bloody" battle.

On the other hand, the most striking aspect of the propaganda part of the Assyrian documents is the capture of important places such as Musasir, and the damages inflicted on Urartu are more focused in the text rather than the battle between the Assyrian king and Rusa. This is conveyed in the document with both propaganda content and the implication that the Urartian state lost its power as a state. This situation, far beyond adding propaganda content to this document, is indisputable proof that the Assyrians understood war not only in its material dimension but also in its intangible dimension. It shows that it was more important for them to destroy a psychological fulcrum from which the enemy drew spiritual strength rather than killing soldiers or capturing enemies. This is another important indicator of Assyria's psychological warfare dimension.

Vassals, in general, play a critical role in battles, even if they are generally seen in the background in the study of warfare. In both the Waush and Ticinus battles, the main focus is the control of the vassals. This shows us the need to look at the battles from a broader perspective.

The most striking commonality between the battles of Waush and Ticinus is that both defeated leaders employed a highly successful escape strategy. In this context, both battles are exemplary in world history. Both the victors and the vanquished produced highly successful strategies in both battles. However, the victors achieved victory by making some tactical moves more accurately, decisively, and swiftly.

The primary sources of strategy studies in the Near East are inscriptions and tablets. These sources provide little detail, as in Greek and Roman works. However, this study shows that it is possible to obtain sufficient general information about the strategy applied, even if small details are given. In addition, it has been revealed that one of the important factors in strategy studies in the Near East is the knowledge of the author who deals with the texts. Sometimes, sources that do not provide direct information can be put on a more realistic basis by comparing them with their examples in the West. In this context, this study's approach can be considered a modest methodological attempt and precursor for future comparative studies on Near Eastern warfare.

Ethics Committee Approval: Ethics committee approval is not required.
Peer-review: Externally peer-reviewed.
Conflict of Interest: The author has no conflicts of interest to declare.
Financial Disclosure: The author declared that this study has no financial support.

References

Allen, D., & Muratov, P. P. (2010). *Caucasian battlefields: a history of the wars on the Turco-Caucasian border, 1828-1921.* Cambridge University Press.

Appianus. (1913). *Appian's Roman History* (T. E. White, Trans.). Macmillan.

Ayrault, T. D. (1893). *Hannibal: A History of the Art of War: Among the Carthaginians and Romans Down to the Battle of Pydna, 168 B. C., with a Detailed Account of the Second Punic War*. Houghton, Mifflin. https://books.google.com.tr/books?id=MVMZAAAAYAAJ

Belibtreu, E. (2002). Grisly Assyrian Record of Torture and Death. *Biblical Archaeology Society*, 17(01).

Carey, B. T. (2005). Perspectives: Assyrian King Sargon ll's Urartu campaign of 714 BC was as sensible as it was ruthless. *Military History,* 22(6), 65.

Çiğdem, S., & Kılıç, M. (2025). The Urartian Army on the Battlefield: Strategy and Tactics. *Turkish Journal of History*, 85, 1–24. https://doi.org/10.26650/iutd.1496808

Çilingiroğlu, A. (1977). Sargon'un Sekizinci Seferi ve Bazı Öneriler. *Anadolu Araştırmaları,* IV(V), 235–269.

Dalley, S., & Postgate, J. N. (1984). *The Tablets from Fort Shalmaneser*. Oxford University Press.

Dezső, T. (2012). *The Assyrian army I.* Budapest Eötvös University Press.

Dezsö, T. (2021). The battle of Mount Waush, 714 BC - Like a furious arrow. *Ancient Warfare*, XIV (6), 26–35.

Dupuy, T. N. (1969). *The Military Life of Hannibal: Father of Strategy.* F. Watts. https://books.google.com.tr/books?id=ckn8pwAACAAJ

Ferrill, A. (1997). *The origins of war: from the Stone Age to Alexander the Great.* Westwiev.

Gabriel, R. A. (2011). *Hannibal: The Military Biography of Rome's Greatest Enemy*. Potomac Books Incorporated. https://books.google.com.tr/books?id=IJcT7R0dEe4C

Goldsworthy, A. (2001). *Cannae: Hannibal's greatest victory*. Cassell Military.

Grayson, A. K. (2002). The *Royal inscriptions of Mesopotamia, / Assyrian periods III.* University Of Toronto Press, Cop.

Grekyan, Y. (2010). The Battle of Uauš Revisited. *Ahramazd*, V (1), 83–108.

Guilaine, J., & Zammit, J. (2008). *The Origins of War*. John Wiley & Sons.

Hamblin, W. J. (2006). *Warfare in the ancient Near East to 1600 BC: holy warriors at the dawn of history.* Routledge.

Hammond, N. G. L. (1980). The battle of the Granicus River. *The Journal of Hellenic Studies*, 100, 73–88. https://doi.org/10.2307/630733

Hart, B. H. L. (2012). *Strategy: the indirect approach.* Pentagon Press.

Hoyos, B. D. (2007). *Truceless War: Carthage's Fight for Survival, 241 to 237 BC*. Brill. https://books.google.com.tr/books?id=ln7kyVlArk0C

Hoyos, D. (2003). *Hannibal's Dynasty Power and politics in the western Mediterranean, 247–183 BC.* Taylor & Francis.

Kravitz, K. F. (2003). A LastMinute Revision to Sargon's Letter to the God. *Journal of Near Eastern Studies*, 62 (2), 81–95. JSTOR. https://doi.org/10.1086/376363

Lancel, S. (1999). *Hannibal.* (A. Nevill, Trans.). Blackwell.

Lazenby, J. F. (1998). *Hannibal's war: a Military History of the Second Punic War*. University Of Oklahoma Press.

Livy. (2009). *Hannibal's War* (D. Hoyos, Ed.). OUP Oxford.

Melville, S. C. (2016). *The Campaigns of Sargon II, King of Assyria, 721–705 BC.* University of Oklahoma Press. https://books.google.com.tr/books?id=tGe2DAAAQBAJ

Parker, G. (2022). *The Cambridge Illustrated History of Warfare*. Cambridge University Press.

Parpola, S. (2001). *The Correspondence of Sargon II (State Archives of Assyria).* Helsinki University.

Pekşen, O. (2016). Eski Mezopotamya daki Savaşlarda Tanrıların Rolü. *History Studies International Journal of History*, 8 (2), 55–68. https://doi.org/10.9737/hist.2016220341

Phifer, M. (2012). *A Handbook of Military Strategy and Tactics*. Vij Books India Private Limited. https://books.google.com.tr/books?id=l_6pCQAAQBAJ

Polybius. (2012). *The Histories of Polybius* (E. S. Shuckburgh, Trans.). Cambridge University Press.

Reilly, H. J. (1940). Blitzkrieg. *Foreign Affairs*, 18 (2), 254. https://doi.org/10.2307/20028996

RINAP. (2024). Upenn.edu. https://oracc.museum.upenn.edu/rinap/corpus

Sextus Julius Frontinus. (1925). *Frontinus: The stratagems, and, the aqueducts of Rome* (C. E. Bennett, Trans.). Heinemann.

Smith, J. B. (1994). A Tactical Re-Interpretation of the Battle of Uaush: Assyria and Urartu at War 714 BC. In A. Çilingiroğlu & D. H. French (Eds.), *Anatolian Iron Ages 3: The Proceedings of the Third Anatolian Iron Ages Colloquium held at Van*, 6-12 August 1990 (pp. 229–239). British Institute.

Sun Tzu. (2000). *The Art of War*. Allandale Online Publishing.

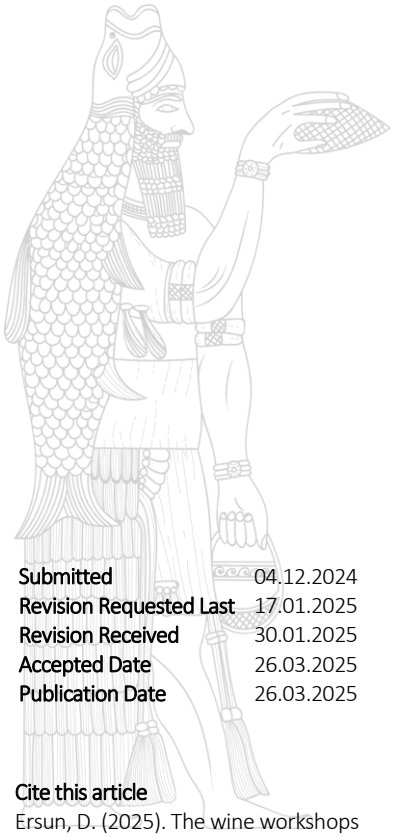
Toptaş, K. (2020). Asur Belgelerinde Kimmerler. *Gazi Akademik Bakış*, 14(27), 31–60. https://doi.org/10.19060/gav.838925

OANNES
2025, 7(1) March
Research Article DOI: 10.33469/oannes.1596031

The Wine Workshops and Production Techniques in the Ancient City of Matiate

Durmuş ERSUN
Corresponding Author

Department of Archaeology, Mardin Artuklu University, Faculty of Letters, Mardin, Türkiye.
ersundurmus@gmail.com



Abstract

Wine has a history of thousands of years as both a ritual and consumer product. As a ritual production, it is used as an offering to the gods in ancient literature. It was also the main drink of entertainment and meetings in daily life. Matiate is located within the borders of Midyat district. The region where Midyat is located was called as Masius in the Classical period and Tur Abdin in the Middle Ages. It is mentioned as the city of the Kaschiari region in Hittite inscriptions. The history of wine production is based on Assyrian inscriptions in Matiate. It is known from Assyrian inscriptions that the city was captured and taxed in 900 BC. It is recorded that the city's residents paid their taxes largely with the wine. Two workshops have been discovered. One of them is located in building a-1 and the other is in the complex a-10. Both building a-1 and a-10 are dated to the late Roman period. The production was carried out using three techniques. These are known as screw press, wedge press and lever press. When the workshops unearthed in the city are evaluated, it is seen that production is carried out using the wedge press in the building a-1. The production is carried out by the screw press technique in the building a-10. In this study, it is revealed what kind of techniques are used in production and the import organization of the surplus product is examined in the city of Matiate.

Keywords: *Wine, Production, Late Antiquity, Grape, Fermentation.*

Submitted	04.12.2024
Revision Requested Last	17.01.2025
Revision Received	30.01.2025
Accepted Date	26.03.2025
Publication Date	26.03.2025

Cite this article
Ersun, D. (2025). The wine workshops and production techniques in the ancient city of Matiate, *Oannes*, 7(1), March, pp. 131-145.

Genişletilmiş Özet

Çalışmaya konu olan Matiate kenti Yukarı Mezopotamya Bölgesinin stratejik yerleşmelerinden birisidir. Hitit metinlerinde kentin bulunduğu coğrafya Kaşyari Bölgesi olarak nitelendirilmektedir. Matiate, Klasik Dönem'de Masius Bölgesi kenti olarak bilinmektedir. Günümüzde ise Orta Çağ'daki tanımlaması ile anılmakta ve Tur Abdin Bölgesi olarak yazılı kaynaklarda yer almaktadır. Tarihsel perspektifte kentin konumu Doğu Anadolu Bölgesi maden kaynaklarına ulaşmak adına anahtar rol üstlenmekteydi. Ele geçen yazıtlarda kent ile ilgili en erken verilere Assur yazılı belgelerinde rastlanmaktadır. II. Assurnasirpal ve III. Salmanassar Dönemlerine tarihlenen metinlerde kentin ele geçirildiği ve vergiye bağlandığı bilinmektedir. Yazıtlarda "Yatu" sözcüğü için Sümer dilinde ülke anlamına gelen tanımlama işareti kullanılmıştır. Söz konusu kullanılan işaretin Akad dilindeki karşılığı "Matu" olarak kayıtlara geçmektedir. III. Salmanassar'ın (MÖ 858-824) metinlerinde bu sözcüklere yer verilmektedir. Buradan hareketle filologlar tarafından kentin ismi Matuyatu ya da Matiate olarak çözümlenmiştir. Yazılı metinlerde kentin vergisini büyük oranda şarap ithalatı ve organizasyonuna dayalı olarak ödediği bilinmektedir. Assur varlığının akabinde kent uygarlıklar arasında çeşitli periyodlar ile el değiştirmiştir. Assur hegemonyasının akabinde İskit, Med ve Pers uygarlıkları kentte hüküm sürmüştür. Hellenistik Dönem ile birlikte Büyük İskender'in kontrolünde kentte yaşam sürdürülmüştür. Son olarak ise, Roma/Bizans ve Parth/Sasani arasındaki mücadeleler yaşanmıştır.

Matiate'nin ekonomik tarihinde bağcılık faaliyetlerine verilen önem göz önüne alındığında üzümler tipik Akdeniz manzarasından çok farklı bir topoğrafya ve iklimsel alanda yetiştirilmiştir. Bağcılığın kurak bir bölgede başarıyla yürütüldüğü anlaşılmaktadır. Bu durum kentte sulama organizasyonunun sıkı bir şekilde kontrol edildiğini göstermektedir. Kentin konumlandığı Mardin yöresi zengin yeraltı su seviyesine sahiptir. Kil içeren kireçli toprak yapısı üzümlerin yetiştirilmesinde olumlu bir etkiye sahiptir. Ayrıca bilindiği üzere üzüm çok fazla sulama gerektirmeyen bir tarım ürünüdür. Bu bölgede olduğu gibi Orta Doğu ve Kuzey Afrika çalışmalarından da kurak iklim koşullarında başarılı bir biçimde üzüm yetiştiriciliğinin varlığı bilinmektedir.

Matiate kenti katakomp mimarisinde inşa edilmiştir. Katakomp mimarisinin başlangıcında sadece defin amaçlı kullanıldığı bilinmektedir. Defin amaçlı kullanımına ek olarak sonrasında yeraltı şehirleri şeklinde bir örgütlenme gerçekleştirilmiştir. Bu dönüşümde özellikle Hristiyanlığı kabul eden kitlenin Roma yöneticilerinin kıyım politikalarından kurtulmak istemeleri etkili olmuştur. Çok tanrılı bir din politikası sonrasında insanların tek tanrılı inanca yönelmesi Roma yöneticilerini rahatsız etmiştir. Midyat çevresindeki kayaç türü yontulmaya oldukça elverişlidir. Bunun yanı sıra bu yerleşme modelinde iklim koşulları da oldukça etkili olmuştur. Böylelikle hem ısınma sorunu ortadan kalmış hem de iklim koşulları şarap üretimi ve muhafaza edilmesine imkân sağlamıştır.

Çalışmada iki şarap işliği değerlendirilmektedir. İşliklerden birisi a-1, diğeri ise a-10 yapısı içerisinde konumlanmaktadır. Hem a-1 hem de a-10 yapıları Geç Roma Çağı'na (M.S. 3-4. yüzyıl) tarihlendirilmektedir. Tarihlendirme kriterlerinde belirleyici ölçüt ele geçen seramiklerdir. Öncelikli olarak işliklerin bulunduğu kontekst içerisindeki tanımlamaları yapılmaktadır. A-1 işliğinde tek kullanım evresi tespit edilmiştir. Buna karşın a-10 işliğinde ise Geç Roma Dönemi sonrasında yapının ikincil bir kez daha kullanım gördüğü anlaşılmıştır. A-10 yapısı ikinci kullanım evresinde Yahudilere ait dini bir mekân özelliği kazanmıştır.

Antik Dönemde üzümün şıra haline getirilmesi için vida pres, takoz pres ya da levye pres yöntemlerinin kullanıldığı bilinmektedir. Yunan ve Roma uygarlıklarında kullanım alanı en geniş yöntem vida pres tekniğidir. Vida pres yönteminde ahşap sistemin döndürülmesi ile üzümlere baskı uygulanmakta ve ezilme işlemi gerçekleştirilmekteydi. Bir diğer yöntem olan takoz pres ile ilgili bilgiler duvar resimlerinden gelmektedir. Özellikle Pompeii Vettii evi duvar resimlerinden üretim modeli bilinmektedir (Figür 3). Bu mekanizma da iki dikey ahşabın arasına konumlandırılan takoz yardımıyla ezme işlemi yapılıyordu. Levye pres yönteminde ise ahşaplar halat yardımıyla bağlanmakta olup sağlanan yönlendirmeler ile presleme sağlanıyordu. Burada yer alan işliklerde hangi pres yöntemlerinin kullanılarak üretimin gerçekleştirildiği hususunun ortaya konulması amaçlanmıştır. Kentte ortaya çıkarılan işlikler değerlendirildiğinde a-1 yapısında takoz pres yöntemiyle üretimin gerçekleştirilmekte olduğu görülmektedir. A-10 kompleksinde ise vida pres yöntemi ile üretim gerçekleştirilmekteydi. Anadolu'da a-1 yapısındaki mekanizma sisteminin benzer örnekleri Tlos (Gözlengiç), Perre, Olba ve Karakabaklı yerleşimlerinden takip edilebilmektedir. Anadolu dışında ise Aijalon'da benzer uygulamaların varlığı bilinmektedir. A-10 yapısındaki vida pres yönteminde ise benzer uygulamalar Amorium ve Eretz yerleşimlerinden takip edilebilmektedir. Tekniklerin saptanmasının akabinde üretimin niteliği ve ticaret organizasyonu çalışma içerisinde ele alınmaktadır. Matiate kenti sakinleri bulunduğu coğrafya da şarap üreticileri arasında yer almaktaydı. Matiate kentinin yanı sıra tüccarların diğer bir uğrak noktası ise Karkamış kentiydi. Mezopotamyalı tüccarlar öncelikli olarak Karkamış kentine gelip alım gerçekleştiriyordu. Karkamış kentinden sonraki güzergâh ise Matiate kentine uzanmaktaydı. Assurlular'dan bu yana Edessa (Urfa), Resaina (Ceylanpınar), Tella (Viranşehir), Dunaysır (Kızıltepe) ve Matiate (Midyat) yol güzergahı takip edilerek ticaret organizasyonu gerçekleştirilmekteydi. Çalışma içerisinde ayrıca 2020 ve 2021 yıllarında ele geçen seramiklerin istatistiği yapılmıştır. Amfora tipindeki seramiklerin % 42 orana sahip olduğu gözlemlenmiştir. Bilindiği üzere amforalar ticaret organizasyonunda sıklıkla kullanılan seramik türü arasındadır. Kap formları içerisinde amforların yüzdelik dilimdeki yeri ticaret organizasyonunun varlığını destekler niteliktedir. Sonuç olarak burada takoz pres ve vida pres olmak üzere iki tip teknik kullanılarak üretimin gerçekleştirildiği ve ticaret organizasyonunun niteliği ortaya konulmaktadır.

Introduction

Matiate is located in Upper Mesopotamia. It has an important location both in historical periods and today in terms of vineyard area and grape production. The city of Matiate is located in the Kaschiari region. The term of Kaschiari is known from Hittite inscriptions (Erkanal, 2007, pp. 1-16). It was called as Masius in the Classical period (Olmstead, 1918, p. 229). Kaschiari is also referred to as Tur Abdin in the Middle Age (Ernest et al., 1973, p. 280; Korkut & Elyiğit, 2018, p. 35). Kaschiari has a feature that separates Eastern Anatolia from Mesopotamia. The main purpose of crossing the Kaschiari region was to reach the mining areas. Kaschiari is located on the trade route. Trade route started from the city of Edessa and extended to Nisibis in the east (Comfort, 2017, pp. 181-182). Due to the strategic importance of the region, the Assyrians taxed and captured the city of Matiate in the Kaschiari. After the Assyrians, the Scythian (635-625 BC) ruled in the region. Later, the Med (625-550 BC) and Persian (550-331 BC) civilizations came into existence. The region came under the rule of Alexander the Great in 331 BC. After Alexander's death, the Seleucid kingdom reigned. The Parthian (140 BC) and Armenian king Tigran (85-69 BC) ruled respectively. After that, the region changed hands frequently and the struggles continued between Parthia and Rome (Çevik, 2007, p. 112; Güneş, 2012, p. 74). After the death of Iuliaunus in 363 AD, for the Romans, Amida acquired great importance and the Euphrates River and Syria were approached in the east. Until the mid-4th century AD, massacre policies were carried out against Christians in the region. The history of massacre policies dates back to the Nero period. At the end of the 4th century AD, an atmosphere of tolerance was established in matters related to region. After the 4th century AD, the best example of the tolerance in the region is the Mor Gabriel Monastery. Palmer emphasizes that donations were made to the monastery by the emperors of the period (Palmer, 1990, pp. 49-52).

Considering the importance given to the viticulture industry in the economic history of Matiate, grapes were grown in a topographic and climatic area very different from the typical Mediterranean landscape. It seems that viticulture was successfully carried out in an arid and very different area. Irrigation was also highly controlled and techniques for growing grapes were successfully implemented. Matiate is located in a settlement with high groundwater levels. Accordingly, clay-containing and calcareous soils positively affect the structure of the grapes. In addition to, hot and dry climate conditions are also important in growing grapes. Because it is a crop that does not require much irrigation, it can be grown efficiently in arid regions. The existence of high-quality grape production is also known from Middle Eastern and North African studies. It is known that wine production existed in North Africa and the Middle East in antiquity (Bowden & Lavan, 2004, p. 13; McGovern, 2019, p. 71; Rogerson, 2018; Dodd, 2020, p. 20; Ghazal & Hanssen, 2021, p. 33; Hitchner, 2022, p. 218; Dodd & Limbergen, 2024, p. 12).

In addition to the strategic importance at the point of the transit route, the economy of the city is largely based on viticulture and wine production activities. Wine was a product with high import organization in Mesopotamian and surrounding cultures from the 4th millennium BC (Laneri, 2018, p. 225). It is a drink that is often encountered in ritual scenes and members of the elite class in antiquity. Production was part of the socio-economic activities of the settled societies in Kaschiari. Matiate's people produced wine and ıt was a settlement where wine was imported by Mesopotamian elites (Palmer, 1990, p. 1; Luckenbill, 1927, p. 178; Wallis-Budge, 2005, p. 228; Forlanini, 2006, p. 148; Bryce, 2009, p. 338). Besides the city of Matiate, Carchemish was another location preferred by the Mesopotamian elites (Laneri, 2018, p. 228). Mesopotamian elites continued their commercial activities between Matiate and Carchemish.

Viticulture, which constituted an important part of agricultural activities in ancient times, was associated with the cult of Dionysus along with wine and was considered sacred. Apart from the experience of mythological characters, wine was an indispensable consumer product of ancient people in ceremonies and entertainment. In autumn, grape harvesting was done by singing songs. For ancient people, it had become a ritual in which grief and pain were left aside. The bunches of grapes collected with sickle-shaped knives were first filled into baskets and then taken to wine presses. Wine presses were set up close to the vineyard where the grapes were harvested to prevent them from losing their juice. We know that the grape harvest and wine-production scene on the shield of Achilles related to the stage of production (Papakonstantinou, 2009, p. 3).

Production and organization are determined in Matiate. Matiate is located within the borders of Midyat district of Mardin province (Fig. 1). The workshops have been identified in two areas. The first workshop is located in building a-1. The second workshop is located in building a-10. First of all, wine presses will be defined in the

study. After that, production techniques will be revealed. As a result, the relationship between production and organization will be interpreted.

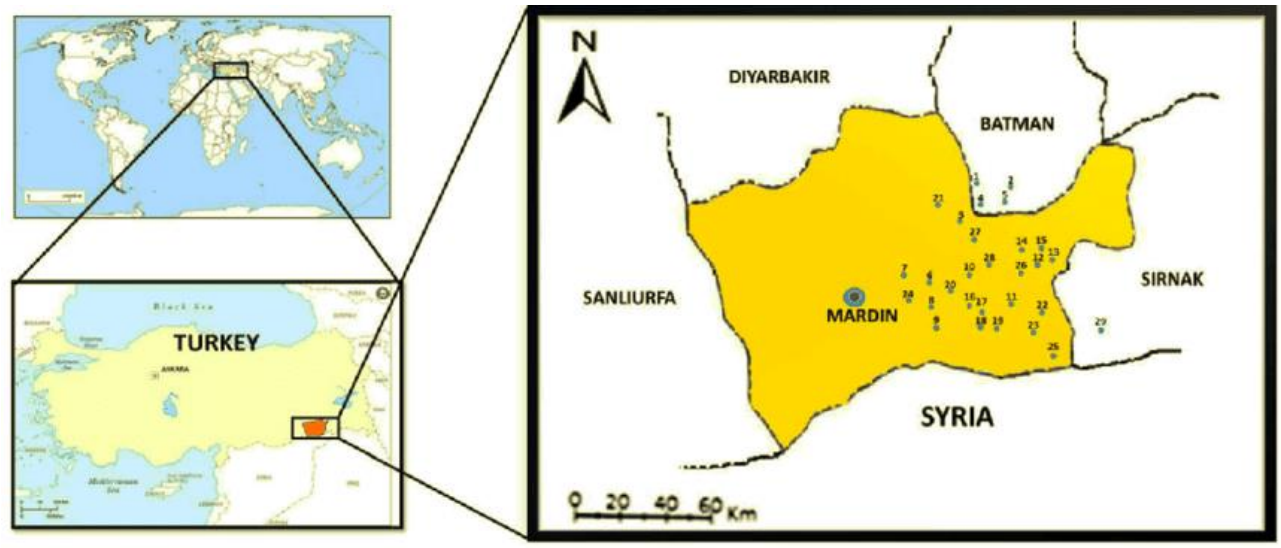


Fig. 1. Location of Mardin and Midyat districts on the map (Akgül et. al., 2018, fig. 1)

The Ancient City of Matiate

The city of Matiate is located within the borders of Midyat. The region where the underground city was located in ancient times was known as Kaschiari or Tur Abdin (Fig. 2). Due to the presence of minerals in Eastern Anatolia, the region is on the transit route. Therefore, the region has become a centre of attraction in ancient time.

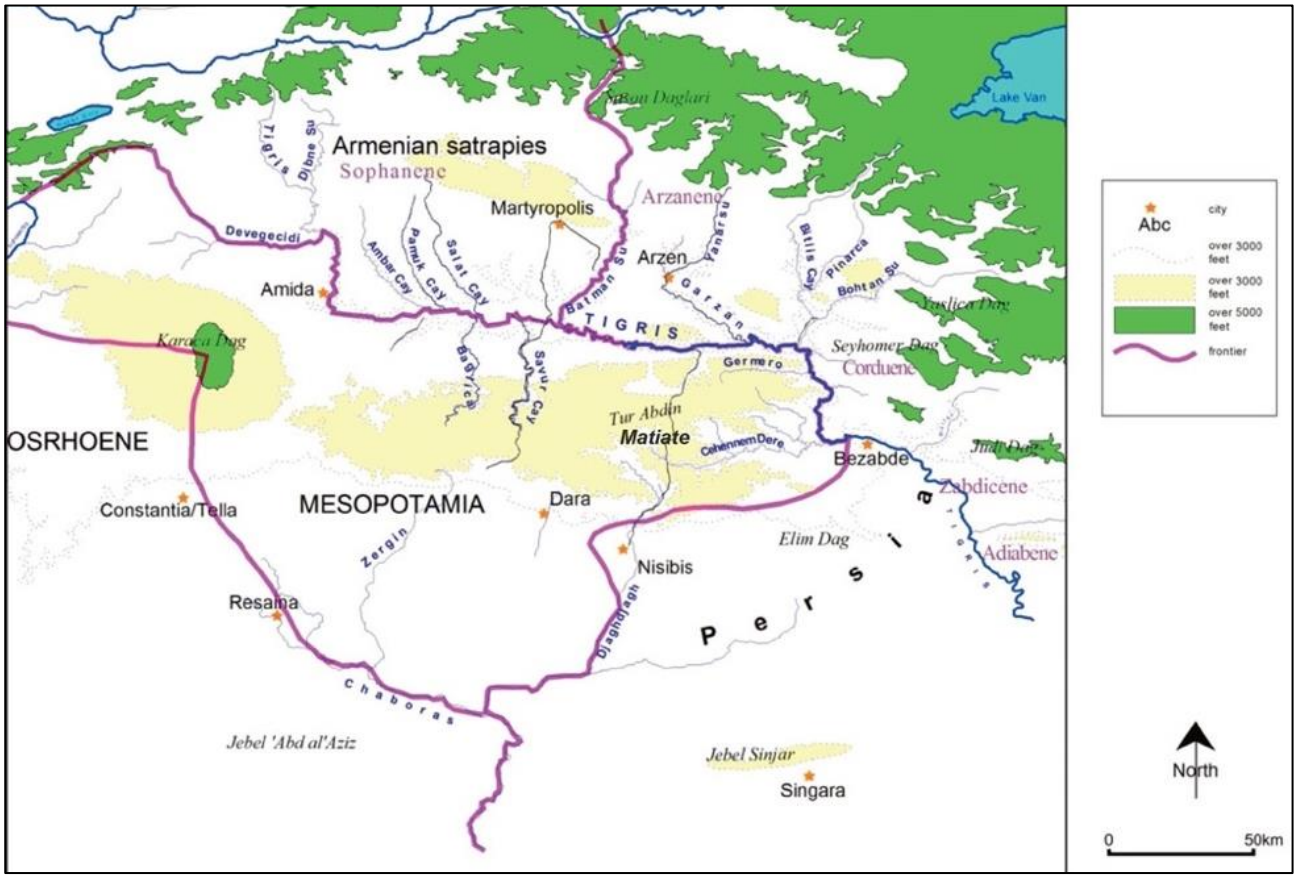


Fig. 2. The map of the archaeological site of Matiate in the Tur Abdin region (Excavation archive)

The ancient name of Midyat is mentioned as Matiate or Matuyatu in Assyrian inscriptions (Bryce, 2009, p. 338; Laneri, 2018, p. 228). The earliest data about the underground city dates back to the Assyrian period. The city of Matiate is found in texts dating to the Ashurnasirpal II and Shalmaneser III periods. The Babylonia village, which is close to the Syrian border, 20 km southwest of Cizre is cited as the region of Subnat. Here, both steles were found from the Assyrian period. While one of the steles is missing, the other is preserved in the Adana Museum (Erkanal, 2007, p. 3).

After leaving the Subnat region, on the way to Kaschiari region, the Ishtarate road is used and then the city of Kibaki is reached (Olmstead, 1918, p. 236). Kibaki is defined as the village of Kivah. It is located 25 km west of İdil in Şırnak (Kessler, 1978, p. 102; Reade, 1982, p. 46; Erkanal, 2007, p. 3). Ashurnasirpal II camped in the city of Kibaki with his army and taxed the city (Bryce, 2009, p. 338). After Kibaki, the city of Matiate was captured. It is stated that when the city was captured by the Assyrians, the settlement consisted of rock and a stele was erected on which the figure of king Ashurnasirpal II was engraved (Olmstead, 1918, p. 236).

The following information about Matiate in the Ashurnasirpal period: “After leaving Kibaki, I approached Matiate. I have occupied the city of Matiate. I defeated around 2800 soldiers and got a lot of loot. I forgave those who ran away from me and then fell at my feet. I let them stay at home. But I put my officer on their heads, attaching themselves to heavy war reparations. I engraved my relief on a stele and had my achievements written on it. I had this stele erected at Matiate. Then I occupied the Maşula castle and two settlements. I took a lot of loot by defeating 300 soldiers in battle. Then I destroyed everything by burning” (Erkanal, 2007, p. 3). It is known from written sources that Shalmaneser III also organized a campaign against Midyat. In wiritten sources, information about the expedition is given as follows: “I crossed the Ishtarate road and walked over the land of Yatu. I have completely occupied the land of Yatu. I have obtained a large amount of loot” (Erkanal, 2007, pp. 3-4). While “Yatu” is mentioned in the inscription, the identification mark, which means “country” in Sumerian, is used. The Akkadian equivalent of the sign is “Matu”. In the texts of Shalmaneser (858-824 BC), Matiate’s name is mentioned as Matuyatu (Erkanal, 2007, p. 4). Excavations have been carried out in two areas in the underground city. This is the Estel part of Midyat as a location. Architectural elements related to both production and storage was identified in two areas.

The underground city was built in catacomb architecture. Catacombs were built as galleries in the first years of Christianity’s spread in Rome. Although these galleries were first designed as burial areas, after that, galleries were converted into living spaces. According to Serin’s report, as far as is known from the legends, it is known that the first Christians who took refuge in these places, escaping from the massacres carried out by the Roman emperors against Christians, from the time of emperor Nero to Diocletian, not only fulfilled their burial requirements and related religious rituals in the catacombs, but also spent their lives here (Serin, 2019, p. 287). Massacre policies must have forced people to settle in more protected areas. Matiate also contains multiple functional units, just like Rome catacomb.

The excavations were carried out in two sections on an area of approximately 3500 square meters. It is planned to expand the work. The underground city was built to accommodate approximately 50000 people. This number was calculated as an estimate based on the surface area of the settled settlement. During the excavations, archaeological material dating back to the 2nd century AD has been found so far. It is known from existing inscriptions that the origin of the city dates back to the Assyrian period. It is possible to find artifacts dating back to the early period through excavations.

Wine Presses

As a pressing technique, the grapes were crushed by foot and the juice was extracted with press machines, then left to ferment in the containers where wine was stored. The juice obtained from the grapes, which were crushed with feet and then pressed, would fill wine vessels below through the holes in the pool. While the quality of wine obtained from the juice of the first grapes is high, the quality of wine obtained from the later pressings is lower. The grape pulp and skins were mixed with hot water again, and second quality wine or vinegar was obtained. In the final stage of wine, the fermentation stage, the juices of the grapes transferred to the pool are transferred to the containers where the wine will be stored. After the waiting phase, the sugar in the grape juice turns into alcohol and carbon dioxide over time. The amount of sugar determines the percentage of alcohol in it. Wine, whose fermentation period is over, is filtered through a fine cloth into amphorae that are completely

coated with resin. These amphorae were left to rest in place, not exposed to light and heat. There are numerous studies on pressing methods and fermentation processes in antiquity (Frankel, 1999, p. 180; Aydınoğlu, 2009, p. 18; Diler, 2010, p. 135; Waliszewski, 2014; Uygun et al., 2015, p. 501; Dodd, 2020; Brun, 2020, p. 3).

The pressing method has three techniques. The production was carried out using methods such as screw press, wedge press, and lever press (Frankel, 1997, p. 73). The screw press, commonly used in Rome and Byzantium, consisted of a wooden block or a large screw-shaped apparatus (Frankel, 1992, p. 48). The wooden block was rotated so that the apparatus directly pressed the grapes and crushed them (Erickson-Gini & Mamalya, 2022, p. 143). There is no written information about the wedge press (Baratta, 2005, p. 66). This method is known from the wall paintings of the house of Vettii in Pompeii (Fig. 3). The wedge press allows grapes to be crushed with a system placed between two vertical timbers.

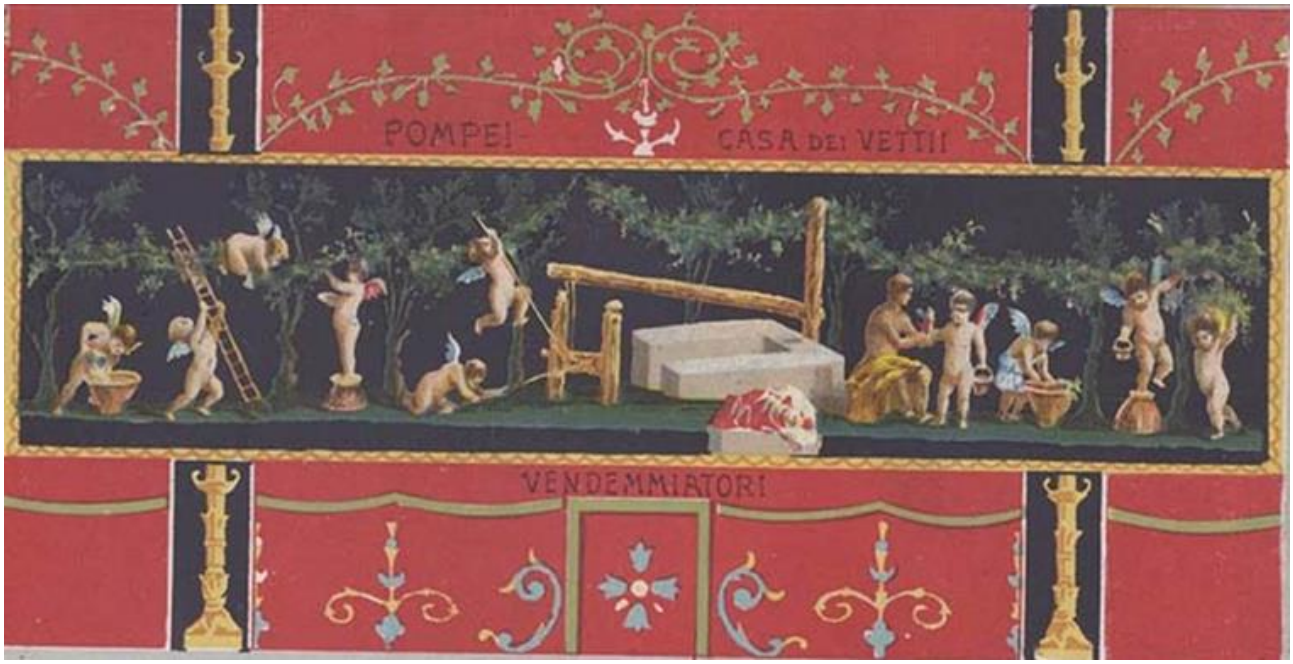


Fig. 3. *The demonstration of production technique in Pompeii (www.pompeiiinpictures.com/pompeiiinpictures/R6/6%2015%2001%20cupids%20p2.htm)*

The lever press method is known from the depiction of an Attic vase (Koparal & İplikçi, 2004, p. 225, fig. 7). We see that the grapes are crushed with the power obtained from the weight held by a wooden beam fixed to the wall at one end and pulled with the help of a rope (Ayalon, 2015, p. 101). Numerous examples of press weights are known in Asia Minor. The press weight found in Örenarkası is also an example (Fig. 4).

Fig. 4. *Press weight from Örenarkası (Laflı, 2017, fig. 11)*

Assyrians are one of the important ethnic groups of the region. The technique of squeezing vessel was mostly preferred by Syriac. They have been producing traditional wine for century. The grapes are filled into cauldrons placed in the courtyard of the house. The grapes are kept in the cauldron for a week and dried. After that, it is placed in squeezing vessel. Wine press is a unique device used to extract-squeeze juice from grapes before the winemaking process can start. There are a number of different styles and sizes of grape presses used by winemakers, but their overall function is the same. Then, grape juice is filled into containers and left to rest under suitable environmental conditions. It does not contain additives. It takes 40 days to mature. Finally, it is ready to drink.

The elements of architectural buildings that serve as storage and workshops can be seen in more than one place in Matiate. The grape workshop is located in the southern part of the corridor in the building a-1 (Fig. 5). Production was provided with the silo and technical mechanism opening to the ground from the south. The southern silo has a mouth diameter of 70x50 cm and a depth of 120 cm. Raw material is transferred from the silo to the pressing area through the channel opened on the floor. The material used in the pressing area was probably wood, so it has not survived to the present day. The existence of the pressing area can be proven through the mechanism holes opened into the ground. It is known that there were grape workshops in many ancient cities in Anatolia. It is known that a similar practice existed in the Gözlengiç winery in the ancient city of Tlos (Fig. 6).

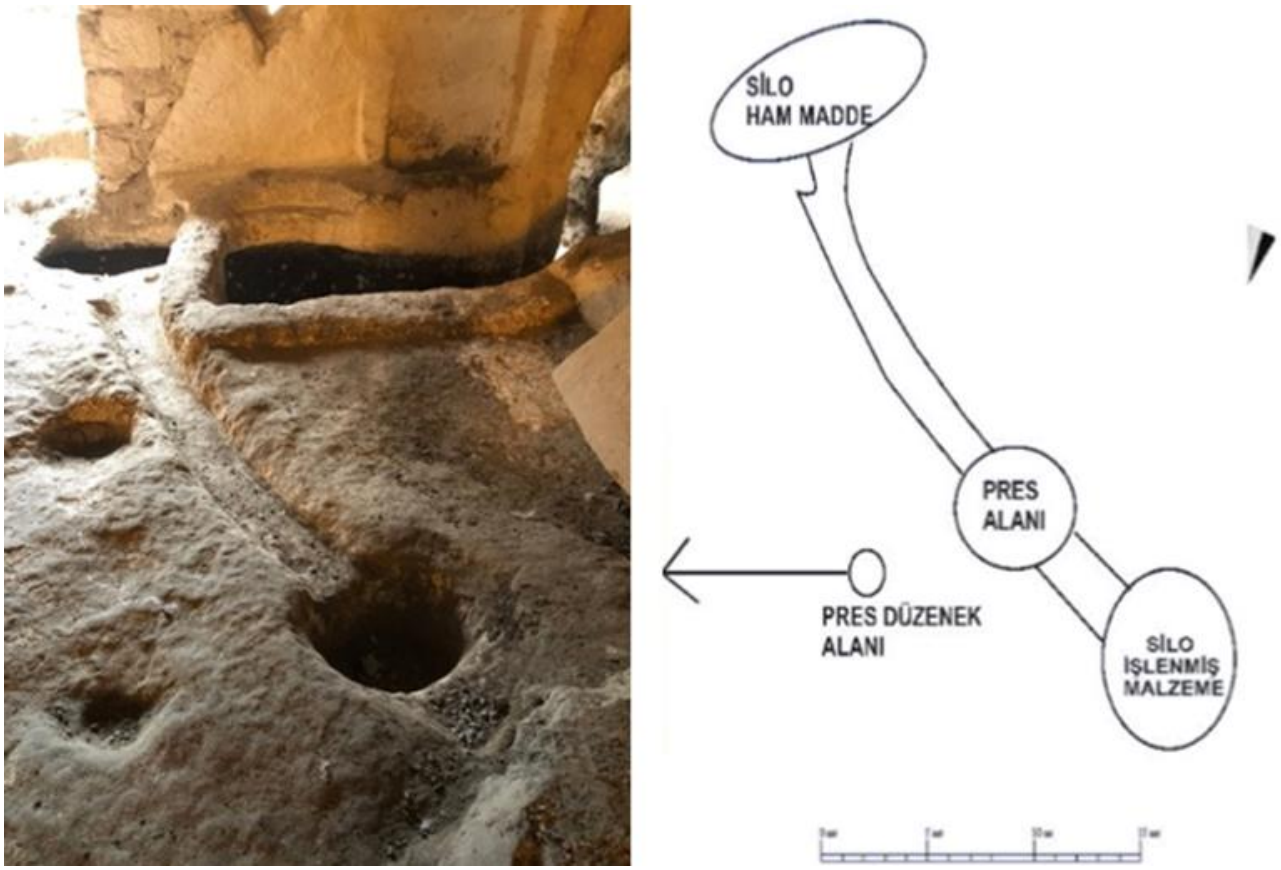


Fig. 5. *The workshop arrangement in building a-1 (Excavation archive)*

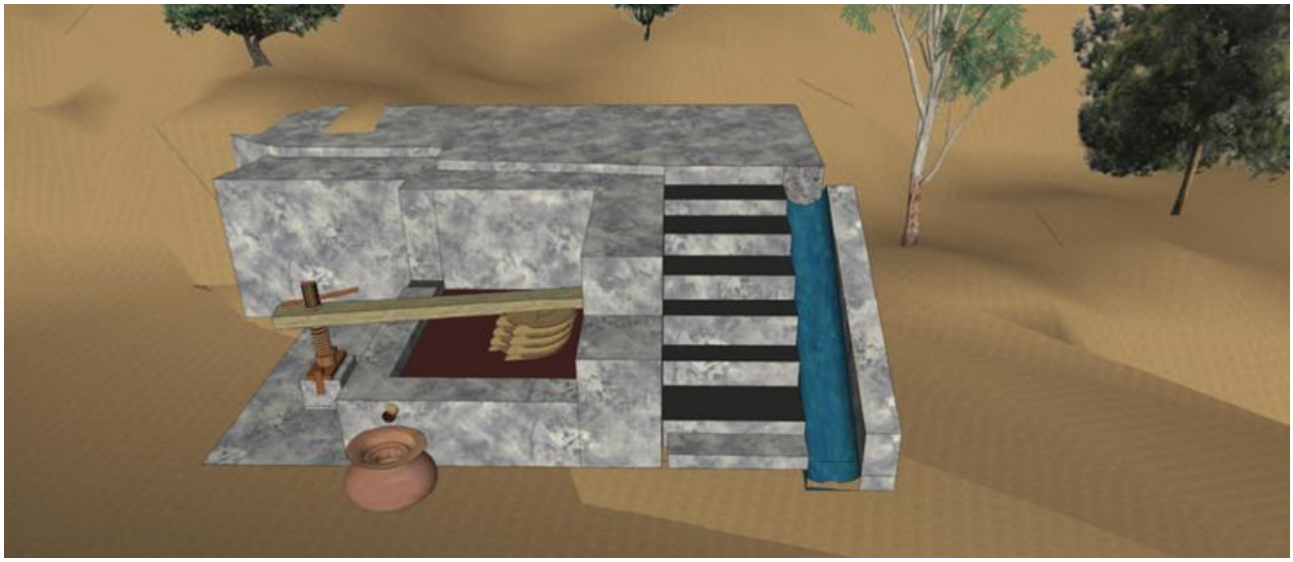


Fig. 6. *The model of wine workshop in Gözlengiç (Uygun et al., 2015, fig. 12)*

The workshops in the ancient city of Perre are carved directly into the rock and have a similar quality (Yağız et al., 2022, p. 147). Wine press of the city of Olba has a round form and is another example in a similar context carved into the rock (Fig. 7). The Karakabaklı press was built using the same technique (Fig. 8). It is known that this type of production mechanism is other than Anatolia. The workshops carved into the rocks can be followed in the Park of Aijalon (Hirschfeld, 1983, fig. 23). Another silo is located after the pressing area. The pressed grapes were stored there. The silo's mouth diameter is 74 cm and its depth is 220 cm. Production was carried out using the wedge press method. First of all, the grapes stored in the northern silo were crushed. Then it was pressed with the wedge system. After it was pressed, it was stored in the south silo.

Fig. 7. *The workshop in Olba (Yeğin, 2016, fig. 4)*

Fig. 8. *The workshop in Karakabaklı (Çakmak, 2010, fig. ü-4)*

Undoubtedly, one of the most important elements in production organizations is storage. The silos (7 pieces) were built to store materials in the building a-4 (Fig. 9). The walls of silos are plastered. Plastered walls are a precaution taken against insect infestation. There are 4 niches and 3 klines on the walls of the building. The building was carved into the main rock in a circular form. It is 9.60 meters in the south-north direction and 8.90 meters in the east-west extension. The height of the building is 2.25 meters. The entrance to the building was via a-5. The primary problem is moisture in storage. Moisture allows bacteria to grow. Therefore, the consistency and taste of the product changes. It is seen that the silos are plastered with lime in order to prevent the product from spoiling. Temperature is very important in storage. Measurements were made in summer and winter. It was determined that the temperature was between 5 and 10°C degrees in both seasons in ancient city of Matiate. The type of rock is a big factor in ambient temperature. It is an ideal amount of heat for storing the product.

Fig. 9. *The silos in the building a-4 (Excavation archive)*

Fig. 10. *The photo of building a-10 (Excavation archive)*

Another workshop was identified in the building a-10 (Fig. 10). The building had two phases of use. First of all, the building was used as a workshop and dates back to the Late Roman Period (3rd and 4th centuries AD). Cilicia and Cyprus type ceramics support the dating criteria. In its final phase, the building was converted into a religious place. The workshop was transformed into a pool, which is interpreted as a Mikveh. According to Ersun, the building acquired a Jewish religious character in its secondary use (Ersun, 2024, pp. 33-34).

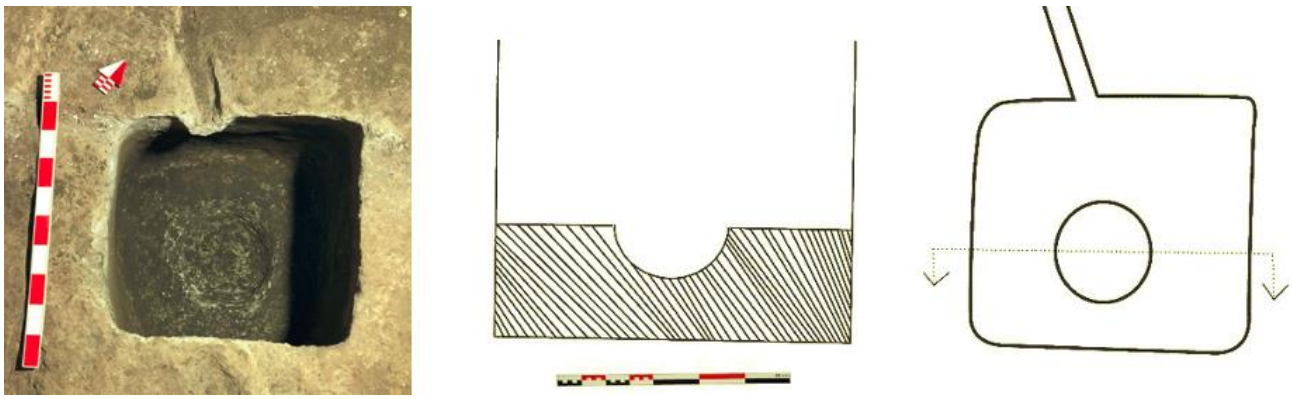


Fig. 11. *The photograph showing the cross-section and plan of the i-2 workshop (Excavation archive)*

The workshop is defined as i-2 (Fig. 11). The mouth diameter of the workshop is 92x82 cm. A building element with a depth of 40 cm is included at the base level. The screw press was used here. A hole was opened in the ground for the screwing technique. The production was carried out using the screw press with the help of a wooden mechanism. By rotating the wooden block, the apparatus directly pressed the grapes and crushed them. After the grapes were crushed, they were taken to storage areas and left to rest. Finally, it was filled into amphorae. A large number of amphorae pieces were found. The find of ceramics unearthed support this situation. The screw press can be followed in the ancient city of Amorium (Fig. 12). The square form carved into the ground and the similar mechanism can be seen in Eretz (Ben Zvi, 2012, p. 30).

Fig. 12. *The workshop in Amorium (Lightfoot, 2007, fig. 2*)

Organization

The city's economy is based on viticulture and wine production. For the Assyrians (Syriac), with a history of 5000 years, the Tur Abdin region is as important as Jerusalem (Dikçınar & Yazgan, 2009, p. 81). Today, as in the past, wine production and import are largely carried out by Assyrians in the region. This situation is the continuity of the tradition from the past. This adventure of wine started in Mesopotamia in the 4th millennium BC (Laneri, 2018, p. 225). The production and import had a high value in Mesopotamia and surrounding cultures. Wine production was part of the socio-economic activities of the settled communities in the Tur Abdin region. Matiate was one of the settlements where wine was produced and with this feature, the city became a frequent destination for Mesopotamian elites or merchants (Forlanini, 2006, p. 148). Since the Assyrians, the region has been a common stop for merchants and also a transit route for mineral trade extending to eastern Anatolia.

Mesopotamian traders were importing wine in the region. The cities of Matiate and Carchemish were the main settlements of the import organization. Carchemish was the first settlement that merchants came into contact with in their trading activities. A road network had to be followed to reach the city of Matiate. After the city of Carchemish, the next station was Edessa. After that, the city of Dunaysır was reached via Tella and Resaina. Finally, the person who reached the city of Matiate was carrying out her commercial activities. As in the past, the region where the city of Matiate is located continues its winegrowing activities today.

The geopolitical locations of cities are important in both domestic and foreign markets for exporting products. Matiate's location on trade routes is important for selling its products to foreign markets. In the trade process, the inhabitants of Matiate first paid their taxes with wine. After that, surplus product continued to be exported. Matiate was the stopping point for traders coming from Mesopotamia. Both Palmer and Forlanini support the case for trade organization in the light of archaeological data (Palmer, 1990, p. 1; Forlanini, 2006, p. 148).

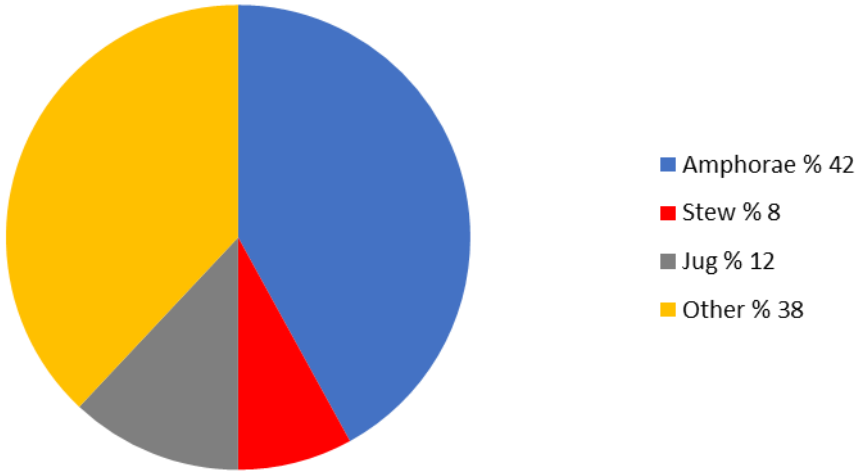


Table 1. *The table of ceramic distribution in Matiate (Excavation archive)*

It is seen that the amphorae have a high percentage in the ceramic distribution (Table 1). The ceramics unearthed during the excavations carried out in 2020 and 2021 were statistically evaluated. First of all, the ceramics were cleaned. After the cleaning process, they were grouped according to their forms. Then, the determining factors that reveal the characteristic features of ceramics were examined. Raw material content and provenance are the main determining features in detection process. In addition to, shaping and cooking properties are other determinants.

As it known, amphorae were preferred both storage and import organization in ancient period. Amphorae, which have survived to the present day in various forms, were used to carry grain, olives, oil and wine. The percentage of amphorae show that the stocking and distribution of the product was mostly organized through this container. Amphorae are not locally produced. It is the type found in the Cyprus and Cilicia region. It is from the Zemer 41 and LR1 type product group. The productions of this type of amphorae were particularly widespread between the 1st and 4th century AD (Söğüt, 2024, pp. 223-224).

Conclusion

The main source of income of Matiate residents was based on production. As it is known, grapes are an agricultural product that does not require much irrigation. Although limited water resources in the region, it is a product that can be produced efficiently. The raw material obtained was first stored in silos and pressed. Then, wine production took place and it was circulated through trade. Trade was the basic of the regional economy. Today, this situaiton is as important for the development of the region as it was in the past.

Wine is an instrument that is always seen in ritual scenes. The earliest examples of this situation were found in Mesopotamia and surrounding cultures in the 4th millennium BC (Laneri, 2018, p. 225). In addition to ritual scenes, it is a product frequently encountered in daily life. Wine had a high import value in ancient times. Matiate was an important location for wine production. The existence of commercial relations with Mesopotamia was known. The workshops and silos prove the existence of production.

The workshop in a-1 is one of the building elements where production takes place. In this system, primarily the grapes that were driven from the silo to the canal were pressed with the help of a wooden mechanism and stacked in the silo. Because the mechanism is wooden, it has probably not survived. Numerous examples of wooden mechanisms are known in Anatolia. Wine was also produced in the i-2 workshop. The workshop was dated to the late Roman period (3rd and 4th centuries AD). The function of the place was changed in the 4th century AD. The building has acquired a religious character, and the workshop was turned into a pool called Mikveh. Its conversion into a religious building must have likely negatively impacted production.

The existence of two workshops has been revealed in the underground city so far. Matiate is one of the important cities of the Tur Abdin region and spreads over a very wide area. It is thought that the number of

examples will increase with research conducted in the coming years. It is concluded that the inhabitants of Matiate used two methods in wine production, based on the existing workshops. While the wedge press was used for production in workshop a-1, It was carried out using the screw press in workshop a-10. The use of both techniques can be proven with the help of existing workshops.

Because it is functional, screw press was frequently preferred in the late Roman period. The apparatus applied direct pressure to the grapes by rotating the wooden block for screw press. On the other hand, the wedge press required more human intervention. For this reason, the wedge press should be more preferred. Ceramic density also reveals that screw method is more preferred.

There is limited information on ancient Greco-Roman viticulture in the Southeastern and Eastern Anatolia. A large number of wine stocks were found preserved in cistern dug into the ground and plastered with mud in the city of Koenes on the left bank of Tigris. In addition to, wine called Monarites was produced in Melitene and was of very high quality (Laflı, 2017, p. 30). Another location for traders coming from Mesopotamia was the city of Carchemish (Laneri, 2018, p. 228). The settlement where similar workshop existed was Perre. On the eastern border of Rome, trade activities extended from Edessa to the city of Matiate. The existence of similar workshops indicates a trend in economic relations between cities.

Production and export were important factors in the basic of socio-economic relations. First of all, wine was transported from the city of Matiate to the Dunaysır. After that, it was exported via Tella, Edessa and Carchemish. As a result, it was distributed to the cities of Mesopotamia. Trade organization takes place on the route mentioned here. The economy of the city has been based on viticulture activities since the Assyrians. Therefore, architectural elements and written records strengthen the possibility of wine production and export.

The typology of ceramic vessel has been revealed in this study. The ceramic group was dated to the late Roman period (3rd and 4th centuries AD). Amphorae type has a ratio of 42 %. The majority of amphorae have pointed bottom. The use of pointed-bottomed amphorae is common in Mesopotamian and Asia Minor cities. The stew has a distribution of 8 %. The Jug has a rate of 12 %. 38 % of the forms could not be grouped because it was found in small pieces that did not show a profile. The percentage of amphorae within the find group support to the possibility the trade organization.

It is aimed to make the workshops functional in the coming years with the experimental archaeology method. Archaeobotanical material didn’t find in the building. Therefore, chemical analysis could not be performed. However, if new workshops find, chemical analyses can be carried out in Matiate. In addition to, it is aimed to reveal the regional differences in ceramics.

Ethics Committee Approval: Ethics committee approval is not required.
Peer-review: Externally peer-reviewed.
Conflict of Interest: The author has no conflicts of interest to declare.
Financial Disclosure: The author declared that this study has no financial support.

References

Akgül, A., Şenol, G. S., Yıldırım, H., Seçmen, Ö., & Doğan, Y. (2018). An ethnobotanical study in Midyat (Turkey), a city on the Silk Road where cultures meet. *Journal of Ethnobiology and Ethnomedicine*, *14*(12), 1-18. https://doi.org/10.1186/s13002-017-0201-8

Ayalon, E. (2015). Twin-screw olive oil presses from Israel. *Israel Exploration Journal, 65*(1), 100–110.

Aydınoğlu, Ü. (2009). *Dağlık Kilikia bölgesinde antik çağda zeytinyağı ve şarap üretimi : Üretimin arkeolojik kanıtları*. Zero Books.

Baratta, G. (2005). *Römische kelteranlagen auf der Italienischen halbinsel*. Tabularium.

Ben Zvi, I. (2012). Wine production in Eretz Israel in antiquity: Advancement in research or a completely new approach. E. Ayalon, R. Frankel & A. Kloner (Eds.), *Cathedra: For the history of Eretz Israel and its Yishuv* (pp.15–36). Irm.

Bowden, W., & Lavan, L. (2004). *Recent research on the late antique countryside*. Brill.

Brun, J.P. (2020). From oil to wine? A balanced view on the production of the most representative agricultural products of antiquity. N. Garnier & G. Olcese (Eds.), *Making wine in western-Mediterranean, production and the trade of amphorae: Some new data from Italy* (pp. 3-22). Propylaeum.

Bryce, T. (2009). *The routledge handbook of the peoples and places of ancient western Asia: The near east from the early bronze age to the fall of the Persian empire*. Routledge.

Comfort, A. (2017). Fortresses of the Tur Abdin and the confrontation between Rome and Persia. *Anatolian Studies*, (67), 181-229.

Çakmak, Ü. (2010). *Dağlık Kilikia bölgesin'nde Karakabaklı antik yerleşimi: Arkeolojik buluntular, bölgesel yerleşim düzenlemesi ve tarımsal organizasyon açısından incelenmesi* [Unpublished Master's Thesis]. Mersin University.

Çevik, A. (2007). İlkçağlardan orta çağın sonuna kadar Midyat ve yöresi (Tur Abdin)'nin tarihi coğrafyası. İ. Özcoşar (Ed.), *Makalelerle tarih I, tarih-coğrafya* (pp. 105-140). Mardin Tarihi İhtisas Kütüphanesi.

Dikçınar, S. B., & Yazgan, G. A. (2009). Uniformification of urban spaces: The Midyat case. *Megaron*, 4(2), 79-89.

Diler, A. (2010). Olive oil and wine production of the Halikarnassos Peninsula in Karia. AK Şenol & Ü. Aydınoğlu (Eds.), *Olive oil and wine production in Anatolia during antiquity* (pp. 135–174). Zero Books.

Dodd, E. (2020). *Roman and late antique wine production in the eastern Mediterranean: A comparative archaeological study at Antiochia ad Cragum and Delos*. Archaeopress.

Dodd, E., & Limbergen, D. V. (2014). *Methods in ancient wine archaeology: Scientific approaches in Roman contexts*. Bloomsbury Publishing.

Erickson Gini, T., & Mamalya, H. (2022). A late Roman caravanserai and early Byzantine winepress near Be'er Mas'abim (Bir 'Asluj) in the central Negev. A. Golani, D. Varga, Y. Tchekhanovets & M. Birkenfeld (Eds.), Archaeological *excavations and research studies in southern Israel* (pp. 139-167). Ben-Gurion University of the Negev.

Erkanal, H. (2007). Mezopotamya'ya açılan kapı: Nusaybin. İ. Özcoşar (Ed.), *Makalelerle tarih I, tarih-coğrafya* (pp. 1-16). Mardin Tarihi İhtisas Kütüphanesi.

Ernest, J. W. H., Mundell, M. C., & Mango, C. (1973). The mosaics of the monastery of Mar Samuel, Mar Simeon and Mar Gabriel near Katmin with a note on the Greek inscription. *Dumbarton Oaks Papers*, (27), 279-296.

Ersun, D. (2024). Figür ve mekân ilişkisi: Matiate şehri örneği. *Journal of Literature and Humanities*, (73), 28–35. https://doi.org/10.55590/ literatureandhumanities.1458730

Forlanini, M. (2006). Etapes et itineraries entre Assur et l'Anatolie des marchands paleo-a-Assyriens : Nouveaux documents et nouveaux problems. *Kaskal*, (3), 147-175.

Frankel, R. (1992). Some oil presses from western Galilee. *Bulletin of the American Schools of Oriental Research*, (286), 39–71.

Frankel, R. (1997). Presses for oil and wine in the southern Levant in the Byzantine period. *Dumbarton Oaks Papers*, (51), 73–84.

Frankel, R. (1999). *Wine and oil production in antiquity in Israel and other Mediterranean countries*. Sheffield Academic Press.

Ghazal, A., & Hanssen, J. (2021). *The Oxford handbook of contemporary Middle Eastern and North African history*. Oxford University Press.

Güneş, H. (2012). Tur Abdin yöresinin islamlaşma süreci. *Şırnak Üniversitesi İlahiyat Fakültesi Dergisi*, *3*(6), 71-101.

Hirschfeld, Y. (1983). Ancient wine presses in the park of Aijalon. *Israel Exploration Journal*, *33*(3), 207-218.

Hitchner, R. B. (2022). *A companion to North Africa in antiquity*. John Wiley.

Kessler, K. (1978). Nawala und Nabula. *Archiv für Orientforschung*, (26), 99-103.

Koparal, E., & İplikçi, E. (2004). Archaic olive oil extraction plant in Klazomenai. A. Moustaka, ME Skarlatidou, MC Tazannes & Y. Ersoy (Eds.), *Klazomenai, Teos and Abdera: Metropoleis and colony* (pp. 221-234). Archaeological Museum of Abdera.

Korkut, T., & Elyiğit, U. (2018). Günümüz Süryani dini mimarisi araştırmaları. *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi*, *5*(6), 35-47.

Laflı, E. (2017). Antik Hellen ve Roma dönemlerinde Anadolu'da bağcılık ve şarapçılık. E. Akpınar & E. Tükenmez (Eds.), *Üzümün Akdeniz'deki yolculuğu I: Tarih öncesi ve antik çağlarda üzüm, bağcılık ve şarapçılık* (pp. 19-40). Dinç Ofset.

Laneri, N. (2018). The Impact of wine production in the social transformation of northern Mesopotamian societies during the third and second millennia BC. *Die Welt des Orients*, *48*(2), 225-237.

Lightfoot, C. (2007). Trade and industry in Byzantine Anatolia: The evidence from Amorium. *Dumbarton Oaks Papers*, (61), 269–286.

Luckenbill, D. D. (1927). *Ancient records of Assyria and Babylonia I*. The University of Chicago Press.

Mcgovern, P. E. (2019). *Ancient wine: The search for the origins of viniculture*. Princeton University Press.

Olmstead, A. T. (1918). The calculated frightfulness of Ashur Nasir Apal. *Journal of the American Oriental Society*, (38), 209–263.

Palmer, A. (1990). *Monk and Mason on the Tigris frontier*. Cambridge University Press.

Papakonstantinou, Z. (2009). Wine and wine drinking in the Homeric world. *L'Antiquité Classique*, (78), 1-24.

Reade, J. E. (1982). Reviewed work(s): Untersuchungen zur historischen topographie Nordmesopotamiens nach keilschriftlichen quellen des 1. jahrtausends v. chr. beihefte zum tübinger atlas des vorderen orients, reihe b nr. 26 by Karlheinz Kessler. *Die Welt des Orients*, (13), 146-147.

Serin, U. (2019). Erken Hıristiyanlıkta ritüel, simge ve kimlik: Mekânsal bir çerçeve olarak 'Katakomb'lar. topoğrafya, mimari ve ikonografya üzerine bazı değerlendirmeler. *Arkeoloji'de Ritüel ve Toplum,* (5), 285-318.

Söğüt, Y. (2024). Mersin 34. cadde kazısı Roma ve geç antik dönem ticari amphoraları. *The Journal of Ceramic Research*, (6), 220–251. https://doi.org/10.55061/srmka.1567986

Uygun, Ç., Özdemir, B., & Sezgin, K. (2015). Zeytin ve şarap işlikleri. T. Korkut (Ed.), *Arkeoloji, epiğrafi, jeoloji, doğal ve kültürel peyzaj yapısıyla Tlos antik kenti ve teritoryumu* (pp. 496-501). Seydikemer Kaymakamlığı.

Waliszewski, T. (2014). *Elaion: Olive oil production in Roman and Byzantine Syria Palestine (Polish center of Mediterranean archaeology/monograph)*. Archeobooks.

Wallis Budge, E. A. (2005). *Annals of the kings of Assyria: The cuneiform texts with translations and transliterations from the original documents*. Columbia University Press.

Yağiz, K., Tosun, M., & Doğan, T. (2022). Seramik buluntuları işığında Perre işliklerinin kullanım evreleri üzerine bir ön değerlendirme. *Höyük*, (10), 145-175. https://doi.org/10.37879/hoyuk.2022.2.145

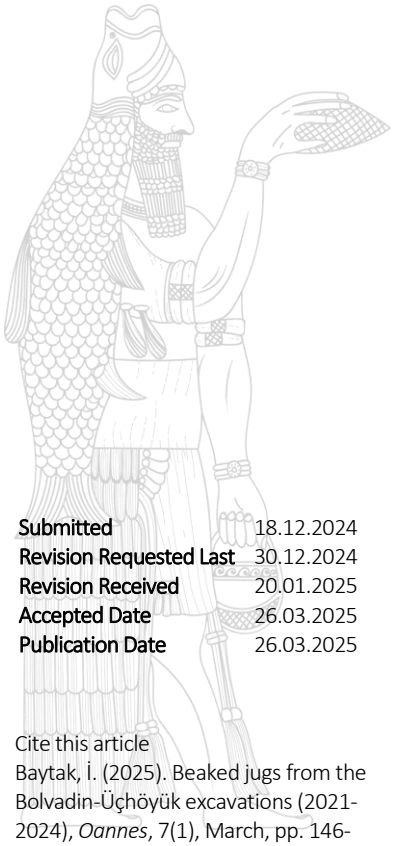
Yeğin, Y. (2016). Olba manastırı'nda işlik kazısı ve sonuçların değerlendirilmesi. *Seleucia ad Calycadnum*, (6), 203-220.

OANNES
2025, 7(1) March
Research Article
DOI: 10.33469/oannes.1603543

Beaked Jugs from the Bolvadin-Üçhöyük Excavations (2021-2024)

İsmail BAYTAK
Corresponding Author

Department of History, Dicle University, Sezai Karakoç Faculty of Literature, Diyarbakır, Türkiye.
ismail.baytak@dicle.edu.tr



Submitted	18.12.2024
Revision Requested Last	30.12.2024
Revision Received	20.01.2025
Accepted Date	26.03.2025
Publication Date	26.03.2025

Cite this article
Baytak, İ. (2025). Beaked jugs from the Bolvadin-Üçhöyük excavations (2021-2024), *Oannes*, 7(1), March, pp. 146-175.

Abstract

This study presents a typological analysis of the beaked-mouthed jugs discovered during the 2021-2024 excavations at the Bolvadin Üçhöyük site in Afyonkarahisar province, offering significant findings on their morphological and functional characteristics. The majority of the examined specimens show influences from nearby cultural groups in the Aegean, Western, Inner Western, and Central Anatolian regions, based on the evaluation of regional boundaries. In our study, the cultural and historical processes of the region, indexed to materials, are examined from the Middle Bronze Age to the end of the Late Bronze Age. When evaluating, the widespread presence of beaked-mouthed jugs, particularly during the Assyrian Trade Colony Period, became widespread and appear in various forms across different Anatolian settlements, providing valuable insights into the period's trade and cultural interactions. The 88 beaked-mouthed jug samples identified during the excavations highlight Üçhöyük as a significant settlement, offering in-depth information on trade, production, and cultural exchange in the region. Understanding the usage and distribution of these jugs in their historical context is crucial for a better analysis of the region's social and economic structure. These jugs, produced in different clay and glaze types, colors, and techniques, feature burnished surfaces and handmade mouths, while the other parts are crafted using wheel-made techniques.

Keywords: *Beaked jug / Beak-mouthed, Middle Bronze Age, Pottery, Western Anatolia, Bolvadin Üçhöyük.*

Genişletilmiş Özet

Afyonkarahisar ili Bolvadin ilçesinde yer alan Üçhöyük, 2021-2024 yılları arasında yapılan kazılarda, bölgenin eski çağ tarihini anlamak adına önemli veriler sunan gaga ağızlı testiler gibi dikkat çekici arkeolojik buluntulara ev sahipliği yapmıştır. Bu çalışmanın temel amacı, Bolvadin-Üçhöyük (bundan sonra Üçhöyük) kazılarında ele geçen gaga ağızlı testilerin tipolojik analizini yapmak, gelişim süreçlerini incelemek ve kullanım amaçlarına dair çıkarımlarda bulunmaktır. Çalışma, Tunç Çağı'nın ortalarından başlayarak çok geniş bir tarihsel perspektife sahip olup, bu süreçte Anadolu'nun farklı kültürel evrelerine de ışık tutmakla beraber çağdaş olarak, Asur Ticaret Kolonileri Çağı, Eski Hitit ve Hitit İmparatorluk Dönemlerini de kapsamaktadır. Bu bağlamda, ele aldığımız "gaga ağızlı testiler", Anadolu'daki farklı bölgeler arasındaki kültürel etkileşimleri, ticaret ağlarını ve üretim süreçlerini gözler önüne sermektedir. Özellikle, bu seramiklerin Anadolu'nun çeşitli yerleşimlerinde üretildiği ve kullanıldığı, dönemin ticaret yollarını da belirleyen önemli veriler sunmaktadır. Dolayısıyla bu durum, Üçhöyük'ün yalnızca yerel değil, aynı zamanda bölgesel bir yerleşim yeri olduğunu da ortaya koymaktadır.

Gaga ağızlı testiler, Anadolu'nun Ege, Batı Anadolu, İç Batı Anadolu ve Orta Anadolu gibi farklı bölgelerindeki kültürel gruplardan etkilendiğini gösteren önemli buluntulardır. Gaga ağızlı testilerin tarihsel bağlamı ve kültürel etkileşimlerine baktığımızda, MÖ 2. Binyılda, Orta Tunç Çağı'ndan başlayarak Geç Tunç Çağı'nın sonlarına kadar Anadolu'nun çeşitli bölgelerinde yaygın olarak kullanılan seramik türlerinden olduğu görülebilmektedir (Koçak et al., 2019; Oy 2011, pp. 311-335). Sadece günlük yaşamın bir parçası olarak değil, aynı zamanda ritüel amaçlarla da kullanılmış olan bu seramiklerin farklı biçimlerinin ve işlevlerinin, dönemin toplumsal yapıları ve kültürel etkileşimleri hakkında değerli ipuçları ortaya koymaktadır. Bölgesel yayılım ve ticaret yolları bakımından gaga ağızlı testiler, Anadolu'nun farklı bölgelerinde yaygın bir şekilde bulunmuş ve kullanılmıştır. Ayrıca, bu testilerin üretilip ticaret aracılığıyla geniş bir coğrafyaya yayıldığı görülmektedir. Üçhöyük'te bulunan gaga ağızlı testilerin özellikle ticaret yolları ile olan ilişkisi dikkat çekicidir. Çalışma, bu testilerin üretim merkezlerinden yerleşim yerlerine nasıl taşındığına dair yeni bulgular sunmaktadır. Gaga ağızlı testilerin yayılımı, dönemin ticaret ağlarının ve kültürel etkileşimlerin anlaşılmasında kritik bir öneme sahiptir. Çeşitli yerleşim yerlerinde yapılan kazılar, bu testilerin farklı topluluklar arasında önemli bir ticaret ürünü haline geldiğini göstermektedir. Ayrıca, bu testilerin bölgesel ticaret yolları ve kültürel alışverişlerden etkilendiği, bazı gaga ağızlı testilerin belirli yerleşim yerlerinde üretilip diğer bölgelere satıldığı düşünülmektedir. Bu durum, kültürel etkileşimlerin ve ticaretin dönemin toplumsal yapısındaki önemli rollerini vurgulamaktadır.

Çalışmada yöntem olarak, eserler gaga ağız formlarına göre gruplandırılmış, resim ve çizimlerle tablolar oluşturulmuş ve dönemlere göre sınıflandırılarak buluntuların tipolojisi yapılmıştır. Katalog bölümünde ise her buluntunun tanımı ve ölçüleri yer almaktadır. Söz konusu seramikler, farklı kil türleri, cilalama renkleri, süsleme stilleri ve üretim teknikleri açısından çeşitlilik göstermektedir. Testiler genellikle çarkla yapılmış olmakla birlikte hem estetik hem de fonksiyonel önemi açısından yalnızca kenar ve kulplar elle şekillendirilmiştir. Ayrıca buluntulardaki cilalı yüzeyler, dekoratif özellikler ve işçilik, dönemin sanatsal duyarlılıklarını doğrudan yansıtmaktadır. Bu çalışmanın bulguları, Üçhöyük'teki çalışmaların başlangıcından bu yana çıkan gaga ağızlı seramiğin tipolojik ve fonksiyonel çeşitliliği hakkında önemli veriler sunmaktadır.

Gaga ağızlı testilerin tipolojisi, gaga biçimleri, boyun yapıları, gövde formları ve taban yapılarına göre sınıflandırılır ve bu bölümlerdeki değişim ve dönüşümlere göre kategorize edilir. Ancak bu sınıflandırmalar buluntuların yeri ve bağlamına göre değişebilir. Gaganın biçimi, çoğunlukla gaganın son kısmının aldığı şekle göre belirlenmiş ve bu da testilerin fonksiyonel özellikleriyle doğrudan ilişkilendirilmiştir. Önceki çalışmalarda, örneğin tipolojilerin küçük, orta ve büyük ölçekli gaga ağızlı testiler olarak ayrıldığı Acemhöyük ve sınıflandırmaların boyun, gövde ve taban bölümlerindeki farklılıklara göre yapıldığı Karahöyük'te genellikle bütünüyle değerlendirmiştir. Buna karşın Üçhöyük gaga ağızlı testilerine baktığımızda, ele geçen testi parçaları esas olarak gagadan ve bazı durumlarda boyun kısmından oluşmaktadır (Hüryılmaz 1998). Bu değerlendirme yapılırken yalnızca gaga kısımlarının olması ve bazı gaga bölümlerinin de kırılmış olmaları, gagalarının duruşlarının tanımlanmasını engellemektedir. Bu nedenle, Üçhöyük kazılarında ele geçen mevcut 88 adet gaga ağızlı seramik parçası buluntularla sınırlı olarak yapılan sınıflandırmada, gaga biçimine göre 10 farklı tip oluşturulmuş ve 8 ana tipoloji belirlenmiştir. Alt gruplar hakkında çok fazla ayrıntıya girmeden (sadece Tip 4a-b ve Tip 6a-b), Üçhöyük'teki bu testilerin formları, gaganın sonunda aldığı şekle göre kategorilendirilecek ve toplamda 10 tipoloji için 8 tip ortaya çıkacaktır.

Bu tipolojik çeşitlilik, yerleşim yerlerinde farklı üretim merkezlerinin varlığını ve bu merkezlerin birbirleriyle olan ticaret ilişkilerini yansıtmaktadır. Ayrıca, bu testilerin sosyal ve kültürel işlevleri üzerine yapılan analiz, dönemin toplumsal yapısını daha derinlemesine anlamamıza olanak sağlamaktadır. Üçhöyük kazılarında ele geçen gaga ağızlı testilerin bulguları, testilerin çeşitli işlevler için kullanıldığını ortaya koymaktadır. Çalışma, bu testilerin hem günlük yaşamda hem de ritüel bağlamda nasıl kullanıldığını, üretim tekniklerini ve kültürel etkileşimleri daha iyi anlamamıza katkı sağlamaktadır. Tüm bu faydalarının yanı sıra gelecekte yapılacak kazılar, daha fazla örneğin keşfiyle bu seramiklerin yayılma alanları ve dönemsel farklılıkları hakkında daha fazla bilgi edinilmesini sağlayacak ve bölgenin tarihi yapısına dair daha derinlemesine bir anlayış geliştirecektir. Ayrıca, bu tür seramiklerin incelenmesi, Anadolu'nun eski yerleşimlerinde sosyal yapılar ve ekonomik ilişkiler hakkında önemli ipuçları sunmaya devam edecek, kültürel etkileşimler ve ticaretin rolünü anlamamıza yönelik önemli ipuçları da sunacaktır.

Introduction

The Bolvadin Üçhöyük (hereafter Üçhöyük) settlement in Afyonkarahisar Province is located in an area where the Akarçay River flows into Lake Eber, to the west of the lake (Koçak 2004, p. 31; Koçak et al., 2022b, pp. 293-309; Koçak & Bayramov 2025, pp. 77-115). (Fig.4) This site is of significant importance for the regional stratigraphy, as it has been excavated and studied. The Üçhöyük excavation began as a rescue excavation, continued under scientific consultancy, and was later included in the officially recognized excavations through a presidential decree. The settlement is bordered by Paşadağ-İscehisar-Emirdağ to the north, Çobanlar to the west, Çay to the south, and extends to the Eber Lake region and Akşehir in the east. The region's road connections, specifically the Bolvadin-Sultandağı-Akşehir route, are important in addressing various political, cultural, and economic issues (Koçak 2005, p. 21). The importance of this city has been emphasized, and it is considered one of the most significant centers for textile, wool, and copper trade, alongside Kaneš. Documents associated with the Akkadian Empire, particularly from the Assyrian Trade Colony (ca. 1950-1740 BC, hereafter ATC), mention a city or principality called Puruşhanda in Anatolia at the end of the third millennium BCE (Barjamović 2011). This reference can potentially be clarified through the findings at Üçhöyük (Üyümez et al., 2022, pp. 24-25).

Üçhöyük covers an area of 50 hectares, (Fig.1-2) making it one of the largest Bronze Age settlements in the region and possibly in all of Anatolia. The central location, size, and findings of the settlement have led to a focus on this mound in recent studies. The cultural context of the Üçhöyük settlement, including trade and production, has been explored through systematic surface surveys conducted in areas known as the North Mound, South Mound, West Mound, and the Lower City. During these surveys, spools for spinning and particularly pieces of "goose-necked" pottery were found in abundance (Koçak et al., 2023, pp. 146-147). The settlement not only expands over a large area but also covers a broad geographical space when considering surrounding smaller Bronze Age settlements and their road connections, indicating a wide hinterland that includes places like Dura Yeri and Hacı Murat (Koçak et al., 2022a, p. 48; Urano et al., 2025).

Excavations at the North Mound, particularly in squares A and B, have uncovered remains from the Early Bronze Age (ca. 3200-2000 BC, hereafter EBA) and Middle Bronze Age (ca. 2000-1600 BC, hereafter MBA). High-quality ceramics with bead-rims, vertebrate patterns, and conical forms were discovered from the second millennium BCE. These ceramics were mostly in cream, white, and yellow tones, with examples also featuring red and light-colored undercoating (Üyümez et al., 2024, pp. 390-397). Additionally, pieces of pithos, high goose-neck pottery fragments, stone weight fragments, spools for thread spinning, stone knife pieces, stamped ceramics, and libation vessels were found in abundance. Most of the ceramic fragment's date to the MBA, and these were found in the same context as layers of lime and ash. A small portion of the findings included human bones, while the majority were animal bones (Ökse 2012, p. 99).

The Culture and Distribution of Beaked Jugs

From early periods, within the pottery forms, the jug has appeared as a subgroup of the vessel category. The jug, a water container made of fired clay with a narrow neck, handle, and a wide body, can be either with or without a spout, originating from the Persian (dest) tradition (Ökse 2012, p. 99). The shape of the mouth distinguishes them into categories such as beak-mouthed, clover-mouthed, and spout-mouthed jugs. As the name suggests, beaked jugs are designed in the shape of a bird's beak, inspired by it. Depending on their use, beaked jugs can be classified into those used in daily life, as urns/funeral offerings/grave coverings, and as libation vessels (for beverages or sacrifices). Beaked jugs, although rare, have been found in Anatolia since the third millennium BCE. During the ATC Period, they became a common and distinctive form in major trade centers of Anatolia (Gürdal 2024, p. 105). Additionally, especially in the second millennium BCE, curved beaked jugs are known to have been used in ceremonial libations, as depicted in seals and various objects. These jugs, particularly the curved beaked jugs examples used in religious rituals, offer valuable insights into belief systems. They stand out as materials reflecting the social structure, aesthetic preferences, trade relations, and religious beliefs of the period.

The Hittites, known as the "People of a Thousand Gods" with their extensive pantheon, had systematized rituals of offering sacrifices and worshiping gods. In these ceremonies, which were often led by the king and frequently mentioned in texts, plant and animal foods, as well as bread and beverages, were offered to gods

who were thought to have human-like qualities. In the Late Iron Age (1st millennium BCE), especially during the Phrygian period, broken beaked jugs fired clay jugs can also be observed (Türker 2008, pp. 147-161).

Beaked Jugs: Forms, Distribution, and Production Techniques

Beaked jugs are generally made from fired clay in a wide variety of sizes and forms. However, metal examples of beaked jugs are rarely found, and those that do exist are thought to have been subject to melting processes due to reuse, which is why only a limited number have survived to the present day.

In terms of production techniques, beaked jugs vessels within the jug form are typically wheel-made. However, as the beak and handle parts cannot be made on the wheel due to the limitations of ceramic production techniques, these parts are added manually after the initial creation of the body (Türker 2008, p. 39). The beak is attached to the neck, while the handle is added to connect the body and mouth. In simple terms, the typical form consists of a single handle opposite the beak-shaped mouth, with a neck formed first, followed by the body, and ultimately ending with a circular or pedestal-like base (Ökse 2012, p. 87).

When considering the detailed varieties, beaked jugs can be classified as having fine/cut/axe-shaped mouths, a body where the mouth is attached from the edge to the body, vertically oriented, with round-sectioned single handles, long/wide/short necks, oval/round/sharp/bulging bodies, and pointed/round-bottomed or pedestal-ended bases.

The beak-shaped spouts can have different types of terminations. If the spout ends in a flat, open, and straight cut, it is referred to as a "cut beak-mouthed" jug. If the spout narrows to a point and has a sharp appearance when viewed from above, it is termed a "pointed beak-mouthed" jug. Additionally, if the spout has pointed ends that curve downward like a hook or a crook, it is classified as a "curved beak-mouthed" jug (Korkmaz 2006, p. 3-4).

Based on their forms, beaked jugs can be categorized as follows: Small beaked jugs (similar in size to a mug), medium-sized beaked jugs (typically 18–25 cm in height and 15–24 cm in body width), large beaked jugs (bulging-bellied with egg-shaped bodies, ranging from 32–46 cm in height), long-necked jugs with fine beaks (height typically between 40–45 cm), and strainer beaked jugs (Türker 2008, pp. 147-162, Pl. XXXV-XL).

Decorated beaked jugs are found with various ornamentation techniques, including painted decorations, embossed designs, button-like embellishments, and sculpted appliqués. Ritual-purpose jugs, featuring handles shaped like animal and human figurines, are also common. These jugs often feature animal heads at the end of the handle or spout, or human or animal figurines placed on the handle.

The Purpose and Methodology of the Study

The purpose of this study is to examine the typology of beaked jugs found at Üçhöyük, observe their developments during this period, and determine their potential uses. The study focuses on beaked jug finds obtained from scientific excavations, published, and previously studied materials. These findings may change in light of new archaeological discoveries. Although it is not possible to draw definitive and binding conclusions, this study is expected to provide a general understanding of the period and geographical region in question and offer the opportunity to compare beaked jugs from earlier or later periods and different geographical areas.

In this study, the artifacts are grouped according to their beak-mouth forms, and tables are created using photographs and drawings. The grouped artifacts are classified according to periods and their typology is established. The catalog section provides inventories of all the beaked jug fragments examined, detailing the description and measurements of each find.

Findings and Excavation Context

The beaked jugs found at Üçhöyük are generally in broken condition. A total of 88 examples, including both excavation finds and surface survey materials, have been evaluated from the stratigraphy of the excavation area, including the mound surface slopes and the surrounding area. In the excavation work between 2021 and 2024, 13 fragments were found in Area A, 7 in Area B, 4 in Area C, 2 in Area D, and 7 in Area E from different layers, with the remaining finds coming from surface surveys. (Table.1-2)

2021 Excavations: In the 2021 season, excavations were conducted in Areas A and B at the North Mound. In Area B, from Locus 1, 6 excavation finds and 18 surface finds were recovered, totaling 24 beaked jug fragments.

2022 Excavations: Excavations in 2022 took place in Areas A (KD and KB quadrants), B, and C at the North Mound, as well as in Structure 1, which revealed important architectural traces. A total of 32 beaked jug fragments were found, including 11 from excavation contexts (Locus 9,10 from Area A and Locus 2,10 from Area C) and 21 surface finds.

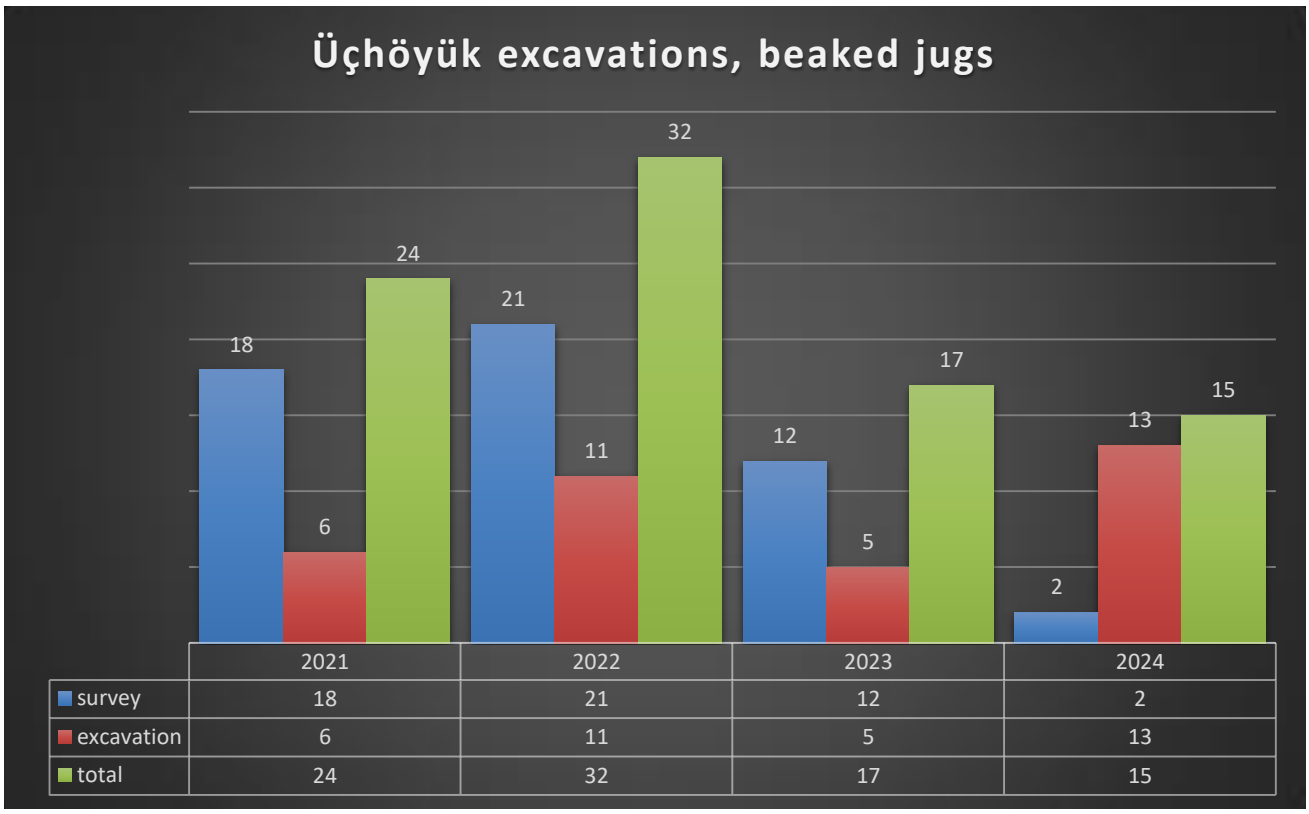
2023 Excavations: The 2023 excavations focused on Areas B and the Wooden Roofed Building at the North Mound. Here, 17 beaked jug fragments were recovered, with 5 coming from excavation contexts (Locus 10,11 from Area A and Locus 4 from Area B) and 12 from surface surveys.

2024 Excavations: In 2024, excavations were conducted in Areas C, D, and E at the North Mound. In these areas, 13 beaked jug fragments were found in excavation contexts (Locus 2,3 from Area C, Locus 2 from Area D, and Locus 1,2,4,5 from Area E), along with 2 surface finds, making a total of 15 beaked jug fragments. (Fig.3)

In total, 88 examples of beaked jugs have been identified, with varying ceramic densities found throughout the excavation areas.

Beaked Jugs of Bolvadin-Üçhöyük

According to the widely accepted view, beaked jugs are categorized and differentiated based on changes and transformations in the beak, neck, body, and base sections. However, these classifications can vary depending on the location and context of the finds. The form of the beak is generally determined by the shape it takes at the end of the beak (Korkmaz 2006, p. 6). Previous studies typically evaluated examples in their entirety, such as in Acemhöyük, where typologies were divided into small, medium, and large-scale beaked jugs, or in Karahöyük, where classifications were made based on differences in the neck, body, and base sections (Türker 2008, p. 14 *Acemhöyük typification*; Gürdal 2024, p. 106 *Karahöyük typification*).



	2021	2022	2023	2024
survey	18	21	12	2
excavation	6	11	5	13
total	24	32	17	15

Table.1 *Üçhöyük beaked jugs*

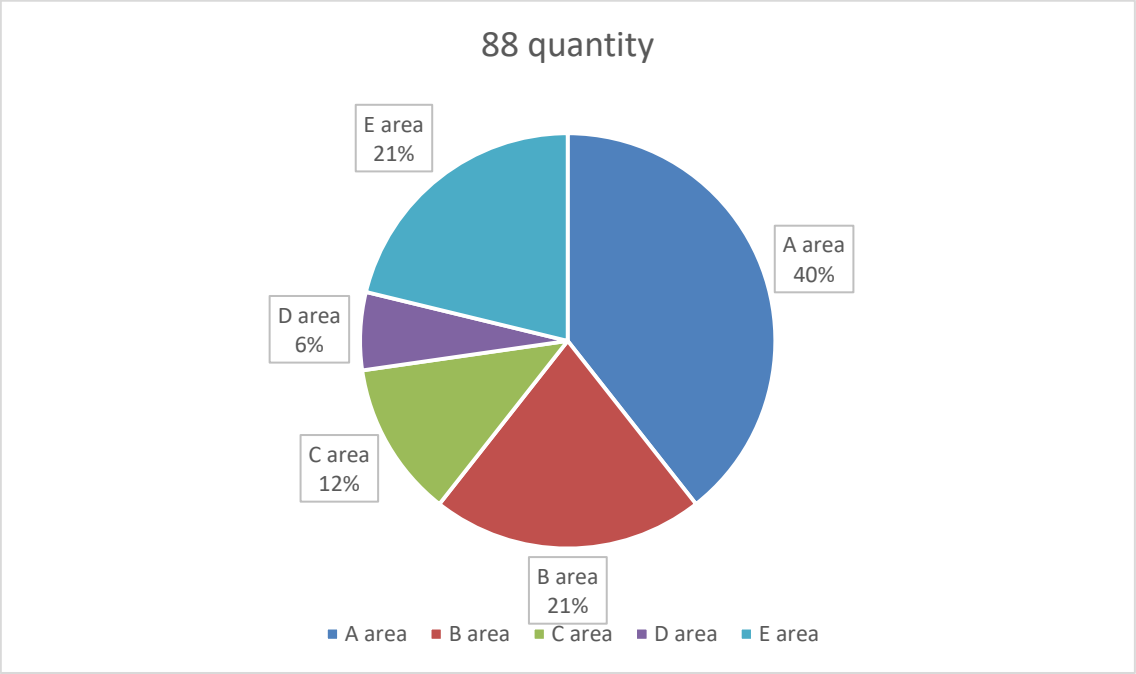


Table.2 Üçhöyük beaked jugs to trench

In contrast, the beaked jug fragments found in the Üçhöyük excavations consist mainly of the beak and, in some cases, the neck portion. As a result, our evaluation will be limited to these parts, and based on their current state, typology and subcategorization can be carried out. Without going into too much detail regarding subgroups (only Type 4a-b and Type 6a-b), the forms of beaked jugs at Bolvadin will be categorized according to the shape the beak takes at the end, resulting in 8 types, as outlined in (Pl. IX), for a total of 10 typologies. These are:

- Type 1: Extended upwards, with a deep and pointed beak
- Type 2: Extended upwards, with a straight, pointed beak
- Type 3: Extended upwards, with a protruding (chin/hump) and pointed beak
- Type 4a: Extended upwards, with a axe-shaped beak
- Type 4b: Tilted forward, with a axe-shaped beak
- Type 5: Tilted forward, with a rounded, pointed beak
- Type 6a: Tilted forward, with a curved beak
- Type 6b: Tilted forward, with a drooping/concave, flat beak
- Type 7: Tilted forward, with a pointed beaked
- Type 8: Cut-off slit-mouthed beak

Type 1: Extended upwards, with a deep and pointed beak: These are medium to large-sized beaked vessels with a slender, long neck (likely with a long and oval body, and a ring base). Typically, these vessels exhibit beaked forms with a slender and long neck, often accompanied by an elongated, oval-shaped body and a ring base. The beak-like mouth (spout) of these vessels narrows towards the tip and forms a pointed structure when viewed from above. The narrowing of the mouth section serves the functional properties of the vessel, with the shape of the spout providing both aesthetic and practical functionality. This unique design of the vessel is typically intended to facilitate the controlled pouring of liquids, while simultaneously harmonizing with the overall aesthetic structure of the object. The examples available to us consist primarily of the mouth sections, which have been shaped by hand. The body and lower sections of the vessels, on the other hand, were most likely produced using a potter's wheel. These vessels are made from a brown paste containing mica sand and are coated with a red slip, then polished to a smooth finish. There are eight representative broken examples of this type, which allow for a more detailed understanding of the

production technique and material properties (Fig.5, Pl. I: 1-8). These fragments measure between 5 to 7 cm in length. The examples are distributed across different layers, specifically from the Locus 1 and Locus 10 layers in the A, B, and C areas and the surrounding surface of Üçhöyük. Most of these fragments were found within the II layer in the A area. Similar examples of this type are as follows: (Türker 2008, Pl. XXXVI/1 *Acemhöyük*; Gürdal 2024, p. 110, Pl. CX/3-5 *Karahöyük-Layer.I*; Özgüç 1986, p. 50, Pl. 98/4 *Kaneş Karum-Layer.II*; Lloyd & Mellaart 1965, p. 87, fig.27, no.6 *Beycesultan-Layer.IV*).

Type2: Extended upwards, with a straight, pointed beak: These are medium-sized beaked vessels with a distinct form characteristic, featuring a narrow and short cylindrical neck (likely with rounded shoulders, a conical body, sharp belly, and a ring base). The tip of the beak protrudes forward and then, immediately after this protrusion, the neck curves upwards to form a flat-ended mouth. This design demonstrates functional and aesthetic harmony, ensuring the controlled flow of liquids while maintaining the overall structural integrity of the object. The vessels are made from a brown paste mixed with mica sand, coated with a slip, and polished. Nine representative broken examples of this type have been identified (Fig.7, Pl. III: 3-12). Half of these examples were found through surface surveys near the excavation areas, while the others were recovered from the excavation site itself. These examples have been observed in various layers within the Locus 2 and Locus 10 of the A, B, C, and D areas of Üçhöyük. Similar examples (Türker 2008, Pl. XXXVI/13 *Acemhöyük*; Koşay & Akok 1966, p. 36, Pl. 13; 1973, 11, Pl. 22.75; Koşay 1973, Pl. XLI.10 *Alaca Höyük, Old Hittite Empire-Layer.IV*) can be found in Karahöyük, where this type is frequently encountered in the I and III layers of the C, P, and L areas, and it is known as a typical characteristic of Karahöyük (Gürdal 2024, Pl. LXXXV/5-7). In Gürdal's typology, Type 2a is described as a beak-shaped vessel with a short neck, and the form with a flattened tip in the Üçhöyük typology is quite similar. Therefore, an analogy can be drawn between both type names.

Type3: Extended upwards, with a protruding (chin/hump) and pointed beak: These are medium-sized beaked vessels that exhibit a distinct form, characterized by a short neck (likely with rounded shoulders, slightly sharp or rounded belly, and a fine ring base). The beak of these vessels is upright, with the tip narrowing into a sharp point that protrudes outward. At the upper part of the neck, just below the beak, a convex protrusion is observed before the tip, creating an outward curve, which is why this profile is referred to as a 'hump' (Gürdal 2024, 110). The general manufacturing technique for these vessels is wheel-based, though the mouth portions in the specimens we have are hand-shaped. The material used is brown clay with added mica, with a red slip covering the surface, which is polished. In total, 7 broken examples of this type are available, contributing to a better understanding of the form and production technique. (Fig.5, Pl. I: 9-12; Fig.6, II: 1,3,5). These pieces range in length from 5 to 9 cm. They are found in different layers of the Locus 1, 4, and 10 strata from the Üçhöyük A, B, and E areas, as well as surface surveys in the surrounding area. Similar examples include: (Gürdal 2024, Pl. LXXXVI/1-2 *Karahöyük-L trench, Layer. III*; Pl. XC/1-2 *Karahöyük, P and V trench, Layer.I*; Korkmaz 2006, Pl. 13/G).

Type4a: Extended upwards, with axe-shaped beaks: These are medium to large-sized beaked vessels with a narrow and long cylindrical neck (likely with rounded shoulders, conical body, sharp belly, and a ring base), exhibiting a distinct structural feature. The lower part of the beak is flattened at the tip, which is then directed sharply upward, creating an axe-shaped mouth. The pouring part of the beak narrows towards the tip, both inward and downward, forming a thin and pointed mouth shape. This design allows for the controlled pouring of liquids. The vessels are wheel-made, and the broken mouth portions we have measure between 5 and 9 cm in height. The material used is brown clay with added sand and mica, with a red slip covering the surface, which is polished. In total, there are four broken examples of this type. (Fig.6, Pl. II: 2,4,6,8). The first two examples (Pl. II-2, 4) were found during surface surveys and clearly match this typology. The other examples (Pl. II-6, 8), fitting this definition, were retrieved from the excavation site. These vessels are found in different layers of Locus 10 and 12 from the Üçhöyük A area. Similar examples include: (It is also known as the Karahöyük typical characteristic type. There are 33 long-necked examples found in Layer I at Karahöyük (Özgüç 1988, p. 10, Pl. 23/1-3; Alp 1994, p. 8, Pl. 27/68), which are evaluated as Type 3 (Gürdal 2024, LXXXVII/1-9, LXXXVIII/1-12, LXXXIX/1-13) and meet this definition. In Karahöyük.II (Özgüç, 1986a, p. 50. Pl. 98/4;) In the materials found in the layer, three long-necked specimens that fit this description are considered Type 5 (Gürdal 2024, Pl. XC/3-5). Morever *Acemhöyük-Layer.II* (Emre 1968, p. 56, fig.1; Türker 2008, Pl. XXXVIII/2-3); *Alaca Höyük* (Koşay & Akok 1966, 23, Pl. 13, no.h49, h.93); *Alişar, Hittite*

Empire Period (Von der Osten 187, fig.186.e877); *Beycesultan-Layer.IVb and V* (Lloyd & Mellaart 1965, fig.P.6 no.30, P.27 no.6); *Boğazköy-Layer.IV and V*. (Fischer 1963, p. 118-120, no.247-248, 250, 289); *İnandık-Layer-IV*. (Özgüç 1988, p. 10. Pl. 2.fig.10); *Kaneş Karum-Layer.Ib and II* (Özgüç 1959, p. 49, Pl. XXIX/2-3; 1964, p. 41, Pl. XIII/2; Özgüç 1986a, p. 50. Pl. 93/3,5; Gürdal 2024, pp. 109-110).

Type4b: Tilted forward, with a axe-shaped beak: These are small to medium-sized beaked vessels with a short neck (likely with rounded shoulders, conical body, sharp belly, and a ring base), exhibiting a distinct structural feature. At the bottom of the beak, the tip is flattened and directed upward in a straight or rounded manner, forming an axe-shaped mouth. The pouring part of the beak narrows inward towards the tip, creating a rough mouth shape, which does not allow the controlled pouring of liquids effectively. The vessels are wheel-made, and the broken mouth pieces we have range from 5 to 7 cm in height. The material used is brown clay with sand and mica added, with the surface covered in a slip and polished. There are several broken examples of this type. (Fig.5, Pl. I: 3, 5, 7, 8, 9). Three of these (Pl. I-5, 7, 9) were found during surface surveys and clearly match this typology. The other examples (Pl. I-3, 8), fitting this definition, were retrieved from the excavation site. These vessels are found in the Locus 10 layer of the Üçhöyük A area. Similar examples include: (Gürdal 2024, 107, Pl. LXXXV/5-8 *There are 4 short-necked specimens found in layers I and III in Karahöyük that fit this description. This type is also known as the Karahöyük characteristic type.*; Özgüç 1959, p. 59, Pl. XXXVII.1; 77, Pl. XXXVI.3; 1986, p. 47, Pl. 94.1 *Kültepe, Kaneş Karum-ATC-Layer.II*).

Type5: Tilted forward, with a rounded, pointed beak: These are medium-sized beaked vessels with a short and wide neck (round shoulders, slightly sharp-bellied or-bodied, ring base), exhibiting a distinct structural feature. The tip of the beak protrudes forward, forming a narrow and rounded mouth shape. This design offers a functional feature intended to facilitate the controlled pouring of liquids. These vessels are wheel-made, and the broken mouth parts, which were hand-crafted, have an average height ranging between 5 to 7 cm. The material used is brown clay with sand and mica added, with the surface covered in a slip and polished. There are 6 broken examples of this type. (Fig.8, Pl. IV: pp. 7-12). All of these examples were found during surface surveys near the excavation areas. Similar examples include: (Fischer 1963, p. 117, Pl. 21.234 *Boğazköy, Kuzeybatı Yamaç-ATC Age-Layer.VIIIa*; Özgüç 1982, p. 36, Pl. 50.9 *Maşathöyük-Layer.V*).

Type6a: Tilted forward, with a curved beak: These are medium-sized beaked vessels with a short and wide neck (round shoulders, slightly sharp-bellied or-bodied, ring base), exhibiting a distinctive structural design. The tip of the beak protrudes forward, forming a narrow and rounded mouth shape. The front sections of the short beaks are slightly drooping (Gürdal 2024, p. 110). This design is shaped to ensure the controlled pouring of liquids, serving a functional purpose. These vessels are wheel-made, and the heights of the broken mouth parts range between 3.5 to 6 cm. The material used is brown clay with sand and mica added, with the surface covered in a slip and polished. There are 7 broken examples of this type (Fig.9, Pl. V: 2, 4-8, 10). Most of these examples were found during surface surveys near the excavation areas, while another example matching this description was found in the Üçhöyük E area, Layer 5 at Locus 5. Similar examples include: (Türker 2008, Pl. XXXVI/5 *Acemhöyük*; Lloyd & Mellaart 1965: fig.P.27, no.3 *Beycesultan-Layer.IV*; Fischer 1963, p. 118, Pl. 24.244-245 *Boğazköy Büyükkale, Old Hittite Period-Layer.IVc*; Pl. 23.260-261 *Hittite Empire Period-Layer.IIIa*; 117, Pl. 28.237 *Aşağı Şehir, Empire Period-Layer.II*; Özgüç 1986b, p. 388, fig.26 *Eskiyapar, Old Hittite Age*; 1959: p. 49, Pl. XXIX/1; 1986a: p. 50. Pl. 98/4 *Kaneş Karum-Layer.II*; 1982: p. 36, Pl. 50.8 *Maşathöyük-Layer.V*).

Type6b: Tilted forward, with a drooping/concave, flat beak: These are medium- to large-sized beaked vessels with a fine and long neck (likely with a round body and ring base), exhibiting distinctive structural features. The mouth of the beak flattens as it extends toward the tip, with the spout ending in a sharp point. This design allows the beak tips to curl or hook downward, creating a drooping appearance. These vessels were likely produced using a wheel; however, the mouth sections were shaped by hand starting from the neck. The height of these examples ranges between 4.9 and 8.1 cm. The material used is brown clay with sand and mica added, and the surface is covered with a slip and polished. There are 3 broken examples of this type (Fig.9, Pl. V: 9, 11-12). Two of these were found during surface surveys near the excavation areas, while an example that fully matches this description was found in Layer 2 at Locus 2 in the B excavation. Similar examples include: (Koşay 1951, 20, Pl. LII.2 *Alaca Höyük-Hittite Empire Age*; Orthman 1984, 44, Pl. 4.158, fig.16.158 *Boğazköy, Aşağı Şehir-ATC Age and Hittite Empire Age.IVb-c-d*; Neve 1984, 66, 4.1 *Old*

Hittite Period-Layer.3c; Fischer 1963, 118, Pl. 24.244-245 *Büyükkale-Old Hittite Age-Layer.IVc*; 119, Pl. 27.275-276 *Hittite Empire Period-Layer.II*; 120, Pl. 27.286 *EBA-MBA transition phase-Layer.V*; Lloyd & Mellaart 1965; fig.P.27, no.6 *Beycesultan-Layer.IV*; Özgüç 1986a, p. 50. Pl. 98/4 *Kaneş Karum-Layer.II*; Gürdal 2024, 110 *Karahöyük-Layer.I*) (Fig.14-17).

Type7: Tilted forward, with a pointed beaked: These are medium-sized beaked vessels with a short and broad neck (likely with rounded shoulders, slightly sharp or rounded belly, and a ring base), displaying distinct structural features. The tip of the beak extends forward, forming a pointed mouth shape. This design creates a functional and aesthetic unity. These vessels were produced using a wheel, and their height varies between 5 and 7 cm. They are made from brown clay with added sand and mica, and the surface is covered with a slip and polished. There are 17 broken examples of this type, which represent the majority in the overall count (Fig.10, Pl. VI: 5,7-12; Fig.11, VII: 1-7; Fig.12, VIII: 1-3). Most of these examples were found during surface surveys near the excavation areas, while others that fit this description are found in various layers at Locus 1, 2, 4, 10, and 11 in the A, C, and E areas at Üçhöyük. Similar examples include: (Emre 1968, p. 57, Pl. XXX/1; Türker 2008, XXXVI *Acemhöyük-Layer.II*; Fischer 1963, p. 118, Pl. 23.260-262 *Büyükkale-Hittite Empire Age.IIIa*; 120, Pl. 25.289 *Boğazköy, Aşağı Şehir-ATC Age-Layer.IV*; Lloyd & Mellaart 1965, fig.P.17, no.8, P.27, no.3 *Beycesultan-Layer.IV*; Özgüç 1959, p. 49, Pl. XXIX/1 *Kaneş Karum-Layer.II*; Gürdal 2024, pp. 110-111, XCI/1-6 *Karahöyük-Layer.I*).

Type8: Cut-off slit-mouthed beak: These are small-sized beaked vessels with a neck or short neck (likely with a shoulder attachment to the body, round or elliptical in cross-section, vertical single handle, sharply curved belly, and a ring base), exhibiting a distinct design feature. The pouring section of the beak is cut in an open and straight manner, creating a structure designed for easy pouring of liquids. Like other vessels, these are wheel-made, while the existing broken beak parts have been hand-shaped. They are made of brown clay with added sand and mica, and their surface is coated with a slip and polished. There are 2 broken examples of this type, with a height of approximately 6 cm (Fig.12, Pl. VIII: 5-6). Notably, the example (Pl. VIII: 5) provides a good model for understanding the form and production technique of this type. Both of these examples were found during surface surveys near the excavation areas. This is one of the less common types of the Early Bronze Age. Similar examples of this type include: (Türker 2008, pp. 149-150, Pl. XXXV/9, XXXIX/1 *Acemhöyük*; Schmidt 1932, fig.143, no.b2548 Alişar; Orthman 1984, p. 44, Pl. 4.158, fig.16.158 *Boğazköy, Aşağı Şehir-The ATC-Layer.IVb-c-d*; Fischer 1963, p. 118, Pl. 23.254; Bilgen 2003, p. 140, fig.4.c; 2005 *Çavlum Mezarlığı-ATC*; Omura 2001, p. 329, res.6/1; 2006, 37, fig.88 *Kaman Kalehöyük-Layer.IIIc*; Özgüç & Özgüç 1953, p. 36, fig.99; Özgüç 1957, p. 68, fig.26; Özgüç 1959, p. 59, Pl. XXXVII/2; Özgüç 1986a, p. 51, Pl. 99/7-8, 100/1; Özgüç 1986b, p. 389, fig.24; Emre 1968, pp. 68-69, fig.47, Pl. XXIX/1, XXXI/2 *Karahöyük*; Ekmen 2012, pp. 79-80, Pl. 9-1 *Karahöyük*; Özgüç 1982, Pl. 50:4 *Maşathöyük*. Early examples of this type indicate its significance within the Troy-Yortan group (Kâmil 1982, p. 109, 279). Supporting examples of this type from the western Anatolian region can be found in the Kemal Uğurbil Collection (Gür & Erdan 2008, fig.5.5/6.6). Cut-beak mouth examples dating to the early period and similar to those found in the Yortan Cemetery can also be seen in the Harmanören Cemetery excavation, where a jar-shaped vessel with a cut-beak mouth has been identified as dating to the Early Bronze Age (Özsait 2000, p. 373, 378, fig.6).

General Evaluation and Conclusion

This study evaluates a total of 88 beaked vessels obtained from the Üçhöyük excavations (Table.1) These vessels have been grouped according to their beak forms, body profiles, find locations, periods, decoration types, and intended uses. In the finds from Üçhöyük so far, only 8 different types (10 types including two subgroups) of beaked vessels have been identified. (Fig.13) It is likely that different types will emerge from unexcavated layers and cultural strata. However, it is also important to acknowledge the existence of beaked vessels with different forms and decorations that have appeared in other excavations but are not found in this settlement. In this context, beaked vessels with double handles and double beaks, such as those found in Karahöyük's Layer I or with two handles in Acemhöyük's Layer III (Türker 2008, Pl. XL; Emre 1968, p. 71, fig.4), Boğazköy Büyükkale's Layer IV (Orthmann 1984, no.157; Fischer 1963, p. 118, no.253), and three-handled beaked vessels, are commonly seen in the Central Anatolian, EBA centers. The influence of the Kayseri Plain in the late stages of the EBA (Phase C - Kültepe Ib) is particularly evident in the Ankara-Sakarya

region, as well as the westward extension of these vessels to areas like Afyonkarahisar, as demonstrated by examples from Kusura (Lamb 1937; 1938; Üyümez et al., 2007, p. 834).

Looking at the evolution of Late Chalcolithic forms, the beaked vessel form, first seen at Kumtepe IB in Western Anatolia, became widely used from the Early Bronze Age Phase 1 onwards. This form reflects the potential commercial and cultural interactions of the period and has a prominent place in the era's morphological development (Efe et al., 1995, p. 376). EBA-I beaked vessels typically have a flattened body, standing on three feet. In the Early Bronze Age, these vessels generally have a short neck, wide body, and flat base. The handles can be in the form of a ring or ribbon, attached to the shoulder, or there may be horn-shaped grips, spouts, and crescent-shaped relief decorations (Türker 2008, Pl. XXXV/9, XXXVI/5). These vessels, with similar forms and decorative features, have been found as grave offerings in Northwest Anatolia, particularly in Yortan and Babaköy cemeteries (Kâmil 1982, p. 109, 282.a.b.; Bittel et al., 1939) When looking at the distribution of beaked spouted jugs in Anatolia, there are several other important centers where excavations have been conducted or are ongoing (Gür & Erdan 2008, 130, map.1; Efe 1988, taf.10,3 *Demircihöyük-EBA-2*; Symington 2007, 326 no.548-550 *Kilisetepe*; Alkım et al., 1988, 28, Pl. V/3-4 *İkiztepe*; Özgüç 1999, 5-6, Pl. 13-14 *Eskiyapar*). The beaked vessels from the EBA are not the only examples of this type of pottery; in addition to these, the beaked jar examples found in Küllüoba and Harmanören are also significant. These beaked jars, which can be seen as a refined version or imitation of the beaked vessels, have been recognized in the literature as excellent representations or adaptations of the beaked vessel form. These examples contribute to the broader understanding of how the beaked vessel tradition evolved and spread across different regions, reflecting not only functional but also aesthetic and cultural influences (Özsait 2000, p. 373; 2002, p. 329.P8; 2003, fig.5,10; Efe 2009, 270i res.3).

When examining the spread of beaked vessels in Anatolia, other significant excavation centers where such vessels have been found include Beycesultan, Yortan, Babaköy, Laodikeia-Asopos Tepesi (Konakçı 2014, fig.4), Panaztepe (Günel 1999, p. 52, Pl. 105.3-5), Liman Tepe (Akyurt 2014, p. 48, Tab.13b/J1), Miletus (Raymond 2005, p. 246) and Seyitömer (Bilgen & Bilgen 2015, pp. 61-118) in Western Anatolia, among others. Expanding the geographic scope, the influence of trade and relationships in Central Anatolia is also apparent. Key sites in Central Anatolia include Alaca Höyük, Çorum-Boğazköy (Büyükkale and Aşağı Şehir), İkiztepe, Ferzant, Maşathöyük, Alişar, İnandıktepe, Eskiyapar, Kültepe-Kaniş, Kaman-Kalehöyük, Acemhöyük, Gordion, Mersin-Kilisetepe, and Konya-Karahöyük.

Beaked vessels from Konya- Karahöyük have long, thin necks, elongated bodies, and exhibit graceful, elongated forms. These are frequently found in the Kaneş Karum examples, with stamp seals depicting gods in scenes (Gürdal 2024, p. 112). These vessels are seen in Karahöyük from Layer VII of the EBA, although they were no longer produced in Layer IV *Late Chalcolithic Age* (Özgüç 1965, p. 14). Seal impressions depicting beaked vessels can also be observed. Karahöyük, one of the important trade centers in Anatolia, stands out especially in the Early Bronze Age with its characteristic beaked vessels from Layers 1 and 3. Alişar's (Alp 1994, p. 7, Pl. 27.67; 8, Pl. 28.69; 210-211, 278, fig.171-73, Pl. 106-108, no.25b-c) beaked vessels have examples with pointed and broken beaks, similar to the Kaneş Karum finds (Koşay 1951, p. 16, fig.11-12; Koşay & Akok 1966, Pl. 13, no.e236, h.93-94). Beaked vessels are also frequently encountered in Alaca Höyük. In Acemhöyük, various forms of beaked vessels have been observed in the I, II, and III strata (Emre 1968, p. 71, fig.4). In Boğazköy Aşağı Şehir and Büyükkale, a variety of beaked vessels with pointed and broken beaks are found (Fischer 1963, p. 120, no.291). Kaman- Kalehöyük's beaked vessels include short-beaked, short-necked, swollen-bellied examples, with both single- and three-handled types (Omura 2000, p. 25, fig.51, 56). Beaked vessels from Beycesultan include short-beaked, wide-necked examples, possibly related to palace ware, with a variety of metallic containers (Lloyd & Mellaart 1965, p. 87; Dedeoğlu & Abay 2014).

A significant portion of this study focuses on the typology of these vessels. Their decorations provide important clues about the artistic and cultural understanding of the period. Moreover, the production techniques of these ceramic vessels are also crucial. The study concludes that while the majority of these vessels were wheel-made, the beak sections and handles were hand-shaped. This study identifies four main forms of beaked vessels based on their shapes: pointed beak, cut beak, axe-shaped beak, and curved beak vessels. Pointed beak vessels are the most common form, typically used for everyday purposes such as storing beverages or carrying water, and they are frequently found as grave offerings. Cut-beak vessels were

used mainly for storage, filtering, or preserving liquids. These vessels offer clues about domestic use. Curved beak vessels are more visually striking, with more intricate craftsmanship, often used in religious rituals and offerings.

In addition, the decorations on these vessels provide important insights into the artistic and cultural understanding of the period, reflecting geometric and figurative elements that represent societal symbols and aesthetic values. The measurements of the beaked vessels from Üçhöyük vary between 3-11 cm and, due to their broken states and missing bases, their complete evaluation might not be entirely accurate. However, these vessels have an important place in the pottery forms of the Early Bronze Age, particularly from Phase I onwards, and the examples from different strata reflect the developments in the Late Chalcolithic and EBA.

The color of the clay used for these vessels varies, with red, reddish-brown, and pink tones being dominant. Among these, red-colored clay vessels are the most frequently encountered. The slip applied to these vessels generally matches the clay's color but also exhibits some variation, including red, reddish-brown, and grayish hues. Polishing is common, though there are also examples that show wear, with rough surfaces or unclear polishing due to wear and tear.

In conclusion, the findings of this study demonstrate that the beaked vessels from Üçhöyük are important archaeological artifacts, contributing to our understanding of the economic, cultural, and religious structures of the period. The study provides a comprehensive analysis of the typological and functional diversity of beaked vessels, their production techniques, decorations, and distribution, shedding light on the social, economic, and cultural relationships of the period. This work enables a better understanding of the cultural and social structure of the region in the 2nd millennium BCE. By examining the typology, development, decoration, and spread of the beaked vessels, this study offers significant insights into the cultural, social, and economic structure of the time.

The study highlights the significance of beaked vessels as one of the characteristic and widespread pottery forms of Central and Inner Western Anatolia, offering valuable data about daily life, ritual practices, and trade relations of the period. The findings underscore the importance of these vessels in the social fabric of the time, and their typological diversity, production techniques, usage contexts, and socio-economic functions provide a better understanding of the societal structure of the EBA and MBA. Moreover, the distribution of these vessels shows their widespread presence across various settlements, indicating important trade and cultural exchanges between different regions. The study also suggests that the production and distribution of these vessels were likely influenced by regional trade routes and cultural interactions, with some beaked vessels being produced in specific settlements and traded to other areas.

Ethics Committee Approval: Ethics committee approval is not required.
Peer-review: Externally peer-reviewed.
Conflict of Interest: The author has no conflicts of interest to declare.
Financial Disclosure: The author declared that this study has no financial support.

References

Akyurt, İ. M. (1998). *MÖ 2. binde Anadolu'da ölü gömme adetleri*. Turk Tarih Kurumu Basmevi.

Alkım, U. B., Alkım, H., & Bilgi, O. (1988). *Ikiztepe I: birinci ve ikinci dönem kazıları*. Turk Tarih Kurumu Basimevi.

Alp, S. (1972). *Konya civarında Karahöyük kazılarında bulunan silindir ve damga mühürleri*. Türk Tarih Kurumu Basımevi.

Barjamovic, G. (2011). *A historical geography of ancient Anatolia in the Assyrian Colony Period* [Doctoral dissertation, Carsten Niebuhr Institute of ancient Near Eastern studies]. Museum Tusculanum Press and CNI Publications.

Bilgen, A. N. (2003). 2002 yılı Çavlum Köyü mezarlık kazısı. *Kazı Sonuçları Toplantısı, Ankara, XXV/1, 139-146 (in Turkish).*

Bilgen, A. N. (2005). *Çavlum: Eskişehir Alpu ovası'nda bir orta tunç çağı mezarlığı*. Anadolu Üniversitesi.

Bilgen, A. N., & Bilgen, Z. (2015). Orta Tunç Çağ Yerleşimi (IV. Tabaka) / Middle Bronze Age Settlement (Layer IV). *Seyitömer Höyük I*, *61*, 118.

Bittel, K., Stewart, J. R., & Angel, J. L. (1939). Ein Gräberfeld der Yortan-Kultur bei Babaköy. *Archiv für Orientforschung*, *13*, 1-31.

Dedeoğlu Konakçı, F., & Abay, E. (2014). Beycesultan Höyük excavation project: new archaeological evidence from late bronze layers. *Arkeoloji Dergisi*, (19), 1-39.

Efe, T., İlaslı, A., & Topbaş, A. (1995). Salvage excavations of the Afyon Archaeological Museum, Part 1: Kaklık Mevkii, A Site Transitional to the Early Bronze Age. *Studia Troica*, *5*, 357-399.

Efe, T. (1988). Demircihüyük/3: Die Keramik; 2 C. Die frühbronzezeitliche Keramik der jüngeren Phasen (ab Phase H). *Demircihüyük die Ergebnisse der Ausgrabungen 1975-1978*.

Efe, T. (2009). Küllüoba'da Erken Tunç II yapısında ele geçirilmiş olan kesik gaga ağızlı bir küp. In H. Sağlamtimur et al., (Eds.), Altan Çilingiroğlu'na armağan: yukarı denizin kıyısında Urartu krallığı'na adanmiş bir hayat= Studies in honour of Altan Çilingiroğlu: a life dedicated to Urartu on the shores of the Upper Sea. (pp. 269-274). Arkeoloji ve Sanat Yayınları.

Ekmen, H. (2012). *Acemhöyük'te Asur Ticaret Kolonileri Çağı ölü gömme adetleri*. [Doctoral dissertation, Gazi University].

Emre, K. (1968). Acemhöyük seramiği. *Anadolu 10*, 53–98.

Fischer, F. (1963). Die Hethitische keramik von Boğazköy. Boğazköy-Hattuşa IV, *Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft 75*.

Günel, A. S. (1999). MÖ 2. bine tarihlendirilen Panaztepe seramiklerinin Batı Anadolu ve Ege arkeolojisindeki yeri ve önemi (2 cilt). Ankara.

Gür, B., & Erdan, E. (2018). Batı Anadolu kökenli bir grup erken Tunç Çağı gaga ağızlı testi/Agroup Of Early Bronze Age Western Anatolian Beaked Jugs. *Cedrus*, *6*, 125-138.

Gürdal, S. (2024). *Konya Karahöyük, 1953-1992 yılı kazıları ve Asur Ticaret Kolonileri Çağı çanak çömleği*. Bilgin Kültür Sanat Yayınları.

Hüryılmaz, H. (1998). Göller Bölgesi'nin Batısında Bulunmuş Bir "Maden Taklidi" Testi. *Belleten*, *62*(235), 713-718. doi:10.37879/belleten.1998.713

Koçak, Ö. (2004). *Erken dönemlerde Afyonkarahisar yerleşmeleri*. Kömen Yayınları.

Koçak, Ö. (2005). Bolvadin-Çay ve Sultandağı yüzey araştırmaları 2003. *Araştırma Sonuçları Toplantısı 22*(1), 19-28.

Koçak, Ö., Bilgin, M., & Küçükbezci, H. G. (2019). *MÖ II. Binyılda Afyonkarahisar Çevresi Kültürleri*. Türk Tarih Kurumu Yayınları.

Koçak, Ö., Baytak, İ., Yavuz, E., & Esen, Ö. (2022a). Afyonkarahisar ili ve ilçeleri 2019-2020 yılları yüzey araştırmaları. *Kültür Varlıkları ve Müzeler Genel Müdürlüğü, 2019-2020 Yılı Yüzey Araştırmaları,* Cilt 3, 47-64.

Koçak, Ö., Baytak, İ., & Esen, Ö. (2022b). Afyonkarahisar Akarçay Havzasının batısında İTÇ yerleşmeleri (pp. 293-309). M. Işıklı, E. Fidan, A. Türker & M. A. Yılmaz (Eds.). *MÖ. III. binyılda Anadolu*. Ege Yayınları.

Koçak, Ö., Üyümez, M., Baytak, İ., Esen, Ö., & Kaya, M. (2023). Bolvadin Üçhöyük 2021 yılı araştırmaları. *Araştırma Sonuçları Toplantısı 38*(3), 145-160.

Koçak, Ö., & Bayramov, K. (2025). Convex Loom Weights in the Akarçay Basin and its Surroundings. *Anatolian Research 31*, 77-115.

Konakçı, E. (2014). Laodikeia'nın İlk Yerleşimi: Asopos Tepesi (pp. 87-122). C. Şimşek (Ed). *10. Yılında Laodikeia, Laodikeia Çalışmaları 3.* Ege Yayınları.

Korkmaz, H. (2006). *İ.Ö. II. bin yıl Orta Anadolu pişmiş toprak gaga ağızlı testileri* [MA dissertation, Aydın Adnan Menderes University].

Koşay, H. Z. (1951). *TTK tarafından yapılan Alacahöyük kazısı, 1937-1939'daki çalışmalara ve keşiflere ait ilk rapor. Les Fouilles d'Alacahöyük entreprises par la Societe d'Histoire Turque: Rapport preliminaire sur les travaux en 1937-1939*. Türk Tarih Kurumu Yayınları.

Koşay, H. Z. (1973). *TTK tarafından yapılan Alacahöyük hafriyatı 1936'daki çalışmalara ve keşiflere ait ilk rapor*. Türk Tarih Kurumu Yayınları.

Koşay, H. Z., & Akok, M. (1966). *TTK tarafından yapılan Alacahöyük kazısı, 1940-1948'deki çalışmalara ve keşiflere ait ilk rapor*. Türk Tarih Kurumu Yayınları.

Koşay, H. Z., & Akok, M. (1973). *Alacahöyük kazısı, 1963-1967'deki çalışmaları ve keşiflere ait ilk rapor*. Türk Tarih Kurumu Yayınları.

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., & Mellart, J. (1965). *Beycesultan, Middle Bronze Age Architecture and Pottery* (Vol. II). London. British Institute of Archaeology.
Schmidt, E. F. (1932). *The Alishar Höyük, Seasons of 1928 and 1929*. University of Chicago Press.
Omura, S. (2000). Preliminary report on the 14th excavation at Kaman-Kalehöyük (1999). *Anatolian Archaeological Studies 10*, 1–37.
Omura, S. (2001). 1999 yılı Kaman-Kalehöyük kazıları. *Kazı Sonuçları Toplantısı 22*(1), 327-336.
Omura, S. (2006). Preliminary report on the 20th excavation season at Kaman-Kalehöyük (2005). *Anatolian Archaeological Studies 15*, 1–61.
Orthmann, W. (1979). Keramik aus den ältesten Schichten von Büyükkale. Boğazköy VI: Funde aus den Grabungen bis *1979* (pp. 9–62).
Oy, H. (2011). Afyonkarahisar Orta Tunç Çağı yerleşmeleri. *Belleten 75*(273), 311-336. https://doi.org/10.37879/belleten.2011.311
Ökse, T. (2012). *Önasya arkeolojisinde çanak çömlek*. Arkeoloji ve Sanat Yayınları.
Özgüç, N. (1957). Kültepe kazılarında bulunan mermer idol ve heykecikler. *Belleten 21*(81), 61-70. https://doi.org/10.37879/ttkbelleten.1272958
Özgüç, N. (1965). *Kültepe mühür baskılarında Anadolu grubu*. Türk Tarih Kurumu Yayınları.
Özgüç, T., & Özgüç, N. (1953). *Türk Tarih Kurumu tarafından yapılan Kültepe kazısı raporu 1949*. Türk Tarih Kurumu Yayınları.
Özgüç, T. (1959). *Kültepe-Kanis: Asur ticaret kolonilerinin merkezinde yapılan yeni araştırmalar*. Türk Tarih Kurumu Yayınları.
Özgüç, T. (1964). The art and architecture of ancient Kanish. *Anatolia 8*, 27–48. https://doi.org/10.1501/andl_0000000086
Özgüç, T. (1982). *Maşathöyük II: Boğazköy'ün kuzeydoğusunda bir Hitit merkezi*. Türk Tarih Kurumu Yayınları.
Özgüç, T. (1986a). *Kültepe-Kanis II: Eski Yakındoğu'nun ticaret merkezinde yeni araştırmalar*. Türk Tarih Kurumu Yayınları.
Özgüç, T. (1986b). Ferzant Hitit mezarlığında bulunmuş eserler hakkında yeni gözlemler. *Belleten 50*(197), 383-392. https://doi.org/10.37879/ttkbelleten.986821
Özgüç, T. (1988). *İnandıktepe, Eski Hitit Çağında önemli bir kült merkezi*. Türk Tarih Kurumu Yayınları.
Özgüç, T. (1999). Vases used for ritual purposes from Eskiyapar. *Essays on Ancient Anatolia, Wiesbaden*. *BMECCJ 11*, 1-22.
Özsait, M. (2000). 1998 yılı Harmanören (Göndürle Höyük) mezarlık kazısı. *Kazı Sonuçları Toplantısı 21*(1), 371-380.
Özsait, M. (2002). 1999-2000 yılları Harmanören (Göndürle Höyük) mezarlık kazısı. *Kazı Sonuçları Toplantısı 23*(1), 327-340.
Özsait, M. (2003). 2001 yılı Harmanören (Göndürle Höyük) mezarlık kazısı. *Kazı Sonuçları Toplantısı 24*(1), 307-318.
Kâmil, T. (1982). *Yortan Cemetery in the Early Bronze Age of Western Anatolia*. BAR Publishing.
Raymond, A. E. (2005). *Miletus in the Bronze Age and Minoan Presence in the Eastern Aegean* [Doctoral dissertation, University of Toronto].
Sevin, V. (2016). *Anadolu'nun tarihi coğrafyası*. Türk Tarih Kurumu Yayınları.
Symington, D. (2007). The Middle Bronze Age Pottery (pp. 319–328). N. Postgate & D. Thomas (Eds.), *Excavations at Kilise Tepe 1994–98, From Bronze Age to Byzantine in Western Cilicia: Volume 1. Text: 30.1*. British Institute at Ankara. http://www.jstor.org/stable/10.18866/j.ctt1pk3jtc.32
Türker, A. (2008). *Assur Ticaret Kolonileri Çağı'nda Acemhöyük çanak çömleği* [Doctoral dissertation, Ankara University].
Urano, S., Koiwa, N., Fukatsu, Y., Hasegawa, T., Baytak, İ. & Koçak, Ö. (2025). Two Approaches in a Preliminary Archaeological Survey of Polybotos (Dura Yeri – Hacı Murat) prior to the Excavation. *Shien (The Journal of Historical Studies, Rikkyo University), 85*(1), 221-246.
Üyümez, M., Koçak, Ö., İlaslı, A., Çay, T., & İşcan, F. (2007). Afyonkarahisar'ın doğusunda önemli bir Orta Tunç Çağı nekropolü: Dede Mezarı. *Belleten 71*(262), 811-842.
https://doi.org/10.37879/belleten.2007.811
Üyümez, M., Koçak, Ö., Bilgin, M., & Baytak, İ. (2022). Bolvadin Üçhöyük 2020 yılı kazıları (pp. 17-32). *2019-2020 Yılı Kazı Çalışmaları 4*, T.C. Kültür Varlıkları ve Müzeler Genel Müdürlüğü.
Üyümez, M., Koçak, Ö., Baytak, İ., Bilgin, M., Uğur, T., Akkemik, Ü., Aytek, A. İ., Yavuz, A. Y., & Aladağ, B. (2024). Bolvadin Üçhöyük-2021-2022 yılı kazıları (pp. 389-407). *Kazı Sonuçları Toplantısı 43*(2).
Von der Osten, H. H. (1937). *The Alishar Hüyük Seasons of 1930-1932*, Part II (OIP XXIX). University of Chicago Press.

Figures

Fig.1. *Üçhöyük aerial photo with Sultan mountains in the background (Üçhöyük/ÜÇH archive)*

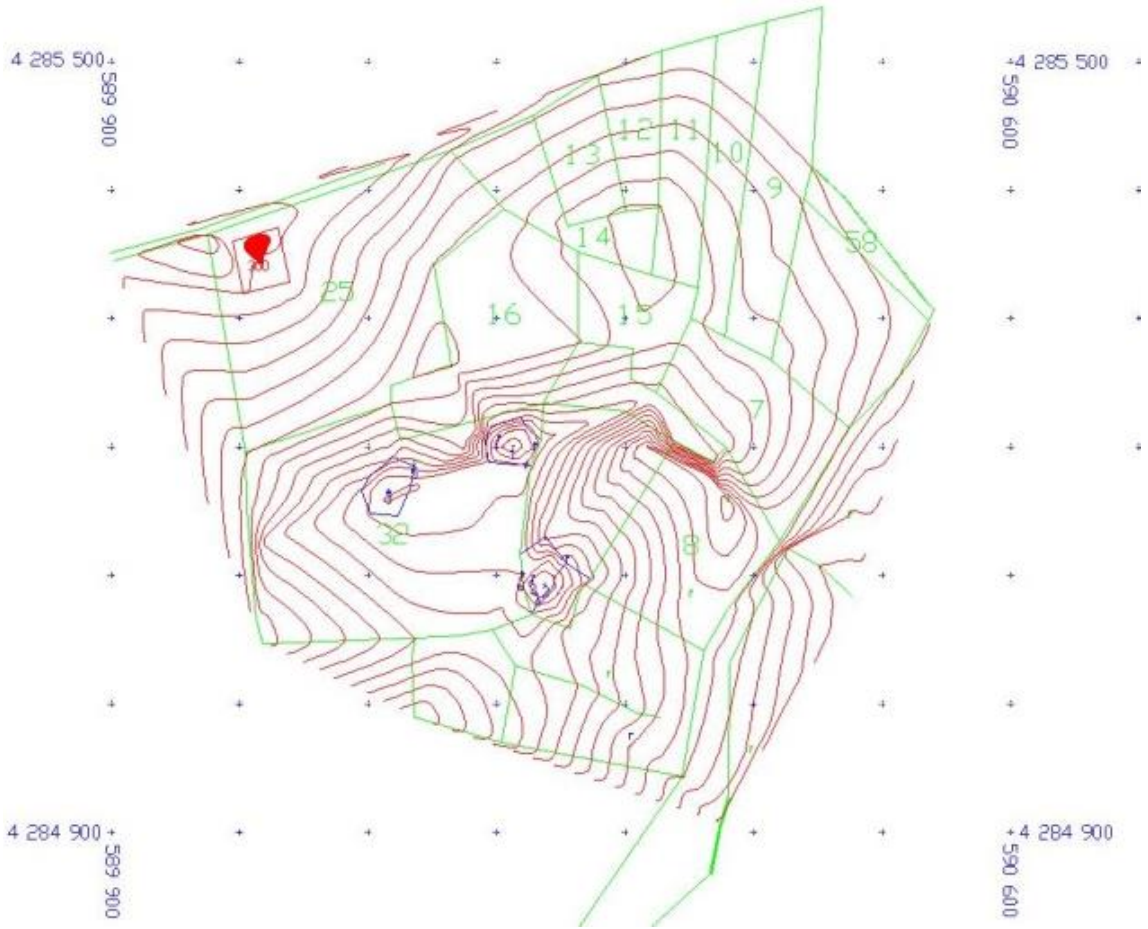


Fig.2. *Map of Üçhöyük Hill settlement and current (Designed by Dr.Ömür Esen)*

Fig.3. Üçhöyük excavations, Area D, and the district center (ÜÇH archive)

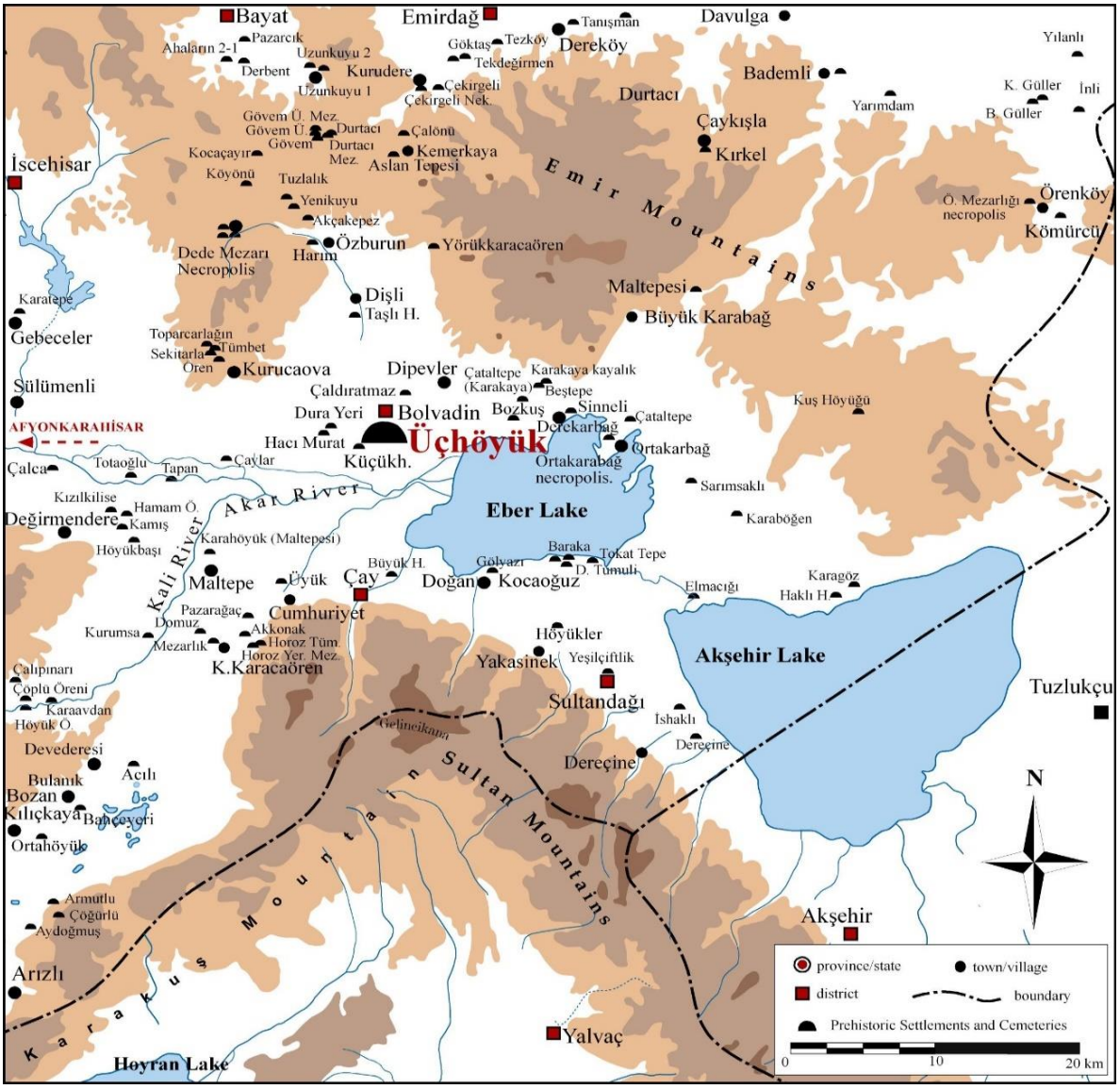


Fig.4. Map of Üçhöyük and surrounding settlements (Ö.Koçak archive)

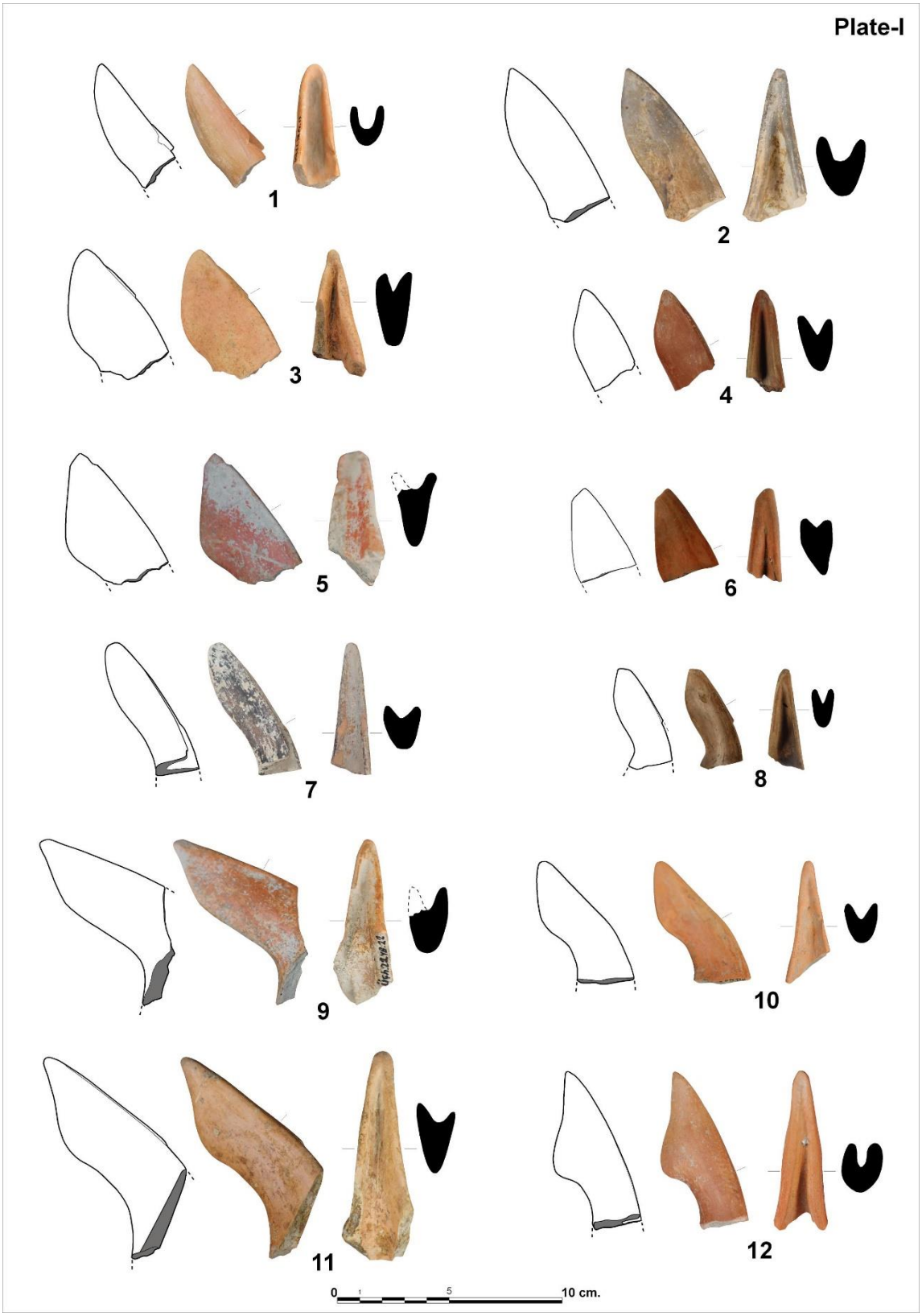


Fig.5. *Examples from type. 1 and type. 2*

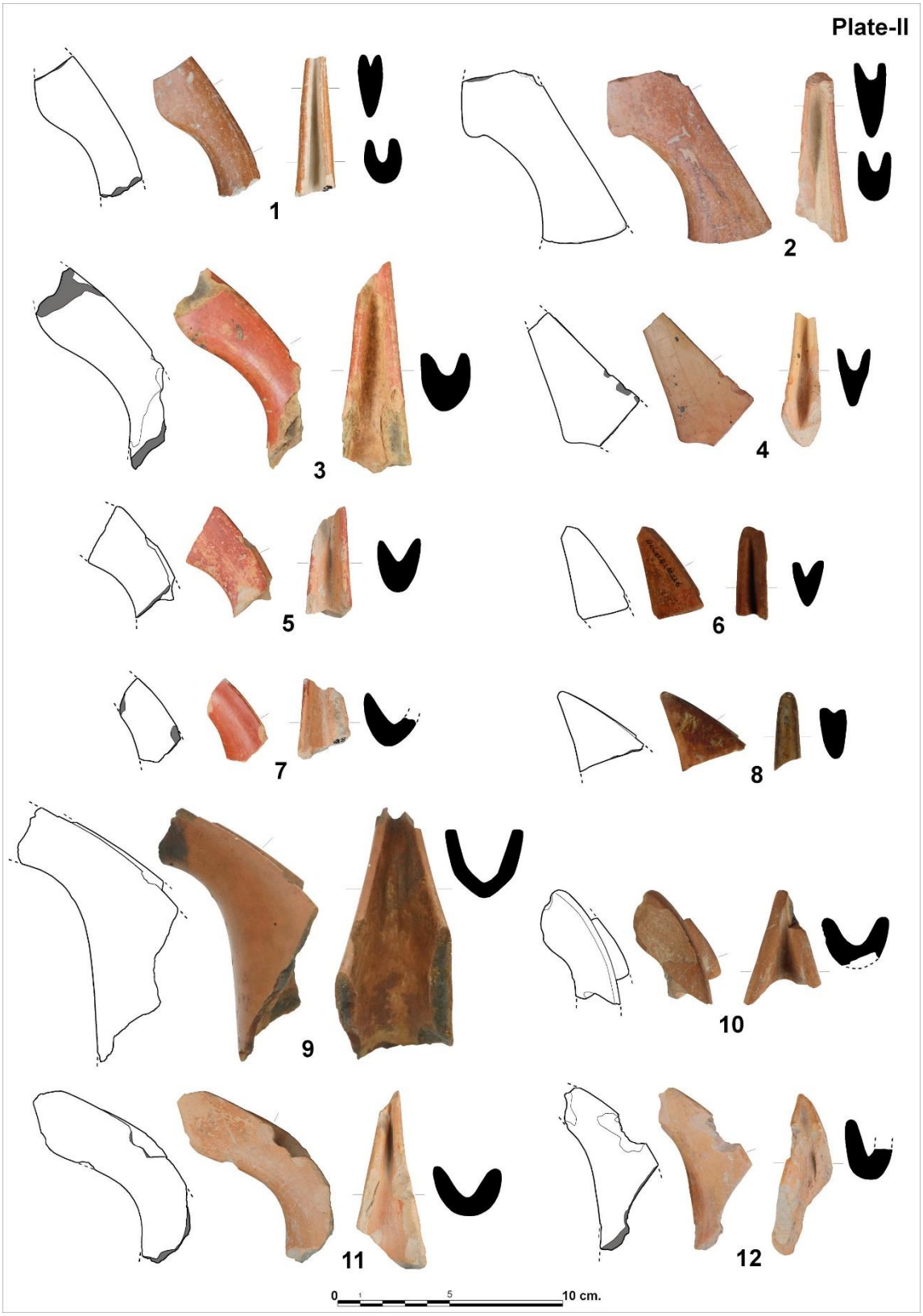


Fig.6. Examples from type. 2 and type. 3

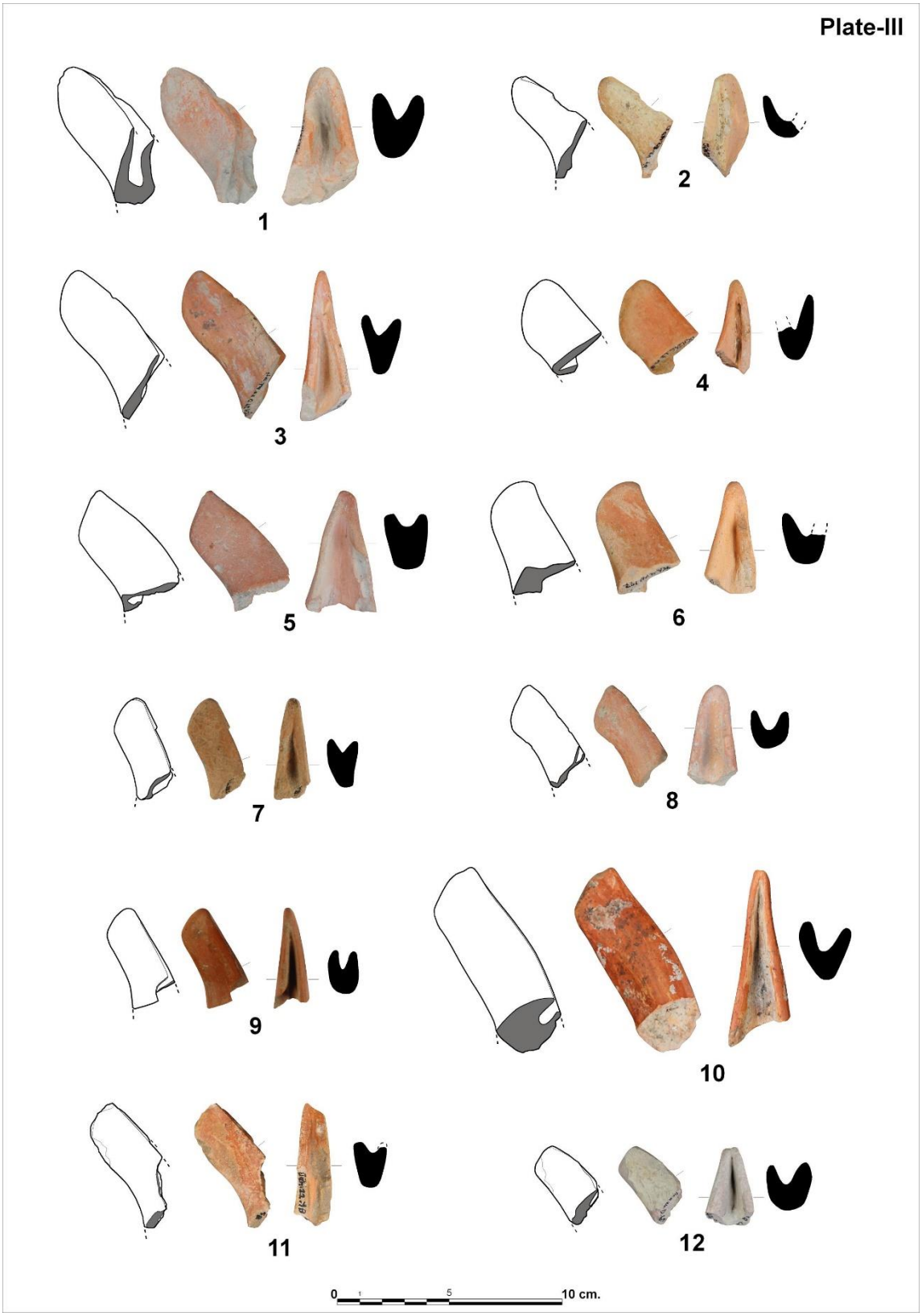


Fig.7. Examples from type. 4

Fig.8. *Examples from type.4 and type.5*

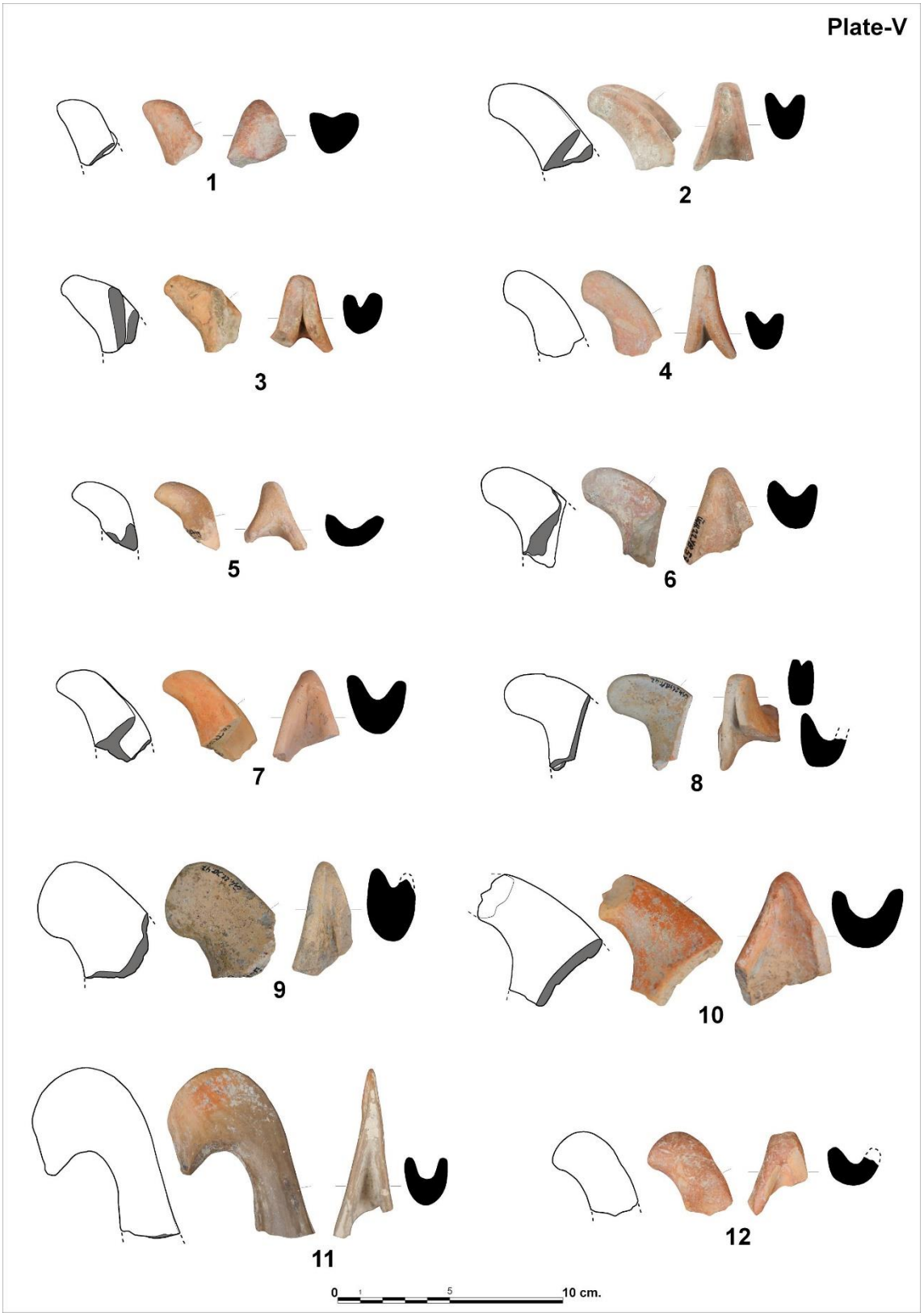


Fig.9. Examples from type.6 and type.7

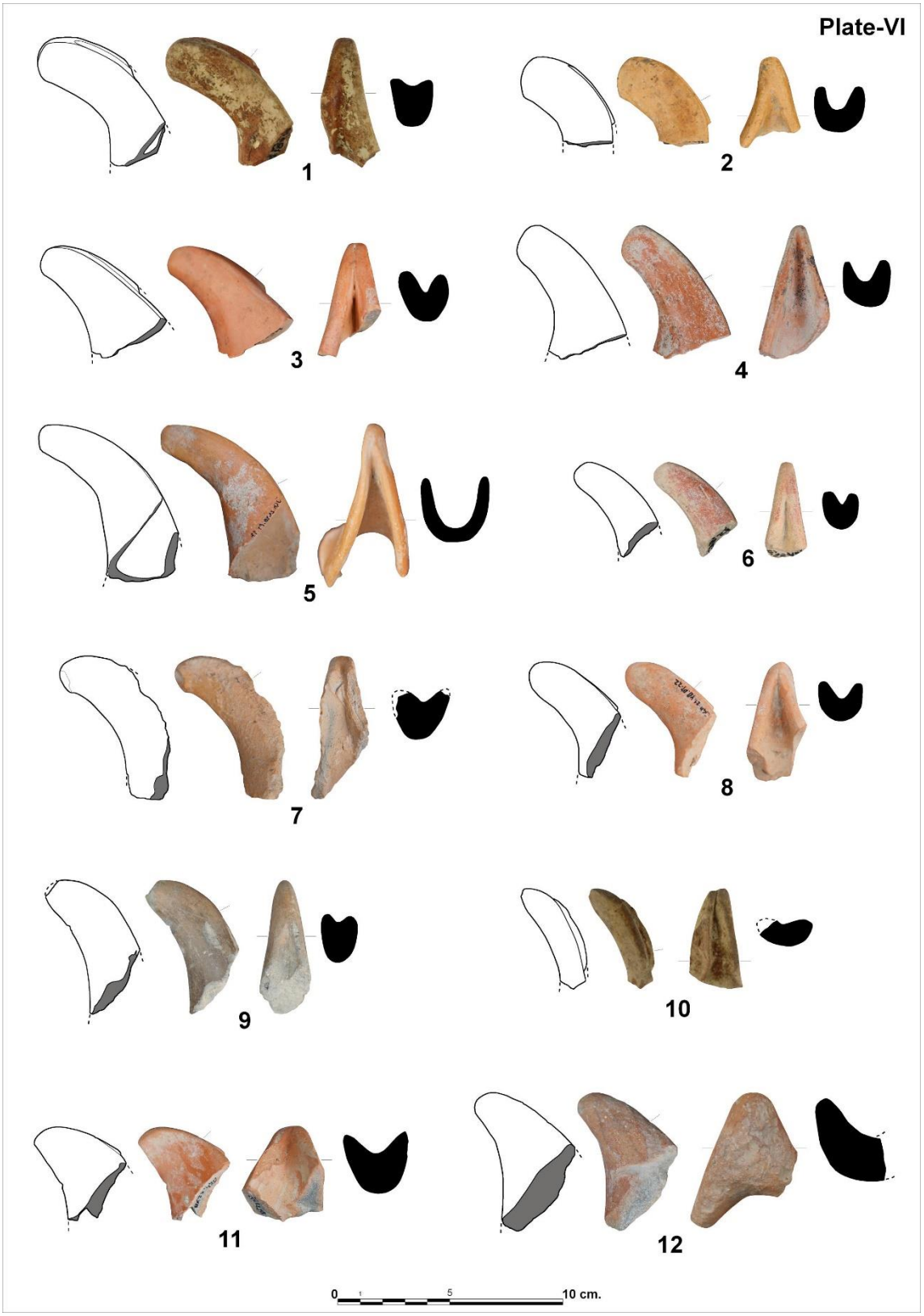


Fig.10. Examples from type.5 and type.8

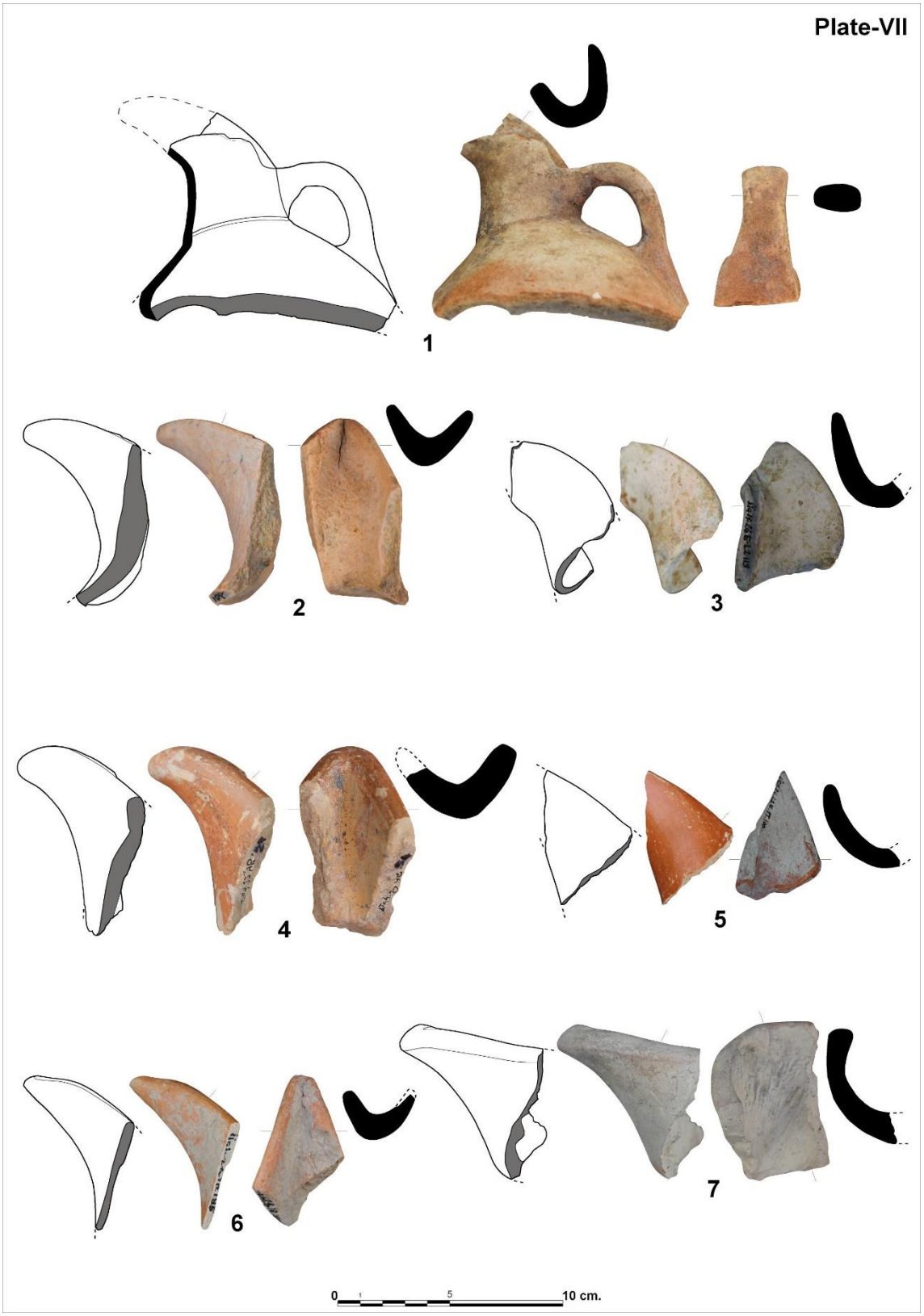


***Fig.11**. Examples from type.8*

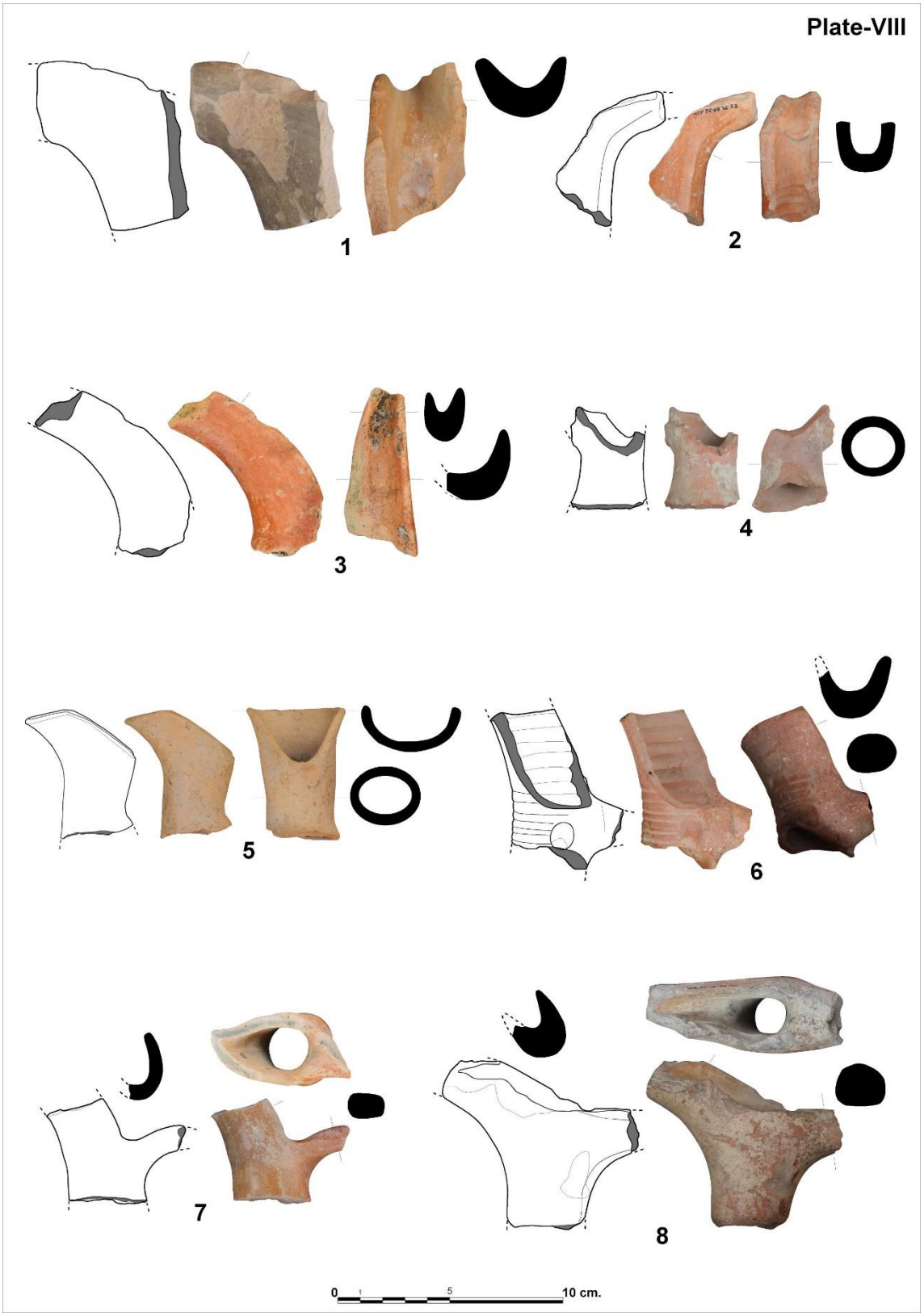


Fig.12. Examples from type.8 and type.9

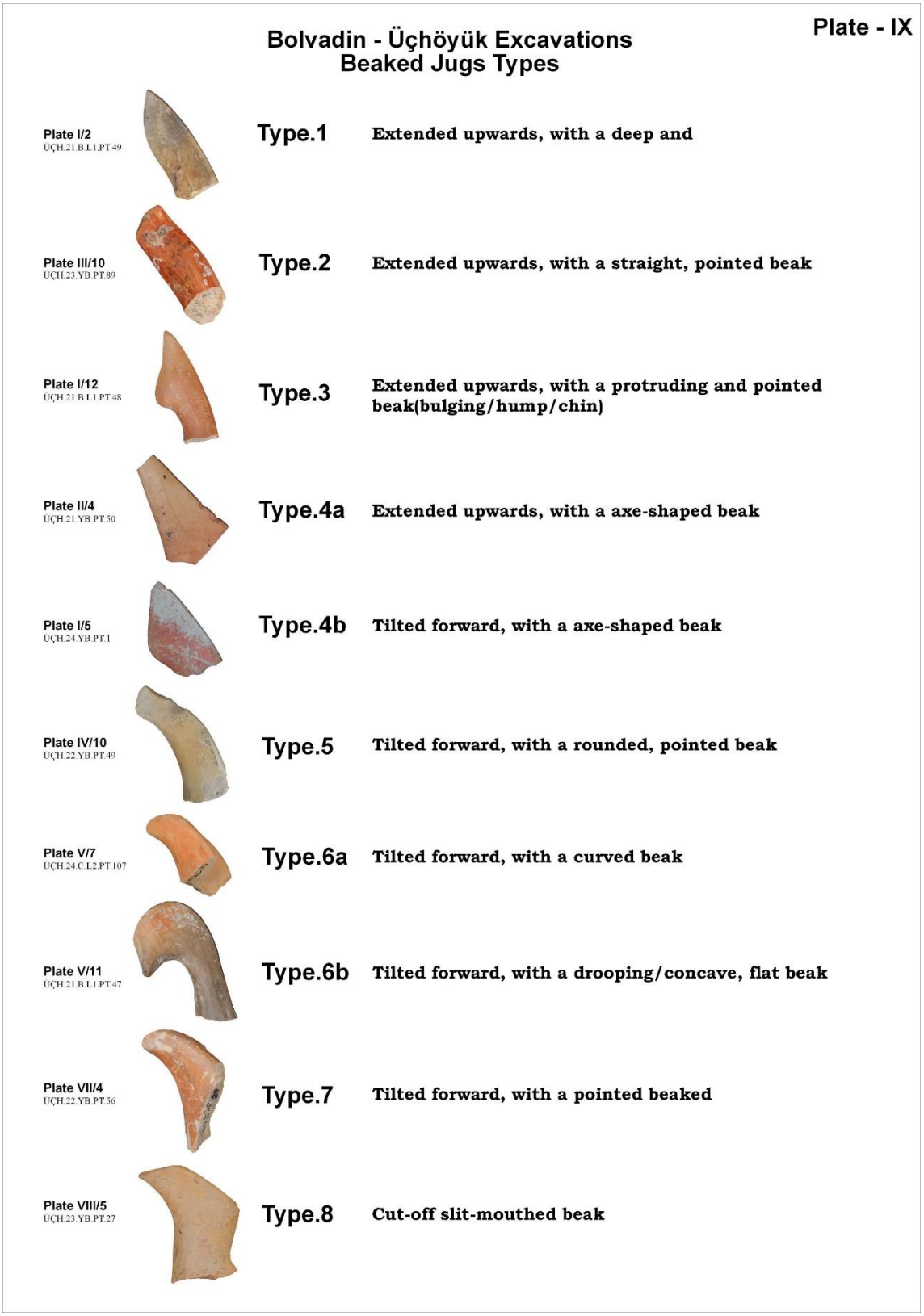


Fig.13. Types of beaked jugs from Üçhöyük Excavations

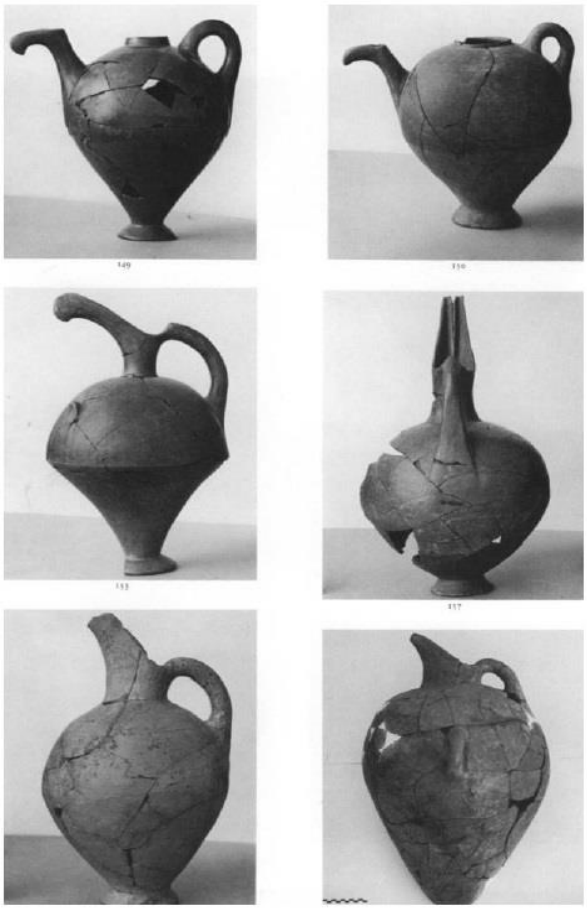


Fig. 14. *BoğazköyVI-Büyükkale (Orthmann 1979, Tafel. 4)*

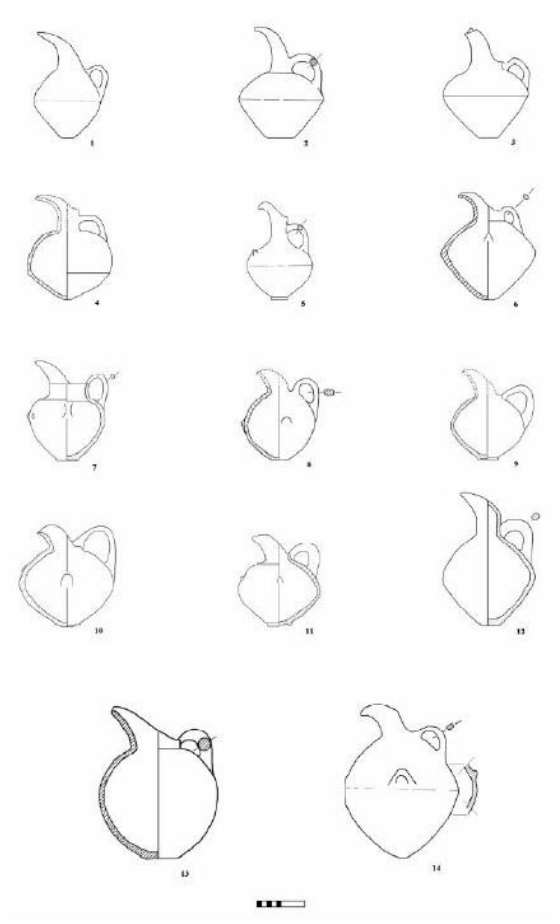


Fig. 15. *Acemhöyük (Türker 2008, Lev. XXXVI)*

Fig. 16*. Hittite terra cotta long neck pitcher 16th century BC – Hattusa (Boğazköy), Museum of Anatolian Civilisations, Ankara, Türkiye.*

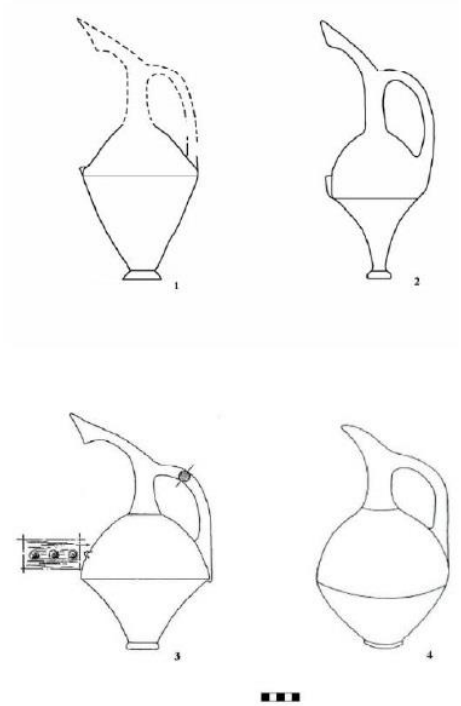


Fig. 17*. Acemhöyük (Türker 2008, Lev. XXXVIII)*

Inventory List

Plate: 1/1 **Find number:** ÜÇH.21.YB.PT.19 **Find spot:** Üçhöyük survey **Find name:** Beaked-jug **Cross-section:** 5 YR 6/6 reddish yellow clay **Clay composition:** fine sandly, low mica **Slip color:** 5 YR 6/6 reddish yellow **Burnishing condition:** burnished **Material group:** red **Firing condition:** mid fired **Making technique:** hand made **Surface feature:** glossy **Dimensions:** (Length:5,4 Width:2 Height:3,1 cm) **Description:** Extended upwards, with a deep and pointed beaked mouth fragment, Type-1.

Plate: 1/2 ÜÇH.21.B.L1.PT.49; Üçhöyük excavation corner NE; beaked-jug; cross-section: fine sandly, mica, lime, small stone, 5 YR 5/4 reddish brown clay, 7.5 YR 5/3 brown slip; burnished and glossy, red group, hand made, well-fired; dimensions: (L:7,4 W:2,8 H:5,2 cm) description: Extended upwards, with a deep and pointed beaked mouth fragment, Type-1.

Plate: 1/3 ÜÇH.23.A.L10.PT.20; excavation corner NW; beaked-jug; cross-section: fine sandly, low mica, small stone, 5 YR 6/6 reddish yellow clay, 2.5 YR 6/6 light red slip; weak-burnished and matte, red group, hand made, mid-fired; dimensions: (L:6,5 W:2,6 H:4,3 cm) description: Tilted forward, with a axe-shaped beak, Type-4b.

Plate: 1/4 ÜÇH.22.C.L10.PT.263; excavation corner NW; beaked-jug; cross-section: fine sandly, low mica, little lime, rich stone, 10 R 6/4 pale red clay, 10 R 5/6 red slip; burnished and glossy, red group, hand made, mid-fired; dimensions: (L:4,6 W:1,7 H:3,2 cm) description: Extended upwards, with a deep and pointed beaked mouth fragment, Type-1.

Plate: 1/5 ÜÇH.24.YB.PT.1; survey; beaked-jug; cross-section: fine sandly, low mica, little lime, small stone, 10 YR 6/6 light red clay, 10 YR 5/6 red slip; burnished and glossy, red group, hand made, mid-fired; dimensions: (L:6 W:2,4 H:4,2 cm) description: Tilted forward, with a axe-shaped beak, Type-4b.

Plate: 1/6 ÜÇH.22.A.L10.PT.206; excavation; beaked-jug; cross-section: fine sandly, rich mica, little lime, small stone, 2.5 YR 6/6 light red clay, 2.5 YR 5/6 red slip; burnished and glossy, red group, hand made, mid-fired; dimensions: (L:4,2 W:1,6 H:3,3 cm) description: Extended upwards, with a deep and pointed beaked mouth fragment, Type-1.

Plate: 1/7 ÜÇH.23.YB.PT.79; survey; beaked-jug; cross-section: fine sandly, low mica, small stone, 7.5 YR 7/4 pink clay, 10 YR 4/1 slip; weak-burnished and matte, red group, hand made, mid-fired; dimensions: (L:7,6 W:2,1 H:5,3 cm) description: Tilted forward, with a axe-shaped beak, Type-4b.

Plate: 1/8 ÜÇH.22.A.L10.PT.209; excavation; beaked-jug; cross-section: fine sandly, low mica, small stone, 7.5 YR 6/4 light brown clay, 7.5 YR 5/3 slip; burnished and matte, red group, hand made, mid-fired; dimensions: (L:4,2 W:1,6 H:3,3 cm) description: Tilted forward, with a axe-shaped beak, Type-4b.

Plate: 1/9 ÜÇH.22.YB.PT.22; survey; beaked-jug; cross-section: fine sandly, rich mica, mid stone, 2.5 YR 7/6 light red clay, 2.5 YR 5/6 red slip; weak-burnished and glossy, red group, hand made, hard-fired; dimensions: (L:7,6 W:2,1 H:5,3 cm) description: Tilted forward, with a axe-shaped beak, Type-4b.

Plate: 1/10 ÜÇH.22.YB.PT.46; survey; beaked-jug; cross-section: fine sandly, rich mica, rich lime, mid stone, 10 R 5/8 red clay, 2.5 YR 5/6 red slip; weak-burnished and glossy, red group, hand made, hard-fired; dimensions: (L:7,2 W:2,3 H:5,1 cm) description: Extended upwards, with a protruding (chin/hump) and pointed beak, Type-3.

Plate: 1/11 ÜÇH.24.E.L4.PT.180; survey; beaked-jug; cross-section: fine sandly, low mica, little lime, 5 YR 6/6 reddish yellow clay, 7.5 YR 6/6 reddish yellow(exterior), 5 YR 7/4 pink(interior) slip; burnished and glossy, red group, hand made, mid-fired; dimensions: (L:9,6 W:3,2 H:7,6 cm) description: Extended upwards, with a protruding (chin/hump) and pointed beak, Type-3.

Plate: 1/12 ÜÇH.21.B.L1.PT.48; excavation; beaked-jug; cross-section: fine sandly, mica, lime, stone, 10 R 5/8 red clay, 2.5 YR 5/6 red slip; burnished and glossy, red group, hand made, well-fired; dimensions: (L:7,2 W:2,2 H:4,8 cm) description: Extended upwards, with a protruding (chin/hump) and pointed beak, Type-3.

Plate: 2/1 ÜÇH.22.YB.PT.50; survey; beaked-jug; cross-section: fine sandly, low mica, little lime, rich stone, 5 YR 6/6 reddish yellow clay, 5 YR 5/6 yellowish red slip; burnished and glossy, red group, hand made, well-fired; dimensions: (L:6,7 W:1,9 H:4,5 cm) description: Extended upwards, with a protruding (chin/hump) and pointed beak, Type-3.

Plate: 2/2 ÜÇH.21.YB.PT.90; survey; beaked-jug; cross-section: fine sandly, low mica, little lime, low stone, 10 R 6/6 light red clay, 2.5 YR 4/6 red slip; burnished and glossy, red group, hand made, well-fired; dimensions: (L:8,9 W:2,7 H:5,8 cm) description: Extended upwards, with a axe-shaped beak, Type-4a.

Plate: 2/3 ÜÇH.21.B.L1.PT.51; excavation corner NE; beaked-jug; cross-section: fine sandly, mica, little lime, stone, 2.5 YR 6/6 light red clay, 10 R 4/8 red slip; burnished and glossy, red group, hand made, mid-fired; dimensions: (L:9,4 W:3,2 H:8,5 cm) description: Extended upwards, with a protruding (chin/hump) and pointed beak, Type-3.

Plate: 2/4 ÜÇH.21.YB.PT.50; survey; beaked-jug; cross-section: fine sandly, rich mica, rich stone, 5 YR 6/4 light reddish brown clay, 5 YR 6/4 light reddish brown slip; burnished and matte, smooth, red group, hand made, mid-fired; dimensions: (L:6,5 W:1,7 H:4,9 cm) description: Extended upwards, with a axe-shaped beak, Type-4a.

Plate: 2/5 ÜÇH.22.YB.PT.53; survey; beaked-jug; cross-section: fine sandly, rich mica, mid stone, 2.5 YR 6/6 right red clay, 10 R 4/6 red slip; burnished and glossy, red group, hand made, mid-fired; dimensions: (L:5 W:2 H:3,4 cm) description: Extended upwards, with a protruding (chin/hump) and pointed beak, Type-3.

Plate: 2/6 ÜÇH.22.A.L10.PT.226; excavation; beaked-jug; cross-section: fine sandly, rich mica, rich stone, 2.5 YR 7/6 light red clay, 10 R 5/4 weak red slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:4,2 W:1,4 H:3 cm) description: Extended upwards, with a axe-shaped beak, Type-4a.

Plate: 2/7 ÜÇH.23.YB.PT.88; survey; beaked-jug; cross-section: fine sandly, low mica, low stone, 2.5 YR 3/6 dark red clay, 2.5 YR 4/8 red slip; burnished and matte, red group, hand made, fine-fired; dimensions: (L:3,7 W:2,4 H:3,1 cm) description: Extended upwards, with a deep and pointed beaked mouth fragment, Type-1.

Plate: 2/8 ÜÇH.22.A.L12.PT.261; excavation; beaked-jug; cross-section: fine sandly, low mica, mid lime, rich stone, 5 YR 6/6 reddish yellow clay, 5 YR 6/6 reddish yellow slip; burnished and matte, red group, hand made, mid-fired; dimensions: (L:3,5 W:1,2 H:2,5 cm) description: Extended upwards, with a axe-shaped beak, Type-4a.

Plate: 2/9 ÜÇH.24.E.L5.PT.279; excavation; beaked-jug; cross-section: fine sandly, rich mica, rich stone, 5 YR 6/4 light reddish brown clay, 5 YR 6/4 light reddish brown slip; burnished and matte, red group, hand made, mid-fired; dimensions: (L:12,3 W:4,9 H:11,2 cm) description: Extended upwards, with a deep and pointed beaked mouth fragment, Type-1.

Plate: 2/10 ÜÇH.22.A.L10.PT.204; excavation; beaked-jug; cross-section: fine sandly, mid mica, mid stone, 5 YR 6/4 light reddish brown clay, 5 YR 6/4 light reddish brown slip; burnished and matte, red group, hand made, mid-fired; dimensions: (L:5,1 W:3,5 H:3,2 cm) description: Extended upwards, with a deep and pointed beaked mouth fragment, Type-1.

Plate: 2/11 ÜÇH.22.YB.PT.54; survey; beaked-jug; cross-section: fine sandly, rich mica, rich stone, 5 YR 7/6 reddish yellow clay, 2.5 YR 5/6 red slip; burnished and matte, red group, hand made, mid-fired; dimensions: (L:9,1 W:3 H:5,9 cm) description: Extended upwards, with a deep and pointed beaked mouth fragment, Type-1.

Plate: 2/12 ÜÇH.21.YB.PT.91; survey; beaked-jug; cross-section: fine sandly, mica, little lime, stone, 5 YR 5/6 yellowish red clay, 5 YR 7/6 reddish yellow slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:7,3 W:2,4 H:5,7 cm) description: deep and pointed beaked mouth fragment, Type-1.

Plate: 3/1 ÜÇH.23.YB.PT.52; survey; beaked-jug; cross-section: fine sandly, low mica, low stone, 5 YR 7/4 pink clay, 2.5 YR 6/6 light red slip; unburnished and matte, red group, hand made, fine-fired; dimensions: (L:6,2 W:2,5 H:4,5 cm) description: Extended upwards, with a deep and pointed beaked mouth fragment, Type-1.

Plate: 3/2 ÜÇH.23.YB.PT.19; survey; beaked-jug; cross-section: fine sandly, mid mica, low stone, 2.5 YR 7/4 light reddish brown clay, 10 YR 8/3 very pale brown slip; burnished and matte, red group, hand made, fine-fired; dimensions: (L:4,9 W:2,1 H:4,1 cm) description: Extended upwards, with a deep and pointed beaked mouth fragment, Type-1.

Plate: 3/3 ÜÇH.24.D.L2.PT.44; excavation corner SW; beaked-jug; cross-section: fine sandly, low mica, little lime, 2.5 YR 6/6 light red clay, 2.5 YR 6/6 light red(exterior), 5YR 7/6 reddish yellow(interior) slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:7 W:2,2 H:5,6 cm) description: deep and pointed beaked mouth fragment, Type-1.

Plate: 3/4 ÜÇH.24.C.L2.PT.8; excavation; beaked-jug; cross-section: fine sandly, mica, lime, low stone, 5 YR 7/6 reddish yellow clay, 2.5 YR 6/6 light red(exterior), 5YR 7/6 reddish yellow(interior) slip; burnished and glossy, red group, hand made, mid-fired; dimensions: (L:4,2 W:1,5 H:3,6 cm) description: Extended upwards, with a straight and pointed beaked mouth fragment, Type-2.

Plate: 3/5 ÜÇH.21.B.L1.PT.53; excavation corner NE; beaked-jug; cross-section: fine sandly, mica, lime, stone, 7.5 YR 5/8 red clay, 2.5 YR 6/4 light reddish brown slip; faintly burnished and glossy, red group, hand made, fine-fired; dimensions: (L:5 W:2,8 H:3,8 cm) description: Extended upwards, with a straight and pointed beaked mouth fragment, Type-2.

Plate: 3/6 ÜÇH.22.YB.PT.147; survey; beaked-jug; cross-section: fine sandly, rich mica, rich stone, 5 YR 7/6 reddish yellow clay, 2.5 YR 6/6 light red slip; burnished and glossy, red group, hand made, mid-fired; dimensions: (L:2,3 W:5,1 H:4,1 cm) description: Extended upwards, with a straight and pointed beaked mouth fragment, Type-2.

Plate: 3/7 ÜÇH.22.C.L2.PT.212; excavation; beaked-jug; cross-section: fine sandly, rich mica, mid lime, rich stone, 7.5 YR 8/4 pink clay, 7.5 YR 7/4 pink slip; faintly burnished and matte, red group, hand made, fine-fired; dimensions: (L:5,1 W:1,7 H:4 cm) description: Extended upwards, with a straight and pointed beaked mouth fragment, Type-2.

Plate: 3/8 ÜÇH.21.YB.PT.92; survey; beaked-jug; cross-section: fine sandly, mica, little lime, 10 R 6/6 light red clay, 10 R 5/6 red slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:4,9 W:2,3 H:3,4 cm) description: Extended upwards, with a straight and pointed beaked mouth fragment, Type-2.

Plate: 3/9 ÜÇH.22.A.L10.PT.208; excavation; beaked-jug; cross-section: fine sandly, rich mica, little lime, rich stone, 2.5 YR 7/6 light red clay, 2.5 YR 6/6 light red slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:4,5 W:1,6 H:3 cm) description: Extended upwards, with a straight and pointed beaked mouth fragment, Type-2.

Plate: 3/10 ÜÇH.23.YB.PT.89; survey; beaked-jug; cross-section: fine sandly, low mica, little lime, rich stone, 2.5 YR 6/6 light red clay, 10 YR 5/6 red slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:6,9 W:2,8 H:4,9 cm) description: Extended upwards, with a straight and pointed beaked mouth fragment, Type-2.

Plate: 3/11 ÜÇH.22.YB.PT.48; survey; beaked-jug; cross-section: fine sandly, rich mica, low stone, 5 YR 7/6 reddish yellow clay, : 2.5 YR 5/6 red slip; faintly burnished and glossy, red group, hand made, mid-fired; dimensions: (L:4,5 W:1,6 H:3 cm) description: Extended upwards, with a straight and pointed beaked mouth fragment, Type-2.

Plate: 3/12 ÜÇH.24.D.L2.PT.87; excavation; beaked-jug; cross-section: fine sandly, low mica, 2.5 YR 6/3 light reddish brown clay, 10 YR 7/2 light gray(exterior), 10 YR 7/2 light gray(interior) slip; faintly burnished and glossy, cream group, hand made, fine-fired; dimensions: (L:3,7 W:2,1 H:3,3 cm) description: Extended upwards, with a straight and pointed beaked mouth fragment, Type-2.

Plate: 4/1 ÜÇH.21.YB.PT.21; survey; beaked-jug; cross-section: fine sandly, mica, little lime, 5 YR 7/4 pink clay, 2.5 YR 6/6 light red slip; unburnished and glossy, red group, hand made, fine-fired; dimensions: (L:4 W:2,1 H:3,1 cm) description: deep and pointed beaked mouth fragment, Type-1.

Plate: 4/2 ÜÇH.22.A.L9.PT.215; excavation; beaked-jug; cross-section: fine sandly, rich mica, rich stone, 2.5 YR 6/6 light red clay, 2.5 YR 6/6 light red slip; unburnished and matte, red group, hand made, mid-fired; dimensions: (L:2,8 W:3,1 H:4,5 cm) description: deep and pointed beaked mouth fragment, Type-1.

Plate: 4/3 ÜÇH.22.YB.PT.158; survey; beaked-jug; cross-section: fine sandly, low mica, little, low stone, 2.5 YR 6/8 light red clay, 2.5 YR 6/6 light red slip; unburnished and matte, red group, hand made, mid-fired; dimensions: (L:3,7 W:1,7 H:2,7 cm) description: deep and pointed beaked mouth fragment, Type-1.

Plate: 4/4 ÜÇH.23.B.L4.PT.19; excavation; beaked-jug; cross-section: fine sandly, low mica, little lime, mid stone, 2.5 YR 6/6 light red clay, 10 R 5/6 red slip; burnished and matte, red group, hand made, fine-fired; dimensions: (L:8,1 W:3,8 H:8 cm) description: deep and pointed beaked mouth fragment, Type-1.

Plate: 4/5 ÜÇH.23.YB.PT.16; survey; beaked-jug; cross-section: fine sandly, low mica, little lime, low stone, 10 R 6/4 pale red clay, 7.5 YR 7/3 pink slip; faintly burnished and matte, red group, hand made, fine-fired; dimensions: (L:6 W:2,6 H:5,1 cm) description: deep and pointed beaked mouth fragment, Type-1.

Plate: 4/6 ÜÇH.23.YB.PT.17; survey; beaked-jug; cross-section: fine sandly, rich mica, rich stone, 2.5 YR 7/6 light red clay, 10 R 5/4 weak red slip; burnished and matte, red group, hand made, mid-fired; dimensions: (L:7 W:2,7 H:5,1 cm) description: deep and pointed beaked mouth fragment, Type-1.

Plate: 4/7 ÜÇH.21.YB.PT.20; survey; beaked-jug; cross-section: fine sandly, low mica, 2.5 YR 6/6 light red clay, 10 YR 8/2 very pale brown slip; unburnished and matte, red group, hand made, fine-fired; dimensions: (L:6,3 W:3,4 H:3,5 cm) description: Tilted forward, with a rounded, pointed beak, Type-5.

Plate: 4/8 ÜÇH.22.YB.PT.60; survey; beaked-jug; cross-section: fine sandly, rich mica, rich stone, 2.5 YR 7/6 light red clay, 2.5 YR 6/6 light red slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:6 W:4 H:3,9 cm) description: Tilted forward, with a rounded, pointed beak, Type-5.

Plate: 4/9 ÜÇH.23.YB.PT.82; survey; beaked-jug; cross-section: fine sandly, little lime, mid stone, 2.5 YR 7/6 light red clay, 7.5 YR 6/3 light brown slip; unburnished and matte, red group, hand made, fine-fired; dimensions: (L:5,9 W:3,8 H:4,9 cm) description: Tilted forward, with a rounded, pointed beak, Type-5.

Plate: 4/10 ÜÇH.22.YB.PT.49; survey; beaked-jug; cross-section: fine sandly, rich mica, rich stone, 10 YR 7/4 very pale brown clay, 10 YR 8/4 very pale brown slip; burnished and matte, red group, hand made, fine-fired; dimensions: (L:9 W:3,6 H:6,2 cm) description: Tilted forward, with a rounded, pointed beak, Type-5.

Plate: 4/11 ÜÇH.22.YB.PT.55; survey; beaked-jug; cross-section: fine sandly, low mica, rich stone, 5 YR 7/4 pink clay, 5 YR 5/4 reddish brown slip; burnished and matte, red group, hand made, mid-fired; dimensions: (L:6,6 W:4 H:3,6 cm) description: Tilted forward, with a rounded, pointed beak, Type-5.

Plate: 4/12 ÜÇH.21.YB.PT.18; survey; beaked-jug; cross-section: fine sandly, low mica, 10 R 6/6 light red clay, 10 R 5/6 red slip; burnished and glossy, red group, hand made, mid-fired; dimensions: (L:5,6 W:2,3 H:4,2 cm) description: Tilted forward, with a rounded, pointed beak, Type-5.

Plate: 5/1 ÜÇH.24.YB.2; survey; beaked-jug; cross-section: fine sandly, low mica, low stone, 2.5 YR 6/6 light red clay, 10 YR 5/4 weak red(exterior), 10R 5/4 weak red(interior) slip; burnished and glossy, red group, hand made, mid-fired; dimensions: (L:3,1 W:2,7 H:2,9 cm) description: deep and pointed beaked mouth fragment, Type-1.

Plate: 5/2 ÜÇH.24.E.L5.PT.280; excavation; beaked-jug; cross-section: fine sandly, mica, low stone, 2.5 YR 6/6 light red clay, 10 R 6/6 light red slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:4,6 W:2,6 H:2,9 cm) description: Tilted forward, with a curved beak, Type-6a.

Plate: 5/3 ÜÇH.24.C.L3.PT.45; excavation corner SW; beaked-jug; cross-section: fine sandly, low mica, little lime, 2.5 YR 6/3 light red clay, 2.5 YR 6/6 light red slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:3,4 W:2,7 H:2,6 cm) description: deep and pointed beaked mouth fragment, Type-1.

Plate: 5/4 ÜÇH.21.YB.PT.45; survey; beaked-jug; cross-section: fine sandly, mica, low stone, 2.5 YR 6/6 light red clay, 10 R 6/6 light red slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:4,2 W:2,3 H:2,8 cm) description: Tilted forward, with a curved beak, Type-6a.

Plate: 5/5 ÜÇH.22.YB.PT.59; survey; beaked-jug; cross-section: fine sandly, rich mica, little lime, rich stone, 5 YR 7/4 pink clay, 5 YR 6/4 light reddish brown slip; burnished and matte, red group, hand made, mid-fired; dimensions: (L:3,1 W:3 H:2,6 cm) description: Tilted forward, with a curved beak, Type-6a.

Plate: 5/6 ÜÇH.22.YB.PT.57; survey; beaked-jug; cross-section: fine sandly, low mica, little lime, rich stone, 5 YR 6/4 light reddish brown clay, 2.5 YR 5/4 reddish brown slip; faintly burnished and matte, red group, hand made, fine-fired; dimensions: (L:5,1 W:2,9 H:4,7 cm) description: Tilted forward, with a curved beak, Type-6a.

Plate: 5/7 ÜÇH.24.C.L2.PT.107; excavation corner NW; beaked-jug; cross-section: fine sandly, low mica, 2.5 YR 5/8 red clay, 2.5 YR 5/8 red slip; faintly burnished and matte, red group, hand made, fine-fired; dimensions: (L:4,6 W:3 H:3,8 cm) description: Tilted forward, with a curved beak, Type-6a.

Plate: 5/8 ÜÇH.21.YB.PT.42; survey; beaked-jug; cross-section: fine sandly, low mica, little lime, rich stone, 2.5 YR 6/6 light red clay, 7.5 YR 7/4 pink slip; burnished and matte, red group, hand made, fine-fired; dimensions: (L:5,3 W:2,8 H:4,6 cm) description: Tilted forward, with a curved beak, Type-6a.

Plate: 5/9 ÜÇH.22.YB.PT.47; survey; beaked-jug; cross-section: fine sandly, rich mica, rich lime, rich stone, 7.5 YR 7/4 pink clay, 7.5 YR 8/4 pink slip; faintly burnished and matte, red group, hand made, mid-fired; dimensions: (L:4,7 W:3 H:3,9 cm) description: Tilted forward, with a drooping/concave, flat beak, Type-6b.

Plate: 5/10 ÜÇH.22.YB.PT.45; survey; beaked-jug; cross-section: fine sandly, rich mica, mid lime, rich stone, 5 YR 7/6 reddish yellow clay, 10 R 6/6 light red slip; faintly burnished and glossy, red group, hand made, fine-fired; dimensions: (L:4,9 W:3,6 H:4 cm) description: Tilted forward, with a curved beak, Type-6a.

Plate: 5/11 ÜÇH.21.B.L1.PT.47; excavation corner NE; beaked-jug; cross-section: fine sandly, rich mica, mid lime, rich stone, 2.5 YR 6/8 light red clay, 2.5 YR 5/2 weak red slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:8,1 W:2,7 H:4,7 cm) description: Tilted forward, with a drooping/concave, flat beak, Type-6b.

Plate: 5/12 ÜÇH.23.YB.PT.18; survey; beaked-jug; cross-section: fine sandly, low mica, little lime, low stone, 2.5 YR 7/4 light reddish brown clay, 10 R 5/4 weak red slip; faintly burnished and glossy, red group, hand made, fine-fired; dimensions: (L:3,8 W:2,5 H:2,8 cm) description: Tilted forward, with a drooping/concave, flat beak, Type-6b.

Plate: 6/1 ÜÇH.22.A.L9.PT.203; excavation; beaked-jug; cross-section: fine sandly, low mica, mid stone, 5 YR 7/4 pink clay, 2.5 YR 4/4 reddish brown slip; unburnished and matte, red group, hand made, fine-fired; dimensions: (L:5,8 W:2,5 H:4 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 6/2 ÜÇH.23.A.L10.PT.147; excavation corner NW; beaked-jug; cross-section: fine sandly, rich mica, low stone, 5 YR 7/6 reddish yellow clay, 7.5 YR 7/6 reddish yellow slip; burnished and matte, red group, hand made, mid-fired; dimensions: (L:4,9 W:2,7 H:3,1 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 6/3 ÜÇH.24.E.L2.PT.105; excavation corner NW; beaked-jug; cross-section: fine sandly, low mica, little lime, 2.5 YR 6/6 light red clay, 2.5 YR 6/6 light red slip; faintly burnished and matte, red group, hand made, fine-fired; dimensions: (L:5,2 W:2,7 H:3,6 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 6/4 ÜÇH.21.B.L1.PT.52; excavation corner NE; beaked-jug; cross-section: fine sandly, mica, lime, low stone, 2.5 YR 6/6 light red clay, 10 R 5/6 red slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:5,8 W:3,2 H:4,5 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 6/5 ÜÇH.21.YB.PT.17; survey; beaked-jug; cross-section: fine sandly, low mica, low stone, 2.5 YR 6/6 light red clay, 5 YR 6/6 reddish yellow slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:11,3 W:4,5 H:7,4 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 6/6 ÜÇH.22.YB.PT.52; survey; beaked-jug; cross-section: fine sandly, rich mica, rich stone, 5 YR 7/6 reddish yellow clay, 10 R 5/4 weak red slip; faintly burnished and matte, red group, hand made, fine-fired; dimensions: (L:4,3 W:1,9 H:3,4 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 6/7 ÜÇH.22.YB.PT.51; survey; beaked-jug; cross-section: fine sandly, low mica, little lime, rich stone, 7.5 YR 7/4 pink clay, 7.5 YR 6/4 light brown slip; unburnished and matte, red group, hand made, mid-fired; dimensions: (L:7,8 W:2,4 H:5,7 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 6/8 ÜÇH.21.YB.PT.22; survey; beaked-jug; cross-section: fine sandly, mica, little lime, 10 R 6/6 light red clay, 10 R 6/6 light red slip; unburnished and glossy, red group, hand made, mid-fired; dimensions: (L:5,2 W:2,7 H:3,6 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 6/9 ÜÇH.21.YB.PT.43; survey; beaked-jug; cross-section: fine sandly, low mica, little lime, rich stone, 5 YR 5/1 gray clay, 5 YR 4/1 dark gray slip; burnished and glossy, red group, hand made, hard-fired; dimensions: (L:6 W:2,3 H:5,2 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 6/10 ÜÇH.22.A.L10.PT.262; excavation; beaked-jug; cross-section: fine sandly, low mica, little lime, rich stone, 5 YR 7/6 reddish yellow clay, 2.5 YR 8/3 pink slip; faintly burnished and matte, red group, hand made, fine-fired; dimensions: (L:4,5 W:2,4 H:2,5 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 6/11 ÜÇH.22.YB.PT.148; survey; beaked-jug; cross-section: fine sandly, rich mica, little lime, rich stone, 5 YR 6/6 reddish yellow clay, 2.5 YR 5/8 red slip; burnished and matte, red group, hand made, mid-fired; dimensions: (L:4,6 W:3,7 H:3,9 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 6/12 ÜÇH.22.YB.PT.44; survey; beaked-jug; cross-section: fine sandly, rich mica, rich stone, 5 YR 7/4 pink clay, 5 YR 7/4 pink slip; burnished and matte, red group, hand made, mid-fired; dimensions: (L:7,4 W:5 H:5,2 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 7/1 ÜÇH.23.A.L11.PT.117; excavation; beaked-jug; cross-section: fine sandly, mid lime, rich stone, 2.5 YR 7/10 light red clay, 10 YR 8/3 very pale brown slip; burnished and matte, red group, hand made, hard-fired; dimensions: (L:6,2 W:4,2 H:3,6 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 7/2 ÜÇH.24.C.L2.PT.106; excavation corner NW; beaked-jug; cross-section: fine sandly, low mica, 2.5 YR 6/3 light red clay, 2.5 YR 6/3 light red slip; faintly burnished and matte, red group, hand made, fine-fired; dimensions: (L:8,6 W:4,7 H:5,9 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 7/3 ÜÇH.24.E.L2.PT.119; excavation corner NE; beaked-jug; cross-section: fine sandly, low mica, 2.5 YR 6/3 light reddish brown clay, 2.5 YR 6/3 light reddish brown slip; faintly burnished and glossy, cream group, hand made, mid-fired; dimensions: (L:6,9 W:4,2 H:7 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 7/4 ÜÇH.22.YB.PT.56; survey; beaked-jug; cross-section: fine sandly, rich mica, mid lime, rich stone, 7.5 YR 7/4 pink clay, 5 YR 6/4 light reddish brown slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:8,7 W:5,3 H:6,9 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 7/5 ÜÇH.24.E. L1.P.T.100; excavation; beaked-jug; cross-section: fine sandly, mica, lime, shiny mineral, 2.5 YR 6/8 light red clay, 2.5 YR 5/8 red slip; fine burnished and glossy, red group, hand made, fine-fired; dimensions: (L:7 W:3,2 H:6,6 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 7/6 ÜÇH.24.E.L4.185; excavation; beaked-jug; cross-section: fine sandly, lime, low mineral, 5 YR pink clay, 5 YR 7/6 reddish yellow slip; faintly burnished and matte, red group, hand made, fine-fired; dimensions: (L:6,8 W:4 H:5,9 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 7/7 ÜÇH.21.YB.PT.93; survey; beaked-jug; cross-section: fine sandly, low mica, low stone, 2.5 YR 5/3 reddish brown clay, 10 YR 7/1 light gray slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:8,2 W:6 H:6,3 cm) description: deep Tilted forward, with a pointed beaked, Type-7.

Plate: 8/1 ÜÇH.22.YB.PT.58; survey; beaked-jug; cross-section: fine sandly, mid mica, little lime, low stone, 7.5 YR 7/4 pink clay, 10 YR 6/3 pale brown slip; burnished and matte, red group, hand made, fine-fired; dimensions: (L:6,9 W:3,9 H:5 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 8/2 ÜÇH.21.YB.PT.23; survey; beaked-jug; cross-section: fine sandly, mica, little lime, 10 R 6/8 light red clay, 2.5 YR 5/6 red slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:6,7 W:2,7 H:6,4 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 8/3 ÜÇH.23.A.L11.PT.91; excavation; beaked-jug; cross-section: fine sandly, rich mica, rich stone, 2.5 YR 6/6 light red clay, 10 R 5/6 red slip; burnished and glossy, red group, hand made, mid-fired; dimensions: (L:8 W:3,4 H:5,8 cm) description: Tilted forward, with a pointed beaked, Type-7.

Plate: 8/4 ÜÇH.21.YB.PT.4; survey; beaked-jug neck piece; cross-section: fine sandly, low mica, low stone, 10 R 6/6 light red clay, 10 R 5/4 weak red slip; unburnished and matte, red group, hand made, mid-fired; dimensions: (L:6,8 W:4,1 H:6,8 cm) description: Deep and pointed beaked mouth fragment, Type-1.

Plate: 8/4 ÜÇH.21.YB.PT.4; survey; beaked-jug; cross-section: fine sandly, low mica, low stone, 10 R 6/6 light red clay, 10 R 5/4 weak red slip; unburnished and matte, red group, hand made, mid-fired; dimensions: (L:6,8 W:4,1 H:6,8 cm) description: Cut-off slit-mouthed beak, Type-8.

Plate: 8/5 ÜÇH.23.YB.PT.27; survey; beaked-jug; cross-section: fine sandly, rich mica, rich stone, 5 YR 7/4 pink clay, 7.5 YR 7/4 pink slip; unburnished and matte, red group, hand made, mid-fired; dimensions: (L:6,1 W:4,5 H:5,3 cm) description: Cut-off slit-mouthed beak, Type-8.

Plate: 8/6 ÜÇH.23.YB.PT.47; survey; beaked-jug neck piece; cross-section: fine sandly, mica, mid lime, rich stone, 2.5 YR 6/6 light red clay, 10 R 6/4 pale red slip; burnished and glossy, red group, hand made, fine-fired; dimensions: (L:6,7 W:3,4 H:6,3 cm) description: Cut-off slit-mouthed beak, Type-8.

Plate: 8/7 ÜÇH.21.YB.PT.94; survey; beaked-jug; cross-section: fine sandly, low mica, little lime, low stone, 7.5 YR 7/4 pink clay, 5 YR 5/6 yellowish red slip; burnished and glossy, red group, hand made, mid-fired; dimensions: (L:7 W:6,2 H:4,2 cm) description: Tilted forward, with a pointed beaked, Type-7.

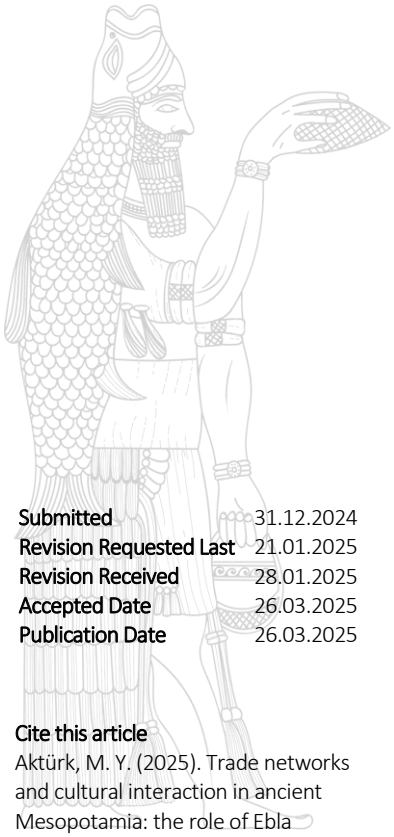
Plate: 8/8 ÜÇH.21.YB.PT.16; survey; beaked-jug; cross-section: fine sandly, low mica, little lime, low stone, 10 R 6/6 light red clay, 10 R 5/4 weak red slip; unburnished and matte, red group, hand made, mid-fired; dimensions: (L:9 W:8,8 H:7,3 cm) description: Tilted forward, with a pointed beaked, Type-7.

OANNES
2025, 7(1) March
Research Article DOI: 10.33469/oannes.1610818

Trade Networks and Cultural Interaction in Ancient Mesopotamia: The Role of Ebla Merchants in The Middle and Late Bronze Age

Mehmet Yunus AKTÜRK
Corresponding Author

Department of History, Gümüşhane University, Faculty of Letters, Gümüşhane, Türkiye.
m.yunusakrep@gumushane.edu.tr



Submitted 31.12.2024
Revision Requested Last 21.01.2025
Revision Received 28.01.2025
Accepted Date 26.03.2025
Publication Date 26.03.2025

Cite this article
Aktürk, M. Y. (2025). Trade networks and cultural interaction in ancient Mesopotamia: the role of Ebla merchants in the Middle and Late Bronze Age, *Oannes*, 7(1), March, pp. 176-186.

Abstract

Ebla was pivotal in shaping the economic, political, and cultural interactions between Mesopotamia and the Levant during the Middle and Late Bronze Ages. Emerging as a significant power in the 24th century BCE, Ebla controlled strategic trade routes connecting Mesopotamia, the Levant, and Anatolia, achieving economic prosperity while also establishing diplomatic dominance. The city leveraged its control over trade routes not only for economic gain but also as a tool to influence regional power dynamics and strengthen cultural ties. The archives of the Ebla Royal Palace G provide critical insights into the organization of trade networks, the diversity of traded goods, and the political and cultural impacts of these exchanges. The trade of goods such as grains, textiles, lapislazuli, and gold not only facilitated economic growth but also promoted the spread of religious practices, the development of linguistic standards, and the transfer of technological innovations. Ebla's merchants served as cultural bridges between Mesopotamia and the Levant, enabling the exchange of knowledge, art, and technical expertise among diverse societies. The city's dominance over trade routes was reinforced through strategic alliances with powerful city-states like Mari and Akkad, further enhancing Ebla's influence in regional politics. Diplomatic agreements ensured the security of trade routes and simultaneously bolstered Ebla's political supremacy. This article analyzes the multifaceted impacts of Ebla's trade networks, emphasizing the transformative role of trade in regional integration and cultural interaction.

Keywords: *Ebla, Merchants of Ebla, Ebla Archives, Mesopotamian Trade, Ebla Trade Routes.*

Genişletilmiş Özet

Ebla, Orta ve Geç Tunç Çağları boyunca Mezopotamya, Levant ve Anadolu arasında ticaretin ve kültürel etkileşimin merkezinde yer almıştır. Şehir, M.Ö. 24. yüzyılda önemli bir güç merkezi olarak ortaya çıkmış ve stratejik konumu sayesinde bölgesel ticaret ağlarının ana düğüm noktası haline gelmiştir. Mezopotamya'nın tarımsal zenginliği ile Levant'ın deniz ticaretine dayalı ekonomisini birbirine bağlayan Ebla, ticaret yolları üzerindeki hâkimiyetini yalnızca ekonomik refah sağlamak için değil, aynı zamanda kültürel alışverişi teşvik etmek ve politik üstünlük elde etmek için kullanmıştır. Bu makale, Ebla'nın ticaret ağlarını ve bu ağların ekonomik, politik ve kültürel bağlamdaki etkilerini analiz ederek, Mezopotamya'nın kuzeyindeki güç dengelerinin nasıl şekillendiğini anlamaya katkıda bulunmayı amaçlamaktadır.

Ebla'nın ekonomik sistemi, tarım ürünleri, tekstil, metaller ve değerli taşlar gibi çeşitli malların ticaretine dayalıydı. Tahıl ve tekstil, ticaretin temelini oluştururken, lapislazuli ve altın gibi lüks mallar, yalnızca ekonomik birer meta olarak değil, aynı zamanda diplomatik ilişkileri güçlendiren bir araç olarak kullanılmıştır. Ebla Kraliyet Sarayı G arşivlerinden çıkarılan tabletler, tahıl ticaretinin detaylarını, buğday ve arpa gibi ürünlerin Mezopotamya'dan Levant'a taşındığını ve bu ticaretin şehrin ekonomik büyümesine nasıl katkıda bulunduğunu belgelemiştir. Öte yandan, keten ve yün tekstil ürünleri, Ebla'nın hem Levant hem de Mezopotamya pazarlarındaki talebi karşılamadaki başarısını göstermiştir. Bu ürünler, gündelik ihtiyaçların ötesinde sosyal statü sembolleri ve diplomatik hediyeler olarak da değerlendirilmiştir.

Metaller ve değerli taşlar ise, Ebla'nın ticaretinde ayrı bir öneme sahiptir. Bakır ve kalay, tunç üretimi için kritik hammaddeler olarak Mezopotamya ve Levant şehir devletlerinin ekonomik ve askeri kapasitelerini artırmış, bu metallerin ticareti sırasında teknolojik bilgiler de aktarılmıştır. Özellikle lapislazuli gibi değerli taşlar, Afganistan'dan başlayan uzun bir ticaret yolculuğunun ardından Ebla aracılığıyla Mezopotamya'ya ulaşmıştır. Bu taşlar, Mezopotamya'daki kraliyet saraylarında ve dini mekânlarda süslemeler için kullanılarak estetik ve kültürel bağlamda önemli bir rol oynamıştır. Ebla'nın bu malların tedarikindeki aracılık rolü, onu sadece ekonomik değil, aynı zamanda kültürel bir merkez haline getirmiştir.

Ebla'nın ticaret ağları, yalnızca ekonomik kazanç sağlamamış, aynı zamanda kültürel etkileşim ve bilgi alışverişini de teşvik etmiştir. Şehir, Mezopotamya ve Levant arasındaki bir kültürel köprü işlevi görmüş; ticaret yolları boyunca dil, sanat ve teknolojinin yayılmasına olanak tanımıştır. Ebla tabletlerinde yer alan kayıtlar, şehrin hem Eblaitik hem de Akadca gibi dillerin kullanımını birleştirerek bölgesel iletişim standartlarının oluşumunda etkili olduğunu göstermektedir. Bu dilsel etkileşim, ticaret ve diplomasi alanlarında ortak bir anlayış yaratmış ve toplumlar arası ilişkileri kolaylaştırmıştır. Ayrıca, tarım teknolojileri ve metal işleme yöntemlerinin Ebla üzerinden yayılması, şehrin bölgedeki teknolojik yeniliklerin yayılmasında oynadığı merkezi rolü gözler önüne sermektedir.

Ebla'nın ticaret yolları üzerindeki hâkimiyeti, şehrin politik bağlamdaki önemini artırmış ve diplomatik ilişkilerinde etkin bir araç olarak kullanılmıştır. Mari, Akkad ve Abarsal gibi şehir devletleriyle yapılan ticari ve diplomatik anlaşmalar, ticaret yollarının güvenliğini sağlamış ve Ebla'nın bölgesel etkisini pekiştirmiştir. Ticaret yollarının düzenlenmesi, tüccarların güvenliğini garanti altına almak için yapılan diplomatik ittifaklarla desteklenmiştir. Örneğin, Ebla tabletlerinde yer alan kayıtlar, tüccarların seyahat ettiği güzergâhlarda yerel liderlerle iş birliği yapıldığını ve bu iş birliğinin ticaretin sürdürülebilirliği açısından kritik bir öneme sahip olduğunu ortaya koymaktadır.

Ebla'nın diplomatik ilişkileri, ticaret yolları boyunca taşınan malların yanı sıra kültürel ve dini bağların güçlenmesini de sağlamıştır. Mezopotamya'dan Levant'a taşınan dini ritüeller ve mitolojik fikirler, ticaretin yalnızca ekonomik bir faaliyet olmadığını, aynı zamanda dini ve kültürel bağları güçlendiren bir mekanizma olduğunu göstermektedir. Ebla tabletlerinden elde edilen bilgiler, Mezopotamya'daki tanrı Enlil ve İştar'a ilişkin ritüellerin Levant'a nasıl yayıldığını ve Ebla'nın bu süreçteki aracılık rolünü detaylandırmaktadır. Bu ritüellerin, özellikle tarımsal döngüler ve bereket temaları etrafında şekillenerek Levant'taki yerel inanışlarla harmanlandığı anlaşılmaktadır. Ebla, bu dini fikirlerin ve ritüellerin fiziksel yayılımının yanı sıra, kültürler arası etkileşimlerin bir aracı olarak bölgesel inanç sistemlerini dönüştürme sürecinde de kritik bir rol oynamıştır. Böylece ticaret yolları hem ekonomik kazanç hem de dini ve kültürel entegrasyonun güçlü birer aracı haline gelmiştir.

Bu çalışmanın önemi, Ebla'nın Mezopotamya ve Levant arasındaki ekonomik, politik ve kültürel bağların şekillenmesindeki dönüştürücü gücünü vurgulamasında yatmaktadır. Ebla, sadece bir ticaret merkezi olarak değil, aynı zamanda bölgesel entegrasyonun bir aracı olarak ortaya çıkmıştır. Ticaret ağlarının detaylı analizi, bu dönemde ticaretin toplumlar üzerindeki ekonomik ve kültürel etkilerini anlamak açısından büyük bir önem taşımaktadır. Ebla'nın başarısı, Mezopotamya tarihindeki daha geniş sosyo-ekonomik ve politik bağlamları anlamak için kaydadeğer bir perspektif sunmaktadır.

Sonuç olarak, Ebla, Mezopotamya ve Levant arasındaki ticaret yollarının şekillenmesinde ve bu yollar üzerinden bilgi, sanat ve teknolojinin yayılmasında merkezi bir rol oynamıştır. Şehrin stratejik konumu, yalnızca ekonomik büyümeyi değil, aynı zamanda kültürel alışverişi ve politik istikrarı destekleyen bir yapı oluşturmuştur. Ebla, Mezopotamya'nın kuzeyindeki güç dengelerini dönüştüren, bölgesel kültürel ve ekonomik sistemlerin birleştirici bir unsuru olarak öne çıkmıştır. Bu makale, Ebla'nın bu çok yönlü etkilerini derinlemesine inceleyerek, Mezopotamya ve Levant arasındaki tarihsel bağların anlaşılmasına katkıda bulunmayı hedeflemektedir. Konu incelenirken ARET (Archivi Reali di Ebla Testi Ebla/Ebla Kraliyet Arşivleri Metinleri) serilerine sıkça atıfta bulunulacaktır.

Introduction

Ancient Mesopotamia is recognized as one of the most significant regions in human history, known not only for its political and cultural achievements but also as a world shaped by trade. Milestones such as the development of agriculture, the rise of city-states, and the invention of writing profoundly influenced the economic and social structures of this region. However, within Mesopotamia's rich historical legacy, the fact that trade was not merely an economic activity but also a tool for cultural interaction is often overlooked (Archi, 2015, pp. 93-96; Liverani, 2006, pp. 32-35; Mieroop, 2018, p. 23). In this context, Ebla, which emerged as a major city-state in the 24th century BCE, served as a central hub in the trade networks between Mesopotamia and the Levant, playing a significant role in both regional and international trade (Pappalardo, 2021, p. 176).

Ebla held a strategic position along the trade routes connecting Mesopotamia, the Levant, and Anatolia during the Middle Bronze Age and the early Late Bronze Age. The city derived its economic growth not only from its geographical advantages but also from the ability of its merchants to organize trade routes and establish complex networks. The tablets discovered in the archives of the Royal Palace G, built in the 24th century BCE, provide invaluable insights into the economic systems and activities of merchants of the time. These tablets detail not only the nature of traded goods but also how trade was organized, the functioning of trade routes, and the cultural exchanges that occurred throughout these processes (Archi, 2015, pp. 102-107; Archi, 2023, pp. 23-24).

The relationships established by Ebla's merchants with the major city-states of Mesopotamia contributed not only to economic activities but also to the strengthening of political and social bonds. The merchants went beyond mere trade, acting as cultural intermediaries and facilitating the integration of skills and knowledge among communities from different regions. For example, trade between Ebla and the cities of Mari and Akkad was not limited to the exchange of goods; it also involved the sharing of language, writing, and religious rituals (Matthews & Glatz, 2009, pp. 53-55). Thus, Ebla demonstrated that the trade networks in Mesopotamia were not merely economic structures but also instruments of cultural and social interaction.

This article aims to provide a detailed analysis of these trade networks by examining the roles of Ebla's merchants during the Middle and Late Bronze Ages. Firstly, it will explore how merchants organized trade networks, the types of goods they traded, and how trade routes were established, based on data extracted from Ebla's tablets. Subsequently, the article will discuss the role of these trade relationships in shaping interactions with other city-states in Mesopotamia (Palmisano, 2018, pp. 78-83). Additionally, the social and political impacts of this trade will be assessed within the context of its function as a vehicle for cultural exchange.

Analysis of Trade Routes

Ebla emerged as a strategic hub in the trade system between Mesopotamia and the Levant during the Middle and Late Bronze Ages. The city's commercial strength stemmed from trade routes that acted as a bridge between Mesopotamia's agricultural productivity and the Levant's economy, which relied on maritime trade. Ebla's tablets, particularly documents such as ARET V.1 and ARET VII.89, provide detailed insights into the organization of these trade routes, the diversity of goods traded, and the diplomatic dimensions of commercial relationships (Archi, 2015, pp. 93-96; Fronzaroli, 2003, pp. 45-47). These trade networks not only generated economic profit but also facilitated the exchange of cultural and technological knowledge between regions.

Data from the tablets reveal that Ebla's trade routes extended from southern Mesopotamian cities such as Uruk and Mari to the northern Mediterranean ports of the Levant. These routes were primarily shaped by the utilization of waterways along the Euphrates River and overland road networks. While water transport on the Euphrates facilitated the rapid movement of heavy goods, overland routes enabled the integration of trade with rural areas (Palmisano, 2018, pp. 78-83; Radner, 2016, p. 139). Tablets such as ARET XIII.15 provide detailed records of the quantities and exchange points of goods such as grain, textiles, and metals transported along the trade routes from Ebla to Mari (Fronzaroli, 2003, p. 46; Liverani, 2006, pp. 59-62; Sasson, 1995, pp. 198-201).

Another significant insight from the Ebla tablets is how merchants structured their trade networks. The trade routes used in their activities focused not only on the transportation of goods but also on ensuring the safety of the merchants (Mieroop, 2004, pp. 84-88). For instance, the ARET VII.45 tablet states that a trade agreement between Abarsal and Ebla involved collaboration with local leaders to ensure the safe travel of merchants along the routes (Archi, 2015, pp. 105-107; Michalowski, 1993, p. 52; Durand, 2002, pp. 147-148). Such agreements are of critical importance for the sustainability of trade.

Another important aspect of trade routes is the diversity of goods transported. Among the goods exported from Ebla were grain, olive oil, textiles, metals, and luxury items. The ARET X.2 tablet highlights that copper and tin, in particular, were among the primary goods transported to the Mediterranean via the Levant, forming part of a system that connected Mesopotamia's production surplus with the import demands of the Mediterranean (Sasson, 1995, p. 199). The transport of luxury goods such as lapislazuli, particularly from Ebla to the cities of Mari and Akkad, illustrates how this trade system facilitated the circulation of high-value items (Michalowski, 1993, pp. 78-79; Radner, 2016, p. 140).

The Ebla tablets also reveal the political and diplomatic aspects of trade as another important insight. Trade routes were used as tools to strengthen diplomatic relations between Ebla and cities such as Mari, Abarsal, and others. The ARET XIII.5 tablet provides details of an agreement with Mari, stating that it ensured access for Ebla's merchants to Mari's markets (Fronzaroli, 2003, pp. 67-70; Liverani, 2006, pp. 60-62). This shows that trade served not only as an economic activity but also as a tool for fostering political unity.

Ebla's trade routes were important not only for their economic value but also for their social impact. Along these routes, the transfer of knowledge, technology, and religious rituals occurred between different cultures. For instance, the ARET V.21 tablet demonstrates that trade between Ebla and Mari was not limited to the exchange of goods but also facilitated the sharing of writing systems, language, and religious practices (Radner, 2016, p. 139; Michalowski, 1993, pp. 50-53). This highlights that trade functioned as a cultural bridge between Mesopotamia and the Levant.

Variety of Goods and Their Commercial Value

Ebla's trade network between Mesopotamia and the Levant held great significance due to the diversity of goods transported and their impact on regional economies. Data from Ebla's tablets reveal that a wide range of goods were involved in trade, including agricultural products (grains, olive oil, wine), metals (gold, silver, copper, tin), luxury items (ivory, precious stones, jewelry, textiles, perfumes), and livestock (cattle, sheep, goats). Additionally, materials such as wood, clay, and ceramic products were also important components of trade.

This diversity demonstrates that Ebla's commercial relationships were not limited to generating economic profit but also played a key role in strengthening social, political, and cultural bonds. Ebla's trade network functioned not only as a system of exchanging goods but also as a medium for cultural and political interactions (Archi, 2015, pp. 102-110; Archi, 2023, pp. 24-27; Sasson, 1995, p. 200).

Agricultural Products

Ebla played a significant role as a trade center connecting Mesopotamia's agricultural wealth with the import demands of the Levant. The city's strategic location allowed it to act as an economic and diplomatic bridge, balancing Mesopotamia's agricultural surplus with the Levant's needs. Staple crops such as wheat and barley were transported via the Euphrates River by Ebla's merchants to Mediterranean ports. This trade route was crucial not only for the movement of large volumes of goods but also for fostering economic interactions between rural and urban areas (Matthews & Glatz, 2009, pp. 53-55; Radner, 2016, p. 138).

The ARET V.12 tablet from Ebla's archives provides detailed insights into how grain trade contributed to Ebla's economic growth and its dominance in diplomatic relations. This tablet outlines the specifics of grain trade with cities such as Mari and Abarsal, while also documenting the trade privileges granted to Ebla's merchants and the diplomatic measures taken to ensure the security of trade routes (Fronzaroli, 2003, pp. 67-70; Michalowski, 1993, p. 52). This trade was more than just an economic endeavor; it also acted as a diplomatic instrument that reinforced Ebla's connections with other city-states.

Furthermore, Ebla's grain trade significantly influenced regional power dynamics. Grain was not only a source of sustenance for Mesopotamian societies but also regarded as a strategic commodity in economic and political terms. The steady supply of grain enabled Ebla to forge alliances with neighboring cities, which often evolved into long-term partnerships. Particularly, grain trade with cities in the Levant supported the region's economic integration and strengthened Ebla's control over trade routes (Archi, 2023, p. 27).

Ebla's trade in agricultural products also had a significant impact on the city's social and political structures. Grain held not only economic value but also cultural significance, as it was used in religious rituals and social contexts. For instance, grain was often presented as an offering in religious ceremonies, a practice that contributed to Ebla's prominence as a religious center (Sasson, 2018, p. 106). The transport of grain along trade routes also facilitated the transfer of agricultural technologies and production techniques to other regions, thereby enhancing Ebla's cultural and economic influence (Winters, 2008, p. 1-3).

Textile Products

Ebla became a significant hub for textile trade between Mesopotamia and the Levant. The city's strategic location allowed textile products to be integrated into a wide trade network, enhancing Ebla's economic power while also strengthening its diplomatic and cultural ties. Linen and wool products were among the most traded goods from Ebla, enjoying high demand in both Levantine and Mesopotamian markets. These items served not only to meet daily needs but also as symbols of social prestige (Winters, 2008, pp. 18-19).

The ARET VI.34 tablet from Ebla's archives provides detailed documentation of how textile products were transported from Ebla to Mesopotamia and how they were utilized as barter items in trade agreements. This tablet highlights that linen fabrics and wool textiles, in particular, were significant goods used in diplomatic exchanges and as gifts in forging relationships. Textile trade became a fundamental component not only of Ebla's economic relations but also of its diplomatic connections (Archi, 2023, pp. 29-30; Palmisano, 2018, pp. 79-81; Radner, 2016, p. 140).

Ebla's textile trade not only generated economic profits but also contributed to regional economic integration. The production and trade of linen products, in particular, reflected Ebla's agricultural and industrial activities. These goods demonstrated both Ebla's local production capacity and the ability of its merchants to meet regional demands. Wool products held significant importance in trade routes, serving as both high-quality fabrics and specialized garments used in religious ceremonies (McCorriston, 1997, pp. 517-519).

Ebla textiles held significance not only economically but also socially and culturally. Luxury textile products, especially those used in royal palaces in Levantine cities, became symbols of Ebla's prestige. These goods are frequently referenced in Mesopotamian written records as items associated with Ebla. Moreover, textile trade served as a tool for strengthening diplomatic ties for Ebla's merchants (Winters, 2008, p. 11). The ARET VII.21 and ARET VIII.14 tablets indicate that Ebla textiles were often used as barter items in trade agreements.

Ebla's textile trade not only generated commercial profits but also played a significant role in the transfer of technological knowledge. Weaving techniques and methods used in textile production spread to other city-states in Mesopotamia and the Levant, enhancing Ebla's cultural influence in the region. This demonstrates that Ebla served not just as a trade hub but also as a conduit for technological innovation and social connectivity (Sasson, 2018, p. 105).

Metals and Precious Stones

Copper and tin were among the highly valued commodities in Ebla's trade. These metals were crucial for bronze production, which gave them a central role in Mesopotamia's trade networks (Winters, 2008, pp. 136-138). Bronze production was considered a cornerstone of the economic and military infrastructure of the time. Ebla's role in the trade of copper and tin is evident in its trade agreements with city-states in both Mesopotamia and the Levant. The ARET VII.11 tablet provides detailed documentation of the movement of these commodities along trade routes and Ebla's intermediary role in the process. The trade routes controlled by Ebla functioned as a strategic network to ensure the steady flow of these metals (Sasson, 1995, p. 200; von Dassow, 2013, p. 312).

Ebla's influence in metal trade extended beyond economic activity, serving as a tool to strengthen diplomatic relationships. The trade of tin and copper formed the basis of Ebla's alliances and diplomatic agreements with other city-states. Notably, trade agreements with Akkad facilitated the transport of these metals to bronze production centers in Mesopotamia. Ebla's role in this trade supported regional economic integration and influenced the balance of power among city-states in northern Mesopotamia (Radner, 2016, p. 139).

Lapislazuli and other precious stones held significant economic, cultural, and social value in Ebla's trade. Lapislazuli, a highly sought-after gemstone, was extensively used for decorative purposes in royal palaces and temples in Mesopotamia. Ebla's merchants sourced this stone from mines in Afghanistan and transported it to markets in Mesopotamia and the Levant. The ARET X.21 tablet provides detailed accounts of the trade routes for lapislazuli and gold, highlighting their importance in Ebla's trade network (Archi, 2023, p. 32).

These precious stones were not only a source of economic gain but also served as diplomatic gifts in fostering relations with other city-states. Ebla's merchants presented items such as lapislazuli and gold as part of diplomatic agreements, with these goods becoming symbols of social status in regional interactions. Moreover, the trade of these valuable stones contributed to the development of religious rituals and aesthetic sensibilities in Mesopotamia. Ebla's role in this trade was thus not merely economic but also a significant medium for social and cultural exchange (Sasson, 2018, pp. 105-106).

Ebla's trade in metals and precious stones not only supported regional economic growth but also facilitated the spread of technological knowledge and production techniques. During the transport of metals used in bronze production, technical expertise regarding the processing of these raw materials was transferred to different regions. This underscores Ebla's significant contribution to the dissemination of knowledge and technology along its trade routes (Knapp & Manning, 2016, pp. 182-183).

Livestock and Animal Products

Animal trade formed a fundamental component of Ebla's economic system and served as a tool to strengthen the city's diplomatic relations. The trade of livestock such as sheep, goats, and cattle played a vital role in connecting Ebla with city-states in Mesopotamia and the Levant. Ebla's merchants transported these animals from rural areas of Mesopotamia to markets in the Levant, contributing to the establishment of economic balance in the region. Records of animal trade provide valuable insights into the social and political impacts of this economic activity (Radner, 2016, p. 140; Zeder, 2008, pp. 107-109).

The ARET VIII.24 tablet documents Ebla's active role in livestock trade. It explicitly states that animal trade not only generated economic profit but also contributed to strengthening regional connections. Wool, leather, and dairy products obtained from the livestock transported by Ebla's merchants were in high demand in markets across the Levant and Mesopotamia. These products played a crucial role in ensuring the sustainability of Ebla's trade network (Snell, 1982, pp. 101-103; McCorriston, 1997, pp. 526-527).

Wool products were among the goods that represented Ebla's economic strength and were particularly utilized in textile production. High-quality wool produced for royal palaces in Mesopotamia and the Levant served not only as a key trade item but also as an important tool for diplomatic gift exchanges. These products highlighted Ebla's role in textile trade and its production capacity. Additionally, wool was favored for garments used in religious rituals, further enhancing Ebla's cultural influence (Liverani, 2014, p. 78; McCorriston, 1997, p. 530).

Leather products emerged as a critical material in Mesopotamia's military and daily life. Ebla's merchants transported high-quality leather to cities in the Levant and Mesopotamia, contributing significantly to the city's economic growth. The ARET IX.15 tablet details the trade routes of leather products and highlights their importance in trade agreements (Potts, 2009, pp. 42-43).

Dairy products were prominent commodities in Ebla's commercial activities, valued as both a source of nourishment and luxury items. Products such as milk, butter, and cheese were not only consumed as staples but were also considered high-value goods. Ebla's tablets provide detailed documentation of the trade

processes involved in transporting these items from rural Mesopotamian regions to markets in the Levant. These products served both economic and social roles within Ebla's trade network (Zeder, 2008, p. 109).

Thus, Ebla's success in livestock and animal product trade reflects the city's economic and political influence. Livestock trade enabled Ebla to forge alliances with other city-states and strengthen its regional relationships. Additionally, animals used as sacrifices in religious rituals enhanced Ebla's significance in the religious context. Tablets documenting animal trade demonstrate that Ebla was not only an economic center but also a cultural and religious hub (Postgate, 2007, p. 256; Zeder, 2008, p. 110).

Luxury Goods and Artworks

Luxury goods in Ebla's trade not only carried economic value but also served as symbols of social and diplomatic prestige. Gold, silver, lapislazuli, and similar precious stones held strategic importance in Ebla's trade networks between Mesopotamia and the Levant. These goods were used both as decorative items in royal palaces and temples in Mesopotamia and as diplomatic gifts in the coastal cities of the Levant (Fronzaroli, 2003, pp. 67-68; Sasson, 1995, p. 201).

The ARET X.15 tablet provides detailed information about the quantities and routes of goods such as gold, silver, and lapislazuli transported from Ebla. This tablet documents the movement of these items within Ebla's trade network, highlighting the city's central role in commerce. Gold and silver were valued not only economically but also as symbols of social status and in religious rituals. Particularly, lapislazuli, used in statues and decorations dedicated to gods in Mesopotamia, underscores Ebla's significant role in the supply of these precious materials (Matthews & Glatz, 2009, p. 55).

The luxury goods transported from Ebla to the Levant and Mesopotamia also played a critical role in cultural exchange. This trade facilitated not only the exchange of goods but also the transfer of aesthetic values, craftsmanship techniques, and technological knowledge. Precious stones such as lapislazuli, transported from Ebla to Mesopotamia, were processed for use in both religious and artistic contexts. These stones were highly favored for creating luxury objects and decorations in royal palaces and temples in Mesopotamia (Radner, 2016, p. 141).

The trade of luxury goods also enabled Ebla to play an influential role in the political context. Precious items such as gold and silver were frequently used as bartering tools in Ebla's diplomatic relations, strengthening the city's strategic alliances with other city-states. For instance, the ARET XI.45 tablet documents how Ebla's merchants utilized these goods as diplomatic instruments when transporting them to city-states in Mesopotamia (Knapp & Manning, 2016, p. 183).

Works of art also held a significant place in Ebla's trade. Jewelry crafted from gold and silver was in high demand in Levantine and Mesopotamian markets, contributing to Ebla's development as a regional center for art and craftsmanship. These artifacts carried Ebla's aesthetic sensibilities to the cultures of Mesopotamia and the Levant, playing a crucial role in fostering cultural integration across the region (Sasson, 2018, p. 106).

Ebla's trade in luxury goods not only drove economic growth but also strengthened diplomatic and cultural connections. These goods reinforced Ebla's central role in linking Mesopotamia and the Levant. Additionally, this trade supported Ebla's economic and social structure as a trade hub while serving as a unifying force in the region's artistic and cultural exchanges (Liverani, 2014, p. 80).

Cultural Exchange and Interaction

Thanks to its strategic location between Mesopotamia and the Levant, Ebla played a unique role in processes of cultural exchange and interaction. The city's trade network facilitated not only economic transactions but also the transfer of knowledge, language, art, and technology, fostering deep connections among diverse societies. Ebla's tablets, diplomatic correspondence, and archaeological findings provide invaluable insights into the complexity and depth of these interactions (Archi, 2015, pp. 105-110; Liverani, 2006, p. 58; Michalowski, 1993, p. 48; Potts, 2009, p. 45). Notably, the ARET IX.23 and ARET X.15 tablets detail the economic as well as cultural dimensions of these connections along the trade routes.

Ebla's trade network functioned as a cultural bridge between Mesopotamia and the Levant, demonstrating that trade was not merely an economic activity. The language used in the tablets combined the Eblaite dialect with Akkadian, reflecting Ebla's influence not only on economic relationships but also on the establishment of cultural and linguistic standards between Mesopotamia and the Levant (Fronzaroli, 2003, pp. 39-41). The ARET X.21 tablet, in particular, documents how Mesopotamian writing systems spread to the Levant and highlights Ebla's role in this process. The adoption of Akkadian as a language for diplomacy and trade facilitated regional interactions and contributed to the dissemination of the language.

Ebla's cultural influence is also evident in art and aesthetic sensibilities. The frescoes and decorations found in Ebla's palaces represent a synthesis of Mesopotamian and Levantine artistic traditions. Luxury goods such as lapislazuli, gold, and other precious stones were used in Mesopotamia for objects dedicated to deities and royal adornments. The ARET XIII.7 tablet details the routes by which these goods were transported from Ebla to Mesopotamia and the Levant. Lapislazuli, sourced from mines in Afghanistan, was brought to Mesopotamia through Ebla, underscoring the city's pivotal role in trade networks (Knapp & Manning, 2016, p. 183).

Technology transfer represents another significant aspect of Ebla's cultural influence. Agricultural technologies and metalworking techniques were disseminated from Ebla to Mesopotamia and the Levant. These advancements not only boosted economic productivity but also increased the complexity of economic structures within societies. The ARET VIII.24 and ARET VII.11 tablets clearly document the transfer of technological knowledge during the transportation of raw materials like copper and tin. These processes highlight Ebla's role not only as a trade hub but also as a conduit for the spread of technological innovations (Palmisano, 2018, pp. 78-82; Zeder, 2008, p. 11598).

Ebla's influence on religious rituals and mythological concepts is also notable. Tablets contain records indicating that rituals associated with Mesopotamian deities such as Enlil and Ishtar were transmitted to the Levant. These rituals helped strengthen religious connections along trade routes, further establishing Ebla as a center of interaction in the religious domain (Sasson, 2018, p. 107). This process demonstrates that trade was not merely an economic activity but also a mechanism for strengthening religious and cultural connections.

Ebla's cultural influence was not confined to Mesopotamia and the Levant but extended to a broader geographical area. The transfer of language, art, and technology along trade routes solidified Ebla's enduring role in the cultural and economic systems of its time. These influences played a pivotal role in shaping the economic and social structures of Mesopotamian and Levantine societies, further elevating Ebla's historical significance (Postgate, 2007, p. 256; Liverani, 2014, p. 78; Michalowski, 1993, pp. 50-53).

The Social and Political Dynamics of Trade

Ebla, situated at the crossroads of trade routes between Mesopotamia and the Levant, was not merely a transit point but also an influential power center in regional politics. The city strategically utilized its trade networks as a tool to convert economic superiority into political hegemony. Data from Ebla's tablets reveal how commercial relations with Mari, Abarsal, and coastal cities along the Mediterranean were leveraged to strengthen diplomatic ties. This demonstrates how Ebla transformed its economic power into diplomatic advantages, solidifying its dominance in regional politics (Steinkeller, 2014; Sasson, 2018, pp. 198-201).

Ebla's trade networks during the Middle and Late Bronze Ages contributed not only to economic growth but also to the development of diplomatic relations in the region. Controlling trade routes between Mesopotamia and the Levant, Ebla entered into various diplomatic agreements to ensure the security and sustainability of these routes. For instance, the ARET IX.23 tablet details an agreement with Mari, highlighting how Ebla secured its dominance over trade routes. Such agreements illustrate that trade was not merely an economic activity but also a crucial instrument for fostering diplomatic relationships (Archi, 2015, pp. 105-110).

Ebla's dominance over trade routes enhanced its political influence over other city-states and allowed it to use economic leverage as a tool of pressure. The ARET X.12 tablet details the sanctions imposed by Ebla on merchants from neighboring cities and how these measures impacted diplomatic ties. Ebla utilized its

control over trade routes not solely for economic gain but also as a means to exert political pressure in its relations with surrounding cities. This demonstrates how Ebla wielded its economic power as a mechanism to shape diplomatic relationships (Knapp & Manning, 2016, pp. 181-182; Radner, 2016, p. 139).

The political impact of Ebla's trade networks extended beyond economic leverage to include the strengthening of cultural connections. Trade facilitated harmony among different regions and enabled the dissemination of cultural elements such as religious rituals, writing systems, and aesthetic values. For example, the ARET XI.45 tablet highlights how Ebla's control over trade routes contributed to the development of cultural ties. This tablet emphasizes the role of trade in transferring religious rituals and symbols of social prestige from Mesopotamia to the Levant (Archi, 2023, p. 33).

Ebla's commercial and diplomatic agreements with cities such as Mari and Akkad enhanced its political influence and shaped regional power dynamics. The ARET XIII.7 tablet provides details about Ebla's alliances with Abarsal, clearly illustrating the impact of trade on diplomatic relationships. These alliances strengthened Ebla's control over trade routes and significantly influenced relations among the city-states in northern Mesopotamia (Durand, 2002, pp. 147-148).

Ebla's commercial supremacy had a far-reaching impact in the political context, making the city a key actor in shaping regional power dynamics through alliances formed along trade routes. Luxury goods such as lapislazuli and gold were not merely economic commodities but also served as tools for diplomacy. These goods played a crucial role in strengthening diplomatic ties and were integral to Ebla's trade agreements with surrounding cities (Postgate, 2007, p. 256).

Goods transported along trade routes facilitated the dissemination of technological knowledge and cultural elements across different regions. This process underscores Ebla's pivotal role in shaping the economic, social, and political structures of Mesopotamian and Levantine societies. Ebla was not merely a trade hub but also a vital center for regional politics and the formation of cultural connections (Potts, 2009, pp. 45-46; Zeder, 2008, p. 11597; Michalowski, 1993, pp. 50-53).

Conclusion

Ebla, strategically positioned at the intersection of trade networks between Mesopotamia and the Levant, played a crucial role in economic, political, and cultural contexts throughout the Middle and Late Bronze Ages. The city's strategic location not only facilitated economic growth and ensured the security of trade routes but also significantly influenced regional diplomatic relations and cultural exchanges. Ebla's dominance over trade routes reinforced its role as a unifying force between Mesopotamia and the Levant, establishing it as a major power center of its time.

Insights derived from Ebla tablets reveal the profound impact of trade routes and agreements on diplomatic relations. Tablets such as ARET XIII.5 and ARET VII.45 detail Ebla's trade relations with Mari and other key cities, illustrating diplomatic arrangements aimed at securing trade routes, guaranteeing merchants rights to free movement, and ensuring the continuity of commerce. Trade became a vital instrument for enhancing Ebla's political power, which the city leveraged to consolidate its regional dominance.

Trade was not merely an economic activity but also had significant social and cultural ramifications. Items transported along Ebla's trade routes, such as lapislazuli, gold, silver, and other valuable materials, were utilized not only for their economic value but also as tools to strengthen diplomatic relations. Tablets like ARET XI.45 and ARET X.12 document the movement of these items and their cultural implications. These goods served as essential components in religious rituals and aesthetic expressions, fostering connections between Mesopotamian and Levantine societies.

Ebla's trade network also played a pivotal role in accelerating cultural exchanges and disseminating technological innovations. Goods transported along trade routes facilitated the exchange of knowledge, artisanal techniques, and agricultural practices. The movement of raw materials like copper and tin and the technologies associated with their processing underscores Ebla's central role in technological transfer. ARET VIII.24 and ARET VI.34 illustrate Ebla's critical contributions to these processes.

Ebla's influence extended beyond its economic and political contributions, significantly impacting the dissemination of language and writing. The adoption of Akkadian as a language of diplomacy and trade fostered the development of regional linguistic standards, strengthening ties between Mesopotamia and the Levant. Records in Ebla's archives show how writing systems traveled along trade routes, transferring Mesopotamian script to Levantine regions and highlighting trade's role as a cultural conduit.

The cultural influence of Ebla was not limited to language and writing but extended to art, aesthetics, and religious practices. Luxury goods transported from Ebla to Mesopotamia were used in royal palaces and religious ceremonies, facilitating the exchange of artistic and aesthetic values between societies. Items such as lapislazuli and gold ornaments were employed in offerings to deities and palace decorations, contributing to the integration of artistic and cultural values across regions.

Ebla's control over trade routes increased its influence on regional power dynamics, positioning the city at the center of the political landscape of the era. By controlling trade routes, Ebla not only achieved economic superiority but also used this control as a mechanism to strengthen diplomatic alliances and promote regional stability. Trade agreements with cities like Mari, Akkad, and Abarsal reinforced Ebla's diplomatic strength, solidifying its status as a regional power.

In conclusion, Ebla's control over trade routes played a foundational role in shaping the economic, political, and cultural ties between Mesopotamia and the Levant. The city's influence extended beyond economic activities to foster cultural bonds, spread artistic and religious practices, and shape regional political structures. As a transformative force in the economic and cultural systems of the ancient world, Ebla's legacy endures as a pivotal example of integration and influence.

Studying Ebla offers a valuable perspective on the dynamics of ancient trade in Northern Syria and Mesopotamia and its social, political, and cultural effects on societies. The transformative power of trade on socio-economic structures is vividly exemplified through Ebla's commercial and diplomatic achievements. Thus, Ebla stands out not merely as a trade hub but as a vital component of Mesopotamian history and a key player in the processes of cultural integration.

Ethics Committee Approval: Ethics committee approval is not required.
Peer-review: Externally peer-reviewed.
Conflict of Interest: The author has no conflicts of interest to declare.
Financial Disclosure: The author declared that this study has no financial support.

References

Archi, A. (2015). *Ebla and its archives: Texts, history, and society.* De Gruyter.

Archi, A. (2023). State production and market at Ebla – Animal and wool values. *Asia Anteriore Antica: Journal of Ancient Near Eastern Cultures, 5*, 23-40.

Durand, J.-M. (2002). *Documents épistolaires du palais de Mari.* Éditions du CNRS.

Fronzaroli, P. (2003). *Testi di cancelleria: i rapporti con le città.* Archivi Reali di Ebla Testi, 13.

Knapp, A. B., & Manning, S. W. (2016). *The Bronze Age Mediterranean: Connectivity and trade.* Cambridge University Press.

Liverani, M. (2006). *Uruk: The first city.* Equinox Publishing.

Liverani, M. (2014). *The ancient Near East: History, society and economy.* Routledge.

Matthews, R., & Glatz, C. (2009). The historical geography of north-central Anatolia in the Hittite period: Texts and archaeology in concert. *Anatolian Studies, 59*, 51–72.

McCorriston, J. (1997). The fiber revolution: Textile extensification, alienation, and social stratification in ancient Mesopotamia. *Current Anthropology, 38*(4), 517-549.

Michalowski, P. (1993). *Letters from early Mesopotamia.* Scholars Press.

Palmisano, A. (2018). *The geography of trade: Landscapes of competition and long-distance contacts in Mesopotamia and Anatolia in the Old Assyrian Colony Period.* Archaeopress.

Pappalardo, C. (2021). Egyptian pottery from the Middle Bronze Age Levant in context. *Vicino Oriente, XXV*, 167-193.

Postgate, J. N. (2007). *Early Mesopotamia: Society and economy at the dawn of history.* Routledge.

Potts, D. T. (2009). *A companion to the archaeology of the ancient Near East.* Wiley-Blackwell.

Radner, K. (2016). *State correspondence in the ancient world.* Oxford University Press.

Sasson, J. M. (1995). *Civilizations of the ancient Near East.* Scribner.

Sasson, J. M. (2018). *Civilizations of the ancient Near East.* Routledge.

Snell, D. C. (1982). *Ledgers and prices: Early Mesopotamian merchant accounts.* Yale University Press.

Steinkeller, P. (2014). Ebla's place in the international trade network at ca. 2350 B.C. *Unpublished paper presented at the international conference: Ebla and Beyond: Ancient Near Eastern Studies after Fifty Years of Discoveries at Tell Mardikh, Rome 2014.*

Van De Mieroop, M. (2004). *Eski Yakındoğu tarihi MÖ 3000-323* (S. Gül, trans.). Homer Kitabevi.

Von Dassow, E. (2013). *State and society in the Late Bronze Age: Alalah under the Mittani Empire.* Eisenbrauns.

Winters, R. D. (2018). *Negotiating exchange: Ebla and international system of the Early Bronze Age* (Unpublished PhD thesis). Harvard University Graduate School of Arts and Sciences, Cambridge.

Zeder, M. A. (2008). Domestication and early agriculture in the Mediterranean Basin: Origins, diffusion, and impact. *Proceedings of the National Academy of Sciences, 105*(33), 11597-11604.

OANNES
2025, 7(1) March
Research Article DOI: 10.33469/oannes.1611585

Fishing and Tuna Trade in Kyzikos

Hacer ÇORUH KURT
Corresponding Author

Department of Archaeology, Harran University, Faculty of Arts and Sciences, Şanlıurfa, Türkiye.
hcoruh@harran.edu.tr

Submitted	01.01.2025
Revision Requested Last	13.01.2025
Revision Received	18.03.2025
Accepted Date	26.03.2025
Publication Date	26.03.2025

Cite this article
Çoruh Kurt, H. (2025). Fishing and tuna trade in Kyzikos, *Oannes*, 7(1), March, pp. 187-203.

Abstract

Located on the coast of Propontis, Kyzikos was colonized by Miletus. The most important factor in the colonization of the city was tuna fishing, which is understood to have been an important source of livelihood in the city. However, it is noteworthy that ancient sources have been silent on this issue.

During the migration season, tuna fish pass through the narrow passages of the Bosphorus and Hellespont in schools. This migration of tuna fish led to the development of large-scale fisheries in the region. Different from other fisheries, watchtowers were used in tuna fishing. Watchtowers made of wood were placed in places with clear visibility. The sharp lookouts placed here would guide the fishermen waiting in the boats toward the tuna.

It is understood that there were public fishing areas and saltpans in Kyzikos. Kyzikos demanded a fee from the fishermen who used these areas. Tuna was the most important industrial activity of the city. However, there are no traces of salting factories or salted fish amphorae in Kyzikos. Epigraphic sources reveal the existence of a guild belonging to fishermen in Kyzikos. Kyzikos is one of the centers where we know garum was produced. Kyzikos oysters have a great reputation as the highest quality oysters of antiquity.

Tuna fish, the source of wealth for Kyzikos, was chosen as the city symbol. The depiction of tuna was used on Kyzikos coins for centuries. The uninterrupted continuation of the depiction of tuna shows the importance of fishing in the social life of the city. The depiction of tuna is also found on many city coins. However, the oldest tuna coins were minted in Kyzikos. Kyzikos turned into a rich city by utilizing its fishing advantage due to its location.

In this article, data on the place of fish and fishing in the social and economic life of Kyzikos will be discussed based on ancient and modern sources, archaeological, epigraphic, archaeozoological, and numismatic data.

Keywords: *Bluefin tuna, tunny, Cyzicus, Salted fish, Fishermen guild.*

Genişletilmiş Özet

Kyzikos Propontis'te stratejik bir konumda yer alan bir kenttir. Kent MÖ 7. yüzyılda Miletos tarafından kurulmuştur. Miletos kolonilerini kurarken balıkçılık için elverişli bölgeleri seçmektedir. Miletos'un en erken kolonilerinden biri olan Kyzikos'un konumu da balıkçılık açısından övgüye değerdir. Ton balıkları Bosphorus (İstanbul Boğazı) ve Hellespontos'un (Çanakkale Boğazı) dar geçitlerinden göç mevsiminde sürüler halinde geçmektedirler. Ton balıklarının göçü, bu bölgede büyük ölçekli balıkçılığın gelişmesine sebep olmuştur. Propontis ve Hellespontos'ta yapılan mevsimlik ton balığı avcılığı, Kyzikos'un kolonize edilmesinde en önemli etkenlerden biridir.

Antik Çağ'da ton balıkları Akdeniz için ekonomik anlamda büyük bir önem arz etmekteydi. Ton balıkları, Akdeniz boyunca uzanan yerleşmelerdeki insanlar için sabit bir protein kaynağıydı. Antik Çağ'da taze olarak tüketilen balık, salamura, isleme tekniği veya kurutma yöntemleri ile konserve edilmekteydi. Konserve balık, özellikle Pontus (Black Sea) ve Propontis kıyı kentlerinde endüstrileşmiştir. Kyzikos ton balığı avcılığı ile ünlenmiştir.

Ton balıkları Kyzikos yakınlarındaki dar Hellespontos boğazı, Sicilya ve İtalya arasındaki Messina Boğazı ile Atlantik'i Akdeniz'e bağlayan ve sıcak tuzlu sularından dolayı yumurtlamayı tercih ettikleri Cebelitarık Boğazı'ndaki göçleri sırasında yakalanmışlardır. Ton balığı avcılığında karşımıza, diğer balık avlarında uygulanmayan farklı bir yöntem çıkmaktadır. Denize bakan stratejik noktalarda gözetleme kuleleri inşa edilmiştir. Ahşap direklerden yapılan gözetleme kuleleri kıyı boyunca yerleştirilmiştir. Gözetleme kulelerine, keskin bakışlı gözcüler yerleştirilmiştir. Ton balıklarını yakalamak için en etkili yöntemlerden biri de, yarı kalıcı ağlar ve kıyı tuzaklarıydı. Kyzikos'ta ton balığı avının gece de sürdüğü ve meşaleler kullanıldığı düşünülmektedir. Antik dönemde insanların gıda ihtiyacını, çoğunlukla tuzlanmış, kurutulmuş ve salamura edilmiş balık karşılamıştır. Kyzikos'ta henüz balık tuzlama fabrikalarına ve kente özgü balık amforalarına rastlanmamıştır.

Ton balığı ticaretinin en önemli merkezi Kyzikos olup, ton balığı göçünün son noktası da Gades /Cadiz'dir. Antik Çağ'da balıkçılık oldukça organize bir endüstri dalıdır. Ton balıkçılığı, kayıklara, ağlara, incir yapraklarına, seramiğe ve tuza büyük bir talep oluşturmaktaydı. Kyzikos yakınlarında tuz, kontrolünü Byzantion ile paylaştığı Dascylitis'ten (Manyas Gölü) elde edilmekteydi. Antik Çağ'da balık tutulan alanlar ve tuzlaların belediyelere ait olabildiğini görmekteyiz. Kyzikos bu konuda ilk örneklerinden biridir. Kentin belediyesi MÖ 1. yüzyılda balık tutulan alanlardan ücret talep etmekteydi. Kyzikos balıkçılarından bir gelir almakta ve Roma yönetimine bir vergi ödemekteydi. Yazıtlar, gözetleme kulelerinin kentler tarafından inşa ettirildiği ya da özel kişilerin mülkiyetinde bulunduklarından bahsetmektedir. Yalnızca özel şahıslar değil belediyelerinde gelir elde etmek için gözcüleri ve gözetleme kulelerini kiralandığı bilinmektedir. Göçmen balıkların rotaları üzerinde yer alan kentlerde balıkçılık önemli bir meslek haline gelmiştir. Birçok insan geçimini bu işten kazanmaya başlamıştır. Kyzikos ton balığından önemli bir gelir sağladığından balıkçıların organize olan balıkçıların kentte bir lonca kurdukları bilinmektedir. Kyzikos'tan ele geçen gelen geç Helenistik ve erken Roma yazıtları, kentin balıkçılık endüstrisi hakkında nadir bilgilerimizi oluşturmaktadır. Bu yazıtlar, gözetleme kulelerinin ve büyük ölçekli balıkçılık faaliyetlerinin varlığını kanıtlamaktadır. Ayrıca yazıtlardan kentlerin kıyının belirli kesimlerinde balık yakalama hakkını balıkçı loncalarına kiraladığı anlaşılmaktadır. Antik kaynaklarda Kyzikos'un balıkçılığına dair bilgilere rastlanmamaktadır.

Kyzikos'ta ki balıkçıların oluşturduğu birliği kanıtlayan yazıtlar bulunmaktadır. MÖ1. yüzyıla ait bir yazıt, kentteki balıkçılar topluluğu tarafından Poseidon ile Artemis/Aphrodite Pontia'ya adanmıştır. Diğer yazıt ise Roma İmparatorluk Dönemi'nden gelmektedir. Yazıt Kyzikos'ta, kendisi ve oğlu Claudius Demokritos için mezar yaptıran kişinin mezar taşıdır. Mezara başka bir ceset konulması veya mezarın ihlali gibi durumlarda ödenmesi gerekli bir ücretten bahsetmektedir. Bu cezanın alacaklısı olarak mezar sahibini koruyan bir balıkçılar birliğini topluluğunu görevlendirilmiştir. Yazıtlardan Kyzikos'ta kurulan loncaların, Anadolu'dabir çok yerde olduğu gibi üyelerinin mezarlarını koruma geleneğinin olduğu anlaşılmaktadır.

Ton balıkları ile ünlü olmuş Kyzikos, ton balığı ihraç eden önemli merkezlerden biridir. Bunun yanısıra diğer deniz ürünlerinin de öne çıktığını bilmekteyiz. Anadolu'da büyük çapta üretimi yapılan garum, Kyzikos'ta da endüstrileşmişti. Antik kaynaklar Kyzikos'un denizkestanelerinin farklı olduğunu belirtmektedir. Bu denizkestaneleri fırtınayı ve denizin kabaracağını önceden tahmin edebilmekteydiler. Suriye valisi Licinius Mucianus, Kyzikos istiridyelerine hayrandır. Mucianus MÖ 1. yüzyılda istiridyelerin tam bir listesini sıralayarak birinciliği Kyzikos'unkilere vermiştir.

Kyzikos'ta ton balığı kentin en önemli endüstri faaliyetini oluşturmaktaydı. Denizle çevrelenmiş olan Kyzikos, kent simgesi olarak ton balığını seçmiş ve yüzyıllar boyunca sikkeler üzerinde bu sembolü kullanmıştır. Elektron sikkeler ile başlayan ton balığı tasviri, ana tip ya da yardımcı tip olarak her zaman kullanılmıştır. Birçok kent hem resmi tanıtımı hem de ekonomik önemini vurgulamak amacıyla, ton balığı ya da baş kısmının yer aldığı sikkeler bastırmıştır. Ancak en erken ton balıklı sikkeler MÖ 6. yüzyılda Kyzikos'un bastığı sikkelerdir. Ton balığı avcılığının kent yaşamına yansımasını, kamu anıtlarında ve heykellerde de görmekteyiz. Antonia Tryphaena tarafından Poseidon'a ithaf edilen Balıktaş diye adlandırılmış bir heykel kaidesinde ton balığı ve diğer balıklarla birlikte, kayıklarıyla balıkçılar görülmektedir. Ayrıca kente adını veren Kral Kyzikos'a ait bir heykelde kral ton balığını hedef alır şekilde gösterilmiştir. Bir denizcilik kenti olarak Kyzikos'ta bazı ünlülerde yetişmiştir. Antik Çağ'ın önemli bir denizcisi olan Kyzikoslu Eudokos bunlardan biridir. Ayrıca balık ressamlarının babası olarak bilinen Androcydes'te Kyzikosludur.

Kyzikos'un ton balıklarıyla dolu bereketli suları ve konumu, kentin refahının temelini oluşturmuştur. Kyzikos balıkçılık sayesinde öne çıkarak zengin bir kente dönüşmüştür.

Introduction

In ancient times, it is thought that fish and fishing were small-scale or part-time individual activities aimed at providing a family's livelihood and did not have an important place in nutrition. Therefore, there is a general belief that fishing had no significant impact on the economy. Analysis of fish remains unearthed in archaeological excavations are not sufficient to refute this view (Bursa Sturtevant, 2016, p. 75). However, in recent years, studies have addressed fishing and seafood in a broader and more comprehensive manner. Ancient sources contain a variety of information about fish species, fishing, fish consumption, processed fish products, and fish trade (Aristoteles, Historia Animalium; Strabon, Geographika; Plinius, Naturalis Historia; Oppianus, Halieutika; Aelianus, De Natura Animalium; Athenios, Deipnosophistai). What is interesting is that there is no information about fishing in Kyzikos in ancient sources. Although it is a city that is prominent with its fishing, the ancient sources seem to have fallen silent. Our data on fishing in Cyzicus are limited to a few epigraphic sources and coins minted by the city. This article will attempt to reveal the importance of fishing since the foundation of Kyzikos, the fish trade, particularly tuna fishing, and the contributions of fishing to the city's economy and social life.

Located on the Propontis, Kyzikos is known as a city of merchants and sailors with its fertile lands, waters full of tuna fish, and convenient harbors (Habicht, 2013, p. 197). Ancient sources see the location and topography of Kyzikos as a sign that it was suited for a maritime destiny (Prêteux, 2008, p. 18). Diodorus describes the people of Kyzikos as "masters of the sea" in the sentences in which he describes the city's successful defense and salvation from the attack by Arrhidaios in 321 BC (Prêteux, 2008, p. 14). Kyzikos is located on the southern coast of the Propontis, halfway between the Hellespontos and the Bosphorus. Its location on the Arktonnesos (Kapıdağ) peninsula (Koçhan, 2011: p. 11) has a strategic position in the Propontis. Kyzikos was colonized by Miletus, which had numerous colonies, in the 7th century BC (Hurter & Liewald, 2006, p. 7; Burstein, 2010, p. 137: Irby, 2021, p. 165). (Fig.1).

Fishing was the most important factor in the choice of the Pontus coasts by Greek colonists as early as the 7th century BC, or possibly earlier. When establishing its Miletus colonies, it selected regions that were particularly suitable for fishing and trade (Mansel, 1999, p. 168; Bursa, 2010, p. 36; Motor, 2010, p. 17). Fish moving in shoals from Pontus to Propontis attracted the attention of Greek colonists. Therefore, they began to establish colonies in Pontus for more abundant fish by advancing from Propontis (Bursa, 2007, p. 145). The location of Kyzikos, one of the first colonies of Miletus and especially famous for its tuna fish, is also commendable in terms of fishing (Greaves, 2003, p. 140).

Propontis is the most important center after Pontus in fishing (Bursa, 2007, p. 145). In fact, Propontis is a sea where no large rivers flow into. However, there are many salty, warm, and nutrient-rich lagoons and lakes that flow into Propontis and the Bosphorus (Istanbul Strait). Therefore, in addition to many fish, migratory fish such as tuna also thrive in Propontis (Bursa, 2010, p. 15). Seasonal tuna fishing in Propontis and Hellespontos is one of the most important factors in the colonization of Kyzikos (Roesti, 1966, p. 84). The city's location provides an ideal place for tuna fishing (Hurter & Liewald, 2006, p. 7).

Tuna fish are seen crossing the Strait of Gibraltar into the Mediterranean in May. At the end of the summer, they migrate in the opposite direction, from the Mediterranean to the Atlantic Ocean (Roesti, 1966:78). In the spring, schools of tuna fish pass through the Hellespontos, Propontis and Bosphorus and head towards Pontus. They spawn here from June to July. In September, the tuna fish are now in the Propontis. The fish, continuing their journey, head towards the Aegean Sea (Roesti, 1966: p. 78).

Tuna Trade in Kyzikos

In ancient times, tuna fish were among the most economically important fish for the Mediterranean (Roesti, 1966, p. 77; Friedell, 1999, p. 45). Tuna fish were a constant source of protein for people in settlements along the Mediterranean. In Greek times generally, the poor, slaves, soldiers, agricultural workers and soldiers preferred tuna because it was cheap and long-lasting (Roesti, 1966, p. 84; Bursa Sturtevant, 2016, p. 85).

Salted, dried, and pickled fish met the food needs of the majority of the Greek people (Gallant, 1985, p. 11; Friedell, 1999, p. 45). Tuna fish, which was in great demand, was exported either whole or cubed and pickled (King, 2004: p. 33). It is thought that among the products imported by ships in ancient times, salted fish was the most commonly found in amphorae after wheat, olive oil and wine (Bursa Sturtevant, 2016, p. 85). Large

quantities of tuna were imported from Sicily and Pontus to Syria, Egypt, and Greece (Gallant, 1985, p. 11). It is understood from the increasing number of archaeological data that processed fish became an industry in the Mediterranean world, especially during the Roman Empire. As a result, fish were sent to all corners of the empire through a large commercial network (Bursa Sturtevant, 2016: p. 75).

In ancient times, fish and fishing were a highly organized industry in terms of technology and economy. We know that this industry developed in Anatolia as well as in other regions during the Roman Imperial Period (Bursa, 2010, p. 36). Pickled fish was industrialized especially in the coastal cities of Pontus and Propontis (Delemen, 2003, p. 7) Even today, the tuna industry in this region continues.

From the 6th millennium BC onwards, there were hunting and fishing communities on the shores of the Propontis (Bursa, 2010, p. 13). In ancient times, the Hellespontos and Propontis regions had important fishing centers. Fish remains unearthed in Troy and nearby Beşik-Yassıtepe prove that deep sea, river and lagoon fishing was intense in the region as early as the Bronze Age (Von den Driesch, 1999, p. 454 et al.; Van Neer & Uerpmann, 1998, p. 249 et el.). Archaeozoological data from Beşik-Yassıtepe, 7 km southwest of Troy, show that tuna fishing had an important place in daily life in the early stages of the Bronze Age. In the Bronze Age, tuna fish were also known in Troy, which was located 5 km south of Hellespontos in a very convenient location for fishing (Bursa, 2010, pp. 5-6). It is understood that tuna was exploited in Troy and Beşiktepe during the Bronze Age (Çakırlar, 2016, p. 296).

In Anatolia, fishing was done on a small scale on the coasts and in some lakes and rivers. There were a few regions where large-scale coastal fishing was prominent. As is the case today, the migration of fish through the narrow passes of the Bosphorus and Hellespont in large numbers during the migration season led to the development of large-scale fishing in this region. A few cities, such as Byzantion, Kyzikos or Parion, benefited greatly from the seasonal migrations of fish, such as tuna, between the Aegean and Pontus (Walser, 2022, p. 87: Lytle, 2012, p. 31).

Parion, located on the migration route of fish in the Hellespont, was known for the delicious taste of tuna and mackerel. Ancient sources (Athenaeus, Deipnosophistai, I. 27e; Athenaeus, Deipnosophistai, III. 116c, 119b; Plinius, Naturalis Historia, XXXII.146) mention that the city was famous for salted tuna, especially during the Roman Empire. The tuna harvest in Propontis, Hellespontus and Bosphorus allowed Byzantion and Kyzikos in Bosphorus and Abydos, supported by Hellespontus, to stand out as export centres (Roesti, 1966: p. 82; Bekker-Nielsen, 2006: p. 93). Kyzikos and Byzantion gained great fame with tuna fishing (Bekker & Nielsen, 2006, p. 93). Coastal fishing, which was carried out at certain points in Kyzikos, constituted the most important part of the local industry (Lytle, 2006, p. 108). In the Archaic Period, tuna fishing and processing became the city's main source of income (Hurter & Liewald, 2006, p. 8). In his speech, Aristeides praises this port city, which is located in the middle of the road between Gadira/Cadiz and Phasis (Georgia-Poti), which are the two ends of the trade (Ertüzün, 1998, p. 107: Diomidis, 2009, p. 132). The main center of tuna trade is Kyzikos and the final point of tuna migration is Gades/Cadiz (Bresson, 2015, p. 186).

Byzantium, which focused on bonito and tuna fishing, is referred to as the "metropolis of tuna" (Athenaeus, Deipnosophistai, 7.303e) in ancient sources. It is understood that tuna exports had an important place in the economy of Byzantium. The fish depictions on the city's coins also indicate this situation (Bursa Sturtevant, 2016, p. 76) (For more information on Byzantine fish and fishing, see: Tekin, 2010). We know from an inscription from the 5th century BC that tuna fishing was done in Halikarnassos (Bursa Sturtevant, 2016, p. 78).

Tuna fish became an important industrial material, especially for cities located on seasonal migration routes on the Black Sea and Eastern Mediterranean coasts (Bursa, 2007, p.7). Athenaeus mentions that (Athenaeus, Deipnosophistai, 7.304) tuna was an expensive delicacy in the Roman period and that those who consumed too much of it could go bankrupt. The tuna industry was quite profitable. Therefore, it enriched the coastal cities and the Roman authorities involved in this business (Irby, 2021, p. 143).

Tuna cannot stay fresh as long as other fish of similar size. It must be consumed or processed immediately after being caught. That is why tuna caught in the Aegean are quickly gutted, beheaded and drained of their blood (Fig.2). A large workforce and intensive effort are required to process the fish brought to shore in droves quickly. For the Greeks, tuna was the only fish suitable for sacrifice to the gods. In tuna festivals in Attica and the Argolid, the first tuna of the season was sacrificed to Poseidon (Mylona, 2021, p. 32). (Fig.3).

Fishermen were wrapping the pieces of tuna in fig leaves to prevent them from spoiling. These pieces were sent to Mediterranean cities by ship in ceramic vessels. The typology of these ceramic vessels varied from place to place. These vessels are an important find to follow the traces of the salted or smoked tuna trade in the Greek and Roman periods (Roesti 1966, p. 83). However, a large portion of organic and inorganic commercial goods cannot be detected in archaeological contexts today because they deteriorate and disappear over time (Dumankaya, 2018: p. 163). Archaeologically, solid evidence is needed to document tuna fishing: fish bones, chemical traces on pottery, and salting barrels and amphorae from the salted fish trade (Mylona, 2021, p. 24). Some of these amphorae bear inscriptions, mostly painted (tituli picti) and occasionally graffiti. The inscriptions usually provide information such as what type of fish product the amphorae contained, the name of the merchant, the quality, quantity and source of the product. However, it is not possible to talk about a standard pot form used in the fish trade (Bursa Sturtevant, 2016, p. 87). No stamped salted fish amphorae have been found in Kyzikos to date. This may be due to the fact that fish amphorae are rarely stamped. While providing information about the port of Kyzikos, Strabon mentions the large warehouses (McLaughlin, 2016, p. 117; Çoruh Kurt, 2022, p. 199) located on the coast. However, no traces of salting workshops have yet been found in the excavations in the city (Prêteux, 2008, p. 7).

Tuna fishing increased the demand for boats, nets, fig leaves, ceramics and salt (King, 2004, p. 32). Beyond its daily use, salt was an indispensable need for the preservation of fish (Walser, 2022, p. 87). In the region of Mysia, salt was extracted from Lake Dascylitis / Manyas (Lytle, 2012, p. 8), whose control was reported by Strabo to have been divided between the cities of Kyzikos and Byzantion (Arslan, 2010, p. 422).

Tuna fishing and fishermen's guild in kyzikos

During the Greek and Roman periods, hundreds of people on the Pontic coast were engaged in the economically profitable tuna fishing and processing business (Roesti, 1966, p. 82). The wealth of many fish import centers in the Mediterranean and Pontus was also due to successful tuna processing (Roesti, 1966, p. 83). Fishing became an important profession in the cities located on the routes of migratory fish (Bursa, 2007, p. 13).

Tuna was the most popular among many species caught in ancient times. The names of tuna fish do not exactly match today. Therefore, it is seen that bonito, tuna and bluefin tuna were caught as tuna (Irby, 2021, p. 143). Tuna fish were caught during their migrations in the narrow Hellespont Strait near Kyzikos, the Strait of Messina between Sicily and Italy and the Strait of Gibraltar, which connects the Atlantic to the Mediterranean and where they prefer to spawn due to its warm salty waters (Irby, 2021, p. 143). Every spring, tuna would enter the Propontis in schools to spawn; in the autumn they returned to the Mediterranean (Hurter- Liewald, 2006, p. 8).

Tuna consumption in the Mediterranean in Prehistoric times is understood from bone remains. As is known, tuna fishing and pickled had great economic and social importance for the Phoenicians, Greeks and Romans in historical times. Tuna fishing required complex organization and large-scale catching systems based on the use of nets. Ancient sources provide sufficient information about tuna consumption and the places where they were caught. However, our knowledge of catching methods is limited (Felici, 2017, p. 2).

Tuna fish were caught using advanced technology compared to daily fishing (Bursa, 2007, p. 7). Large scale equipment and capital were needed to catch tuna fish en masse during their migration. The short fishing season had to be successful in order to cover the expenses. Therefore, fishing groups came together and used large equipment that they had prepared in advance (Bursa, 2007, p. 13). Tuna fishing requires a great deal of organization as well as experience in when and how to catch the fish (Horejs, et al, 2015, p. 313).

In tuna fishing, we encounter a different method that is not applied in other fishing. The Phoenicians and Greeks developed the most effective tuna fishing techniques that are still valid today. The most effective of these are the spotters placed at strategic points overlooking the sea. In some places, watchtowers were built so that these spotters could see farther (Roesti, 1966, p. 79). Spotters on watchtowers built along the coast are to can detect the slightest change in the sea (Walser, 2022, p. 88). Watchtowers are built on the seashore or in an area with a wide and uninterrupted field of vision, using wooden poles (Bursa, 2007, p. 25; Felici, 2017, p. 2; Mylona, 2021, p. 32). (Fig. 4). The spotters would signal to the fishermen waiting in the boats and warn them in which direction to cast their nets or in which direction to row. Thus, the tuna, surrounded by the nets and exhausted, were caught with the help of the currents and narrow bays. It is known that the spotters could estimate the number of tuna in the shoal with great accuracy (Bursa, 2010, p. 11; Irby, 2021. P. 143). Oppian describes

(Oppian, Halieutika, 6.637-648) a tuna watcher on a high hill watching the approaching school, and the fish streaming towards the fixed nets like phalanx soldiers (Bekker-Nielsen, 2006, p. 93).

There is information in ancient sources that tuna fish can see better with their right eyes, that these fish enter the Black Sea by following the right shore, and that they follow the left shore when leaving (Bursa, 2007, p. 74). In fact, the reason for this is that when you go from Bosphorus to Pontus, the main current flows counterclockwise along the shore, that is, from right to left (Arslan, 2010, p. 413.dn.1701).

In the early 20th century, Greek and Turkish fishermen confirmed Aristotle's account, stating that bluefin tuna migrate by following the shore with their right eye and keeping it towards the shore. They reported that schools of tuna migrate counterclockwise along the coast. This observation is very important for estimating their presence in different places and also for the construction of tuna fishing equipment. They also observed that if a school of tuna is encountered in shallow coastal areas, it is more likely to be a large school. This is an important observation in terms of the location of tuna fishing in the region and fishing equipment (Mylona, 2021, p. 28).

The migrations of tuna fish to both ends of the Mediterranean have a predictable timetable (Roesti, 1966, p. 78). In tuna fishing, apart from the time of year and the location of fishing operations inshore or offshore, the moon phase is an important factor. It has been observed that the probability of catching tuna exhibits a periodicity that coincides with the lunar cycle. For this reason, fishermen in the Aegean call some rich catches the “full moon of May tuna” (Mylona, 2021, p. 27).

The function of tuna traps is based on the fact that schools of tuna tend to swim counterclockwise along the coast, very close to the shore, and due to their physiology they cannot turn back. Fishermen set up a system of poles and nets that form a kind of labyrinth in the shallow waters. These nets intercept the fish, driving them into a closed, controlled area where they are caught. Usually carried by boat, the nets are extended out to sea to extend the reach of the trap when schools of tuna approach. Watchtowers facilitate the accurate timing of this large-scale event (Mylona, 2021, p. 32).

One of the most effective methods for catching tuna was semi-permanent nets and coastal traps (Bekker - Nielsen, 2006, p. 93). The coasts of Propontis, Hellespontos and Bosporus have a unique geology and ecology. The fishing technology in this region was coastal trap nets (Lytle, 2012, p. 31). (Fig. 5). Today, we see that the same watchtowers continue to be used on the Bosphorus. These systems, called Dalyan, are established at the end of March and the beginning of April. It is a system where rooms and corridors are created by stretching nets between piles driven into the seabed along the shore. Fish schools are directed to this system. Upon the signal of the watchman on the watchtower, the fishermen waiting in their boats close the entrance. In this way, the fish are trapped. The fishermen who approach them transfer the fish in the nets to the boats. It is a difficult task for the watchman who waits for hours in a small place on the tower and the fishermen who wait for a signal in the boat to wait for hours under the sun. These systems and equipment are removed when the Anavaşa is finished, that is, when the fish go north, for use and repair for the next time (Ertan, 2010, p. 45 et al). (Fig. 6).

We know that large-scale fishing, where commercially valuable species such as tuna were caught, involved night fishing and the use of fire. Lytle states that (Harland, 2014, p. 104; Lytle, 2018, p. 80) this was also the case at Kyzikos. Torches were used to attract schools of tuna to the nets. In addition, the presence of a lighthouse (Benjamin, 1880, p. 43; Çoruh Kurt, 2022, p. 203) at Kyzikos may have contributed to this environment.

It is known that during the Roman period, city municipalities also had fishing areas and salt pans. Kyzikos is one of the first examples. According to Strabo, in the 1st century BC, in order to develop fish farming, they demanded a fee from the areas where fish were caught (McCann, 2017, p. 37). Kyzikos and Byzantion, which we know received income from their fishermen, paid a tax to Rome (Curtis, 1991, p. 151). It is understood from ancient sources that watchtowers were built by cities or were owned by private individuals. Inscriptions reveal that not only private individuals but also municipalities rented watchtowers and watchtowers to generate income. It is understood that this situation was valid in Kyzikos in the 1st century BC (Vargas - Del Corral, 2007, p. 211; Marzano, 2013, p. 77). We learn from Strabon (Strabon. XI.2.4.) that there were watchtowers belonging to the city of Klazomenai on the shores of the Sea of Azov. From an inscription belonging to the city of Kos, we learn that the city sold the right to collect taxes from the watchtowers. It is understood that these towers, which are owned by the state or private individuals, are rented to fishermen during migration seasons, and both the fishermen and the property owners make a lot of profit (Bursa Sturtevant, 2016, p. 78).

In Aelianus' narratives, a watchtower is a place where a net is tied after a fish is seen. It is understood that a watchtower consists of two poles made of pine timber leaning towards the sea. Wooden towers of this type are known everywhere in the Mediterranean in the Byzantine, Middle Ages and Modern periods. However, the fact that the watchtower in Kyzikos belonged to the municipality and was rented by the fishermen's guild suggests that this tower cannot be a simple wooden frame (Vargas and Del Corral, 2007: p. 211).

Kyzikos was getting a significant income from tuna fish. As a reflection of this, we see that fishermen came together and established a fishermen's guild in Kyzikos (Hasluck, 1910: p. 258; Corcoran, 1963, p. 98; McCann, 2017, p. 41; Motor, 2010, p. 189; Irby, 2021, p. 148). Several late Hellenistic and early Roman inscriptions from Kyzikos and Parion provide rare information about the fishing industry in this region. The inscriptions attest to the existence of watchtowers and large-scale fishing operations. It appears that during this period the municipalities of the city leased the right to catch fish on certain parts of the coast to fishermen's associations for income (Lytle, 2012, p. 31; Walser, 2022, p. 87). An inscription from Parion, dated to the 1st or 2nd century AD, provides important information about tuna fishing. It attests to the renting of a fishing watchtower, a partnership of more than thirty people, and that the fishing and its duties were similar to those of modern tuna fishing (Marzano, 2018, p. 444). The inscriptions from Kyzikos confirm that the same conditions applied to Kyzikos.

The first epigraphic evidence of fishing activities in Kyzikos is found on a stele from the Hellenistic Period. The inscription, dating back to the 1st century BC, was dedicated to Poseidon and Artemis/Aphrodite Pontia by the fishermen in the city (Bursa, 2007, p. 20, 138; Marzona, 2013, p. 42; Felic, 2017, p. 3; Harland- Last, 2020, p. 95).

Aphrodite was worshipped as the goddess of the sea in Kyzikos (Zając, 2023, p. 114), and Poseidon was also highly respected in the city surrounded by the sea (Ertüzün, 1998, p. 67). Although the inscription states that it was dedicated to Poseidon and Aphrotite, we encounter an interesting situation on the stele. The depictions do not reflect Poseidon and Aphrodite, but Kybele and Apollo. This suggests that they may have been mixed up in the workshop. Kybele is sitting on her throne, with a tympanum next to her. Apollo is opposite her. Below this, there is a slave making a presentation in front of an altar (Harland, 2014, p. 105. Vermaseren, 2015, p. 92; Watson, 2016, p. 77).

The inscription mentions roles related to fishing (such as fish watchers, boatmen, net pullers) (Felic, 2017, p. 3, 9). It is understood from the inscription that eleven people came together and made a partnership agreement to share the financial responsibility for tuna fishing activities (Marzona, 2013, p. 80). The inscription mentions the existence of a rented tuna watchtower. It is understood that the partners were managed by an archon and that there were two people responsible for the treasury of this community (Marzona, 2013, p. 42). It is thought that those on the dedication were from a tax-paying business. This tax is related to some fishing and maritime rights. This inscription is associated with inscriptions attesting to the fishermen's guild in Kallipolis (Gelibolu) and Parion (Bursa, 2010, p. 38).

A second inscription that proves the union of fishermen in Kyzikos comes from the Roman Imperial Period (Harland, 2014, p. 104; Robert, 1950, p. 94 et al.). Unlike the previous inscription that refers to the hiring of tuna spotters and proves business partnerships, this inscription points to a specific professional union (Marzona, 2013, p. 46). The inscription is the tombstone of a person who had a tomb built for himself and his son Claudius Demokritos in Kyzikos. It mentions a fee that must be paid in cases such as the placement of another body in the grave or the violation of the grave. A fishermen's union that protected the owner of the tomb was assigned as the creditor of this penalty (Lytle, 2006, p. 79; Marzona, 2013, p. 46; Harland, 2014, p. 103). This inscription, which dates to a later period than our previous inscription, shows that fishing activities, which constituted an important part of the economy of Kyzikos, continued in the 2nd century AD (Marzona, 2013, p. 46).

Another tomb inscription unearthed in recent excavations in Kyzikos proves the existence of a maritime guild and that the guilds took on the task of guarding tombs in Kyzikos. The inscription from the family tomb of Aelius Marcus Diogenianus, dating back to the 2nd century AD, states that if anyone else were buried in the tomb, a fine of 1,500 drachmi would be imposed on those who "protected the harbor" (Koçhan, 2018, p. 16-17). The inscriptions constitute the few documents about fishing activities in the city. There is no

information about the city's fishing in ancient source (Bursa, 2007, p. 93). In Kyzikos, along with the fishermen's guild, there were also fullers (Harland, 2014:103) and clothing- cleaners (Harland- Last, 2020, p. 116) guilds as recipients of penalties for violations of tombs. The inscriptions show that the fishermen worked in a highly organized manner and formed a professional union/guild among themselves. It is understood that these guilds had duties such as protecting the graves of their members within the social life of the city. This tradition, which was widespread in Kyzikos and its surroundings, is seen elsewhere in Anatolia (Harland, 2014, p. 103).

Kyzikos seafood

Some cities on the Propontis coast have come to the fore with the deliciousness of their fish and the income they earn from fishing (Bursa, 2010, p. 13). Kyzikos is a city famous for its tuna fish. However, we know that other seafood products were also prominent. Fishing in Lake Daskylitis near Kyzikos was a Byzantine monopoly. This situation caused disagreements between the two cities (Dumont, 1976, p. 113).

John dory (Zeus faber)

John Dory are common near Kyzikos in Propontis. The fish, which attract attention with their ugly appearance, have very tasty meat. Sometimes consumed salted, the fish is one of the delicacies of Cadiz (Dalby, 2003, p. 186).

Louvar

It is one of the fish depicted together with tuna on Kyzikos coins (Fig. 7a) but not mentioned in publications. This fish, which we encounter on the coins of Kyzikos (Hurter & Liewald, 2006, p. 9 Taf.1.3), is rarely seen in the world. The first data regarding the occurrence of this species in Hellespontus belongs to 2005. The fish found on the coast of Çanakkale is today preserved in the Çanakkale University Piri Reis Marine Museum (Fig.7b.) (Irmak & Alparslan, 2008, p. 507).

Additionally, fish identified as Squid (Fig.8) and Eel (Fig.9) are seen on the coins, although they are not included in the publications.

Garum

One of the most important goods that brought in international trade was a type of fish sauce that the Romans called garum. To obtain garum, overly salted fish were fermented and the resulting liquid was strained. Everyone flavored their meals with garum (Casson, 2002, p. 111). Tuna, sturgeon and mackerel were added to the garum sauce. The sauce, to which wine and spices were added, was left to ferment for a month (Friedell, 1999, p. 46). Garum, which was produced on a large scale in Anatolia, had become an industry in the regions of Kyzikos, Klazomenai (Bursa, 2010, p. 43) and Bithynia (Yıldırım, 2010, p. 38: Bursa, 2007, p. 40). One of the most well-known and famous garum centers was Kyzikos and the other was Byzantion (Di Natali, 2014, p. 2830). However, no traces of garum production have been found in Kyzikos so far.

Sea urchins

Ancient sources state that the sea urchins of Kyzikos and Byzantion were different. These sea urchins could predict storms and sea swells. They would even calculate the direction and strength of the waves and stick to the nearest rocks. In this way, they would not be uprooted by the waves and swells and would remain balanced with the weight of the rock they were stuck to (Arslan, 2010, p. 411 dn 1692).

Oysters

During the Roman period, pools were built to easily obtain some of the favorite fish, especially oysters, and other seafood (Delemen, 2003, p. 23). One of the areas famous for oyster beds during the Roman period was Kyzikos (Marzano, 2013, p. 174). Kyzikos was considered rich in terms of oyster beds along the Propontis coast (Dalby, 2002, p. 159, 165).

The oysters of Kyzikos were quite famous in antiquity. Pliny (N.H. XXXII 21, 62-65) compares them with those of various regions and states that the oysters of Kyzikos were superior to them (Sevin, 2016, p. 64). Pliny, on the other hand, seems to have taken Mucianus' assessments literally (Ash, 2007, p. 13; Hamilton, 2012, p. 103; Marzano, 2013, p. 174). When Licinius Mucianus was sent to the East as governor of Syria during the reign of Nero, he stopped by Kyzikos. He is known for his fondness for the oysters of Kyzikos that he tasted there (Birley, 2013, p. 162; Caldwell, 2015, p. 76, 83).

Mucianus, a statesman, writer, soldier and tastemaker, speaks with admiration of the quality of the oysters of Kyzikos in the 1st century AD. (Lovell, 1867, p. 69: Elsner& Rutherford, 2005, p. 232; Tillie, 2017, p. 36). Mucianus, in Roman times, ranks oysters according to their quality and praises them by comparing them with those of Kyzikos. Mucianus states that they are “larger than those of Lake Lucrinus, fresher than those of the British coast, sweeter than those of Medulla, more delicious than those of Ephesus, fuller than the Ilicians in Spain, less slimy than those of Coryphan, softer than those of Istria, whiter than those of Circeii” (Pilinius, 32.62)” (Lovell, 1867, p. 70; Elsner & Rutherford, 2005, p. 251 dn.29; Marzano, 2013, p, 174). This list, in which Kyzikos won the victory among all oysters (Ash, 2007, p. 13; Marzano, 2013, p. 174), is important in terms of showing the spread of the Roman oyster trade (Livie, 2014, p. 20).

Reflection of Tuna on Coins and Urban Life

In ancient times, cities put symbols on their coins that expressed their identity. Therefore, coins are decorated with depictions that refer to the main source of wealth or fame of a city, its patron god or mythological elements. Kyzikos is one of the best known examples in this regard and included tuna in its coin designs. Tuna, one of the sources of wealth of Kyzikos, was featured on coins as a symbol of the city's wealth or as a distinct product of its economy (Robinson & Blegen, 1935, p. 389; Aldrete & Aldrete, 2019, p. 34; Morrisson, 2002, p. 46) (For Kyzikos coins see; Motor, 2010).

Kyzikos electrum coins have been called the most interesting coins of all times and places (Mildenberg, 1995, p.1; Motor, 2010, p. 7). There was no need to test the weights of Cyzicus electrum coins in a very wide geography where they were valid. Since it is well known that the weight of Kyzikos electrums does not change, it was enough for the customer to see the tuna symbol on the coin (Kraay, 1976, p. 261; Motor, 2010, p. 63). Sellers and buyers found Kyzikos coins reliable because they are a three hundred year old traditional coin (Mildenberg, 1995, p. 4; Motor, 2010, p. 63). It is a matter of curiosity why and how such an important trade coin emerged in a small city and continued to be used for centuries (Mildenberg, 1995; Motor, 2010, p. 54).

The tuna emblem has always been used as a promotional emblem on Kyzikos coins (Carradice & Price, 2001, p. 83; Motor, 2010, p. 92). The depiction on the coins is not coincidental due to its huge imports (Bresson, 2015:186). The tuna on the earliest electrum coins is the symbol of the city and has a meaning that reveals the importance of the fish trade, which was the city's main industry (Prêteux, 2008, p. 7,18; Psoma, 2016, p. 93). As an emporion, the tuna symbol on Kyzikos coins symbolizes that it was a fishing city (Motor, 2010, p. 17) (For the depiction of tuna on Kyzikos coins, see Fig.10).

The tuna depiction was also included in the smallest coin units. The tail or head of the tuna was featured on the coins. The entire fish was included on large-denomination coins. The constant use of tuna and its presence even in the smallest units shows that they had an urban symbol function (Skinner, 2012, p. 135). The tuna depiction, which began with electrum coins, was used for centuries as the main type or auxiliary type, although the types changed every year (Carradice & Price, 2001, p. 62; Hansen & Nielsen, 2004, p. 986).

Many cities are known for their coins depicting a full ton or the head of a tuna fish as a symbol of their economic importance. In addition to Kyzikos, we come across coins depicting tuna fish in Gades, Sexti, Abdera, Rome, Solunturn, Acanthaia, Istria, Olbia, Chersonesus, Panticapaeum, Phanagoria, Sinope, Chalcedon, Lampsacus, Methymna, Clazomenae, Teius, Chius, Samos, Lycia, and Tarsus. In addition, cities such as Chalcedon, Lampsakos, Sinope and Olbia, Chersonesus, Pantikapaion, Phanagoria, and Istria from the Black Sea used tuna fish on their coins (Roesti 1966, p. 84; Motor, 2010, p. 97).

The tuna coins prove that bluefin tuna first became of significant economic importance in the eastern part of the Mediterranean basin, in the Bosphorus, Propontis and Aegean, and later in the central part (Sicily and Calabria). Kyzikos first minted tuna coins in electrum. The tuna coins of other cities were of silver or bronze (Di Natali, 2014, p. 2832). Tuna coins seem to have been concentrated in Kyzikos, Sicily and Gades, where the tuna industry was developed. (Gades used the tuna symbol later than Kyzikos Morrison, 2002, p. 46; Motor, 2010, p. 97, 102). The cities of Gades, Sexi, Salacia, Abdera, Itucci and Malaca in the Iberian peninsula were also famous for their tuna wealth (Güney, 2012, p. 193).

Most tuna coins were minted in the 3rd and 2nd centuries BC. The earliest tuna coins are those of Kyzikos in the 6th century BC (Di Natali, 2014, p. 2831).

The electrum coins of Kyzikos depicting tuna fish enjoyed great fame in antiquity. There were more than two hundred types on the obverse of the coins (Motor, 2010, p. 91). Thousands of tuna coins were minted at Kyzikos over three centuries (600-300 BC). Kyzikos tuna coins feature terrestrial predators, including wild boars, a lioness attacking a fish, a panther standing on a tuna, and birds such as Zeus' eagle with a fish in its claws. Hunters are shown hunting fish or gods with tuna. The mythological water creatures and ship prows on the coins are a reference to the fact that watercraft were a fundamental aspect of the fishing industry (Irby, 2021, p. 169).

We can interpret the depictions of tuna on coins as a reference to the annual migration of tuna between Pontus and the Mediterranean. It was an important and highly profitable activity for coastal cities. These migrations caused a great increase in fishing activities. In addition, the easy availability of highly demanded fish caused changes in eating habits (Skinner, 2012, p. 135). The importance of the fishing industry, even for a city with a large area such as Kyzikos, is evidenced by the depiction of a tuna on its official emblem (Walser, 2022, p. 88).

One of the few valuable studies that trace tuna fish, Di Natali states that (Di Natali, 2014, p. 2832) based on the distribution of coins, the high economic importance of bluefin tuna fishing and trade in the western Mediterranean and adjacent to the Atlantic Ocean during the Phoenician and Roman periods was confirmed. Fishermen were catching bluefin tuna at that time.

Propontis and Bosphorus were important trading areas from the earliest periods, at least from the 4th century BC. Kyzikos was the most important trade center for bluefin tuna for several centuries. Byzantion became the main center a few centuries later and maintained its importance during the Ottoman period (Di Natali, 2014, p. 2832). The fact that tuna was continuously minted on Kyzikos coins from the 6th century BC to the 3rd century AD shows the importance of fishing in the social life of the city (Bursa, 2010, p. 19; Bursa, 2007, p. 93).

The importance of tuna fishing in city life is seen not only on coins but also on public monuments and statues. The source of the city's wealth is also reflected in a public monument dedicated to Poseidon by Antonia Tryphaena in the 1st century AD (Lytle, 2018, p. 85; Çoruh Kurt, 2022, p. 200). We come across traces of fishing on a monument thought to have been built in the city's harbor. Dolphins, bonitos and small fish are depicted on a statue base called Balıktaş, which is lost today. On the pedestal there is a trident, a boat and fishermen, which are the symbols of Poseidon (Çoruh Kurt, 2022, p. 200).

It is also possible to see traces of tuna fish on a statue of King Kyzikos, who gave his name to the city. In the statue of Kyzikos in the British Museum, the king is shown with a trident in his hand, aiming at a tuna fish (Robinson & Blegen, 1935, p. 389; Motor, 2010, p. 103).

As a sea city, Kyzikos also produced famous people related to the sea. Edudoxos from Kyzikos was the greatest sailor of the ancient period (Ertüzün, 1998, p. 95-96; Koçhan, 2011, p. 43; Cunliffe, 2017, pp. 322-323; Roller, 2004, p. 230; Çoruh Kurt, 2022, p. 202). Androcydes, who had a great reputation in the ancient period and was considered the father of fish painters, was from Kyzikos. Androcydes became famous with his painting of Scylla, which has various fish around it (Peirano, 2009, p. 192.dn.27).

Conclusion

In ancient times, water shaped people's lives, myths and rituals. Water also influenced the expression of urban identity, which distinguished coastal and island cities. Maritime imagery on coins of urban identity emphasizes the relationship and origins of many Greeks, who were founded on waves or became rich and powerful thanks to the sea, with water.

The fact that tuna was used as an indispensable type on Kyzikos coins from early times also reveals the importance of tuna in the life of the city. The depiction of tuna was not intended merely as an artistic choice. This depiction also reflects the economic and ecological contexts of Kyzikos. Its location on the tuna migration route played an important role in the foundation of Kyzikos. It is possible to interpret the tuna depictions on Kyzikos coins as a reference to the annual migration of fish and a sign of fish trade. The city, which has been involved in tuna trade since its foundation, has been the main center of this trade. The city maintained its importance for centuries as the main center of the tuna trade, but eventually lost its leadership to Byzantion.

One of the most famous and longest-lasting coins of antiquity were the Kyzikos coins. One of the facts underlying this situation is the tuna trade that has been carried out in Kyzikos for centuries. The fact that Kyzikos minted the earliest tuna coins and used this type for centuries is evidence that the city was the oldest and main centre of the tuna trade. The silence of ancient sources on this issue can perhaps be explained by the fact that people have been familiar with this situation for centuries. New archaeological findings will allow us to increase our knowledge of Kyzikos fishing.

The central location of Kyzikos on the Propontis and its wealth in the sea formed the basis of the city's prosperity. Tuna fishing on its shores became the city's main source of income. Tuna fishing and its fishermen contributed to the prosperity of their city. This way, Kyzikos became a rich city, standing out from other cities. Kyzikos had a glorious past with the presence of the sea surrounding it.

Ethics Committee Approval: Ethics committee approval is not required.
Peer-review: Externally peer-reviewed.
Conflict of Interest: The author has no conflicts of interest to declare.
Financial Disclosure: The author declared that this study has no financial support.

Figures

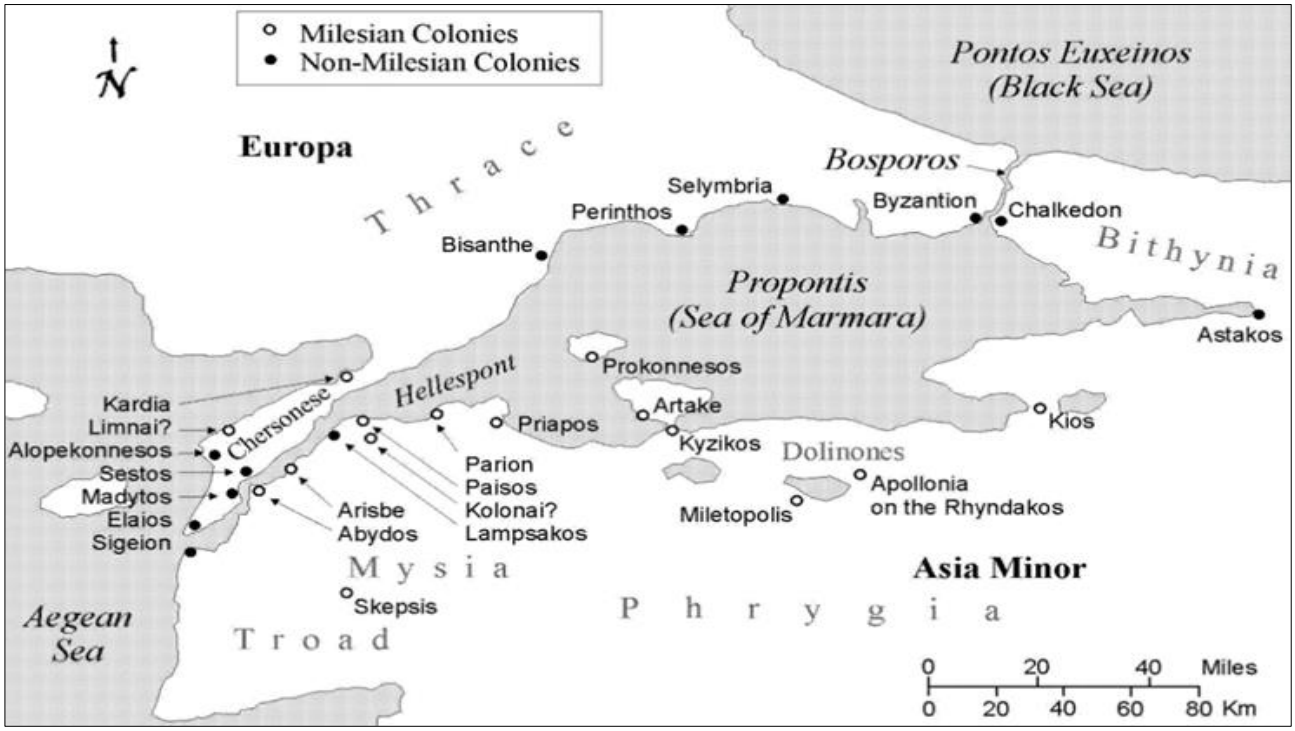


Fig.1. *Hellespont, propontis ve bosporos: Gorman, 2001, p. 285 map.6*

Fig. 2*. Image of a bluefin tuna vendor on a "Siciliota" pottery from the IV century B.C. at the Mandralisca Museum in Cefalù (Sicily, Italy). https://artsupp.com/it/artisti/anonimo/cratere-del-venditore-di-tonno*

Fig. 3. *Cutting a bluefin tuna before a ceremony or a feast. Black figures painted on a reddish background and decorating a Greek wine pitcher of VI b.C. at the State Museum in Berlin (Germany). https://kosmossociety.org/wp-content/uploads/2021/06/Tuna-sacrifice.jpg*

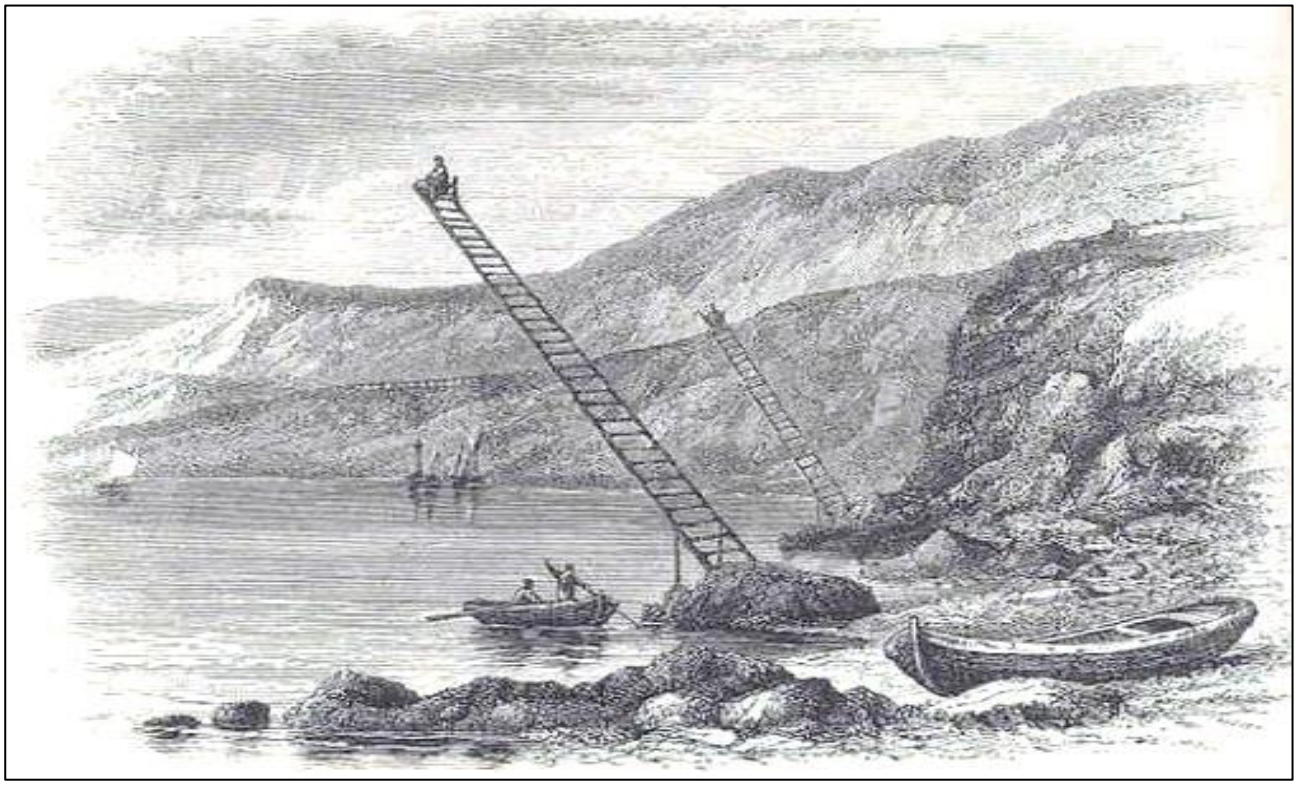


Fig.4: *Tuna watchtower. Gallant, 1985, Plate 14.*

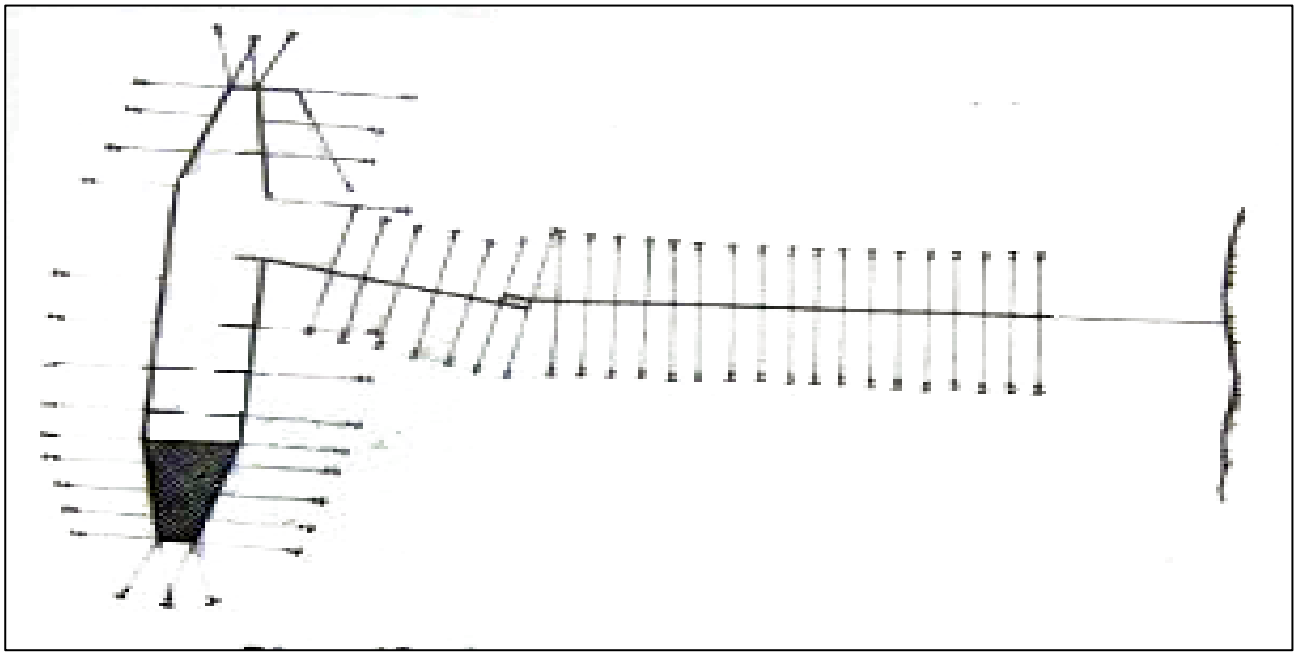


Fig. 5. *Tuna trap. Gallant, 1985:Plate 12.*

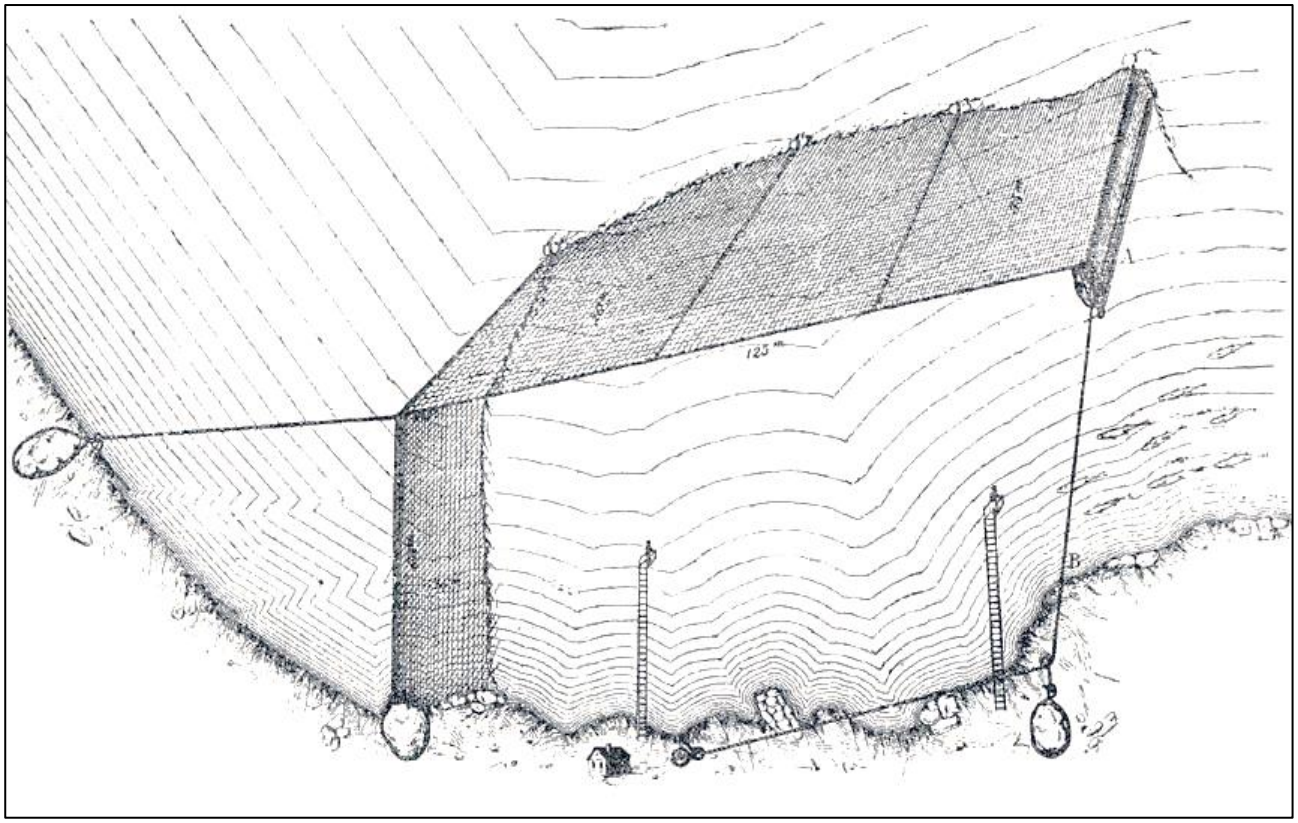


***Fig. 6**. Portable tuna trap. Gallant, 1985, Plate 13.*

***Fig.7a.** Louvar and Tuna.*

www.acsearch.info/search.html?id=12796536

***Fig.7b.** Louvar. Irmak- Alparslan, 2008, Fig. 2.*

***Fig.8**.Tuna and Squid.*

www.acsearch.info/search.html?id=11725700

***Fig.9**.Tuna and Eel.*

www.acsearch.info/search.html?id=3594266

***Fig.10.** The tuna on a Kyzikos electrum coin from about 520 BC. Hurter- Liewald, 2006:6.*

References

Aldrete, G. S. & Aldrete, A. (2019). *The long shadow of antiquity: What have the Greeks and Romans done for us?* Bloomsbury Academic.

Arnold, P. (2020). Polysemy, epigraphic habit and social legibility of maritime shippers: navicularii, naukleroi, naucleri, nauculari, nauclari (pp. 367-423), Arnaud, P., & Keay, S. (Eds.). *Roman Port Societies.* Cambridge University Press.

Arslan, M. (2010). *İstanbul'un antik çağ tarihi, arkaik ve klasik dönemler.* Odin Yayıncılık.

Ash, R., (2007). The Wonderful World of Mucianus (pp. 1–17). *Bulletin of the Institute of Classical Studies. 50. Issue Supplement 100: Vita Vigilia Est: Essays in Honour of Barbara Levick*. Oxford University Press. https://doi.org/10.1111/j.2041-5370.2007.tb02461.x

Bekker Nielsen, T. (2006). *Ancient fishing and fish processing in the black sea region.* Aarhus University Press.

Benjamin, S. G. W. (1880). The light-houses of old, *The Art Journal* (1875-1887). New Series. *6*. 41-45.

Birley, A. R. (2013). *Hadrian: the restless emperor.* Routledge.

Bresson, A. (2015). *The making of the ancient Greek economy: ınstitutions, markets, and growth in the city-states.* Princeton University Press.

Bursa, P. (2007). *Antik çağ'da Anadolu'da balık ve balıkçılık.* [Doctoral dissertation, İstanbul University].

Bursa, P. (2010). *Antik çağ'da Anadolu'da balık ve balıkçılık.* Türk Eskiçağ Bilimleri Enstitüsü Yayınları.

Bursa Sturtevant, P. (2016). Eskiçağ'da anadolu'nun güney ve batısında yer alan bölgelerde balık ve balıkçılık, *Adalya,* No. XIX / 201, 75-94.

Burstein, S.M. (2010). *The Greek cities of the Black Sea, a companion to the classical Greek world*. Kinzl, K. H. (Ed.). Blackwell Publishing.

Caldwell, T. F. (2015). *The* career of licinius mucianus, [MA dissertation, University of Melbourne].

Carradice, I. & Price, M., (2001). *Helen dünyasında sikke*. Homer Kitabevi.

Casson, L. (2002). *Antik çağda denizcilik ve gemiler,* Homer Kitabevi.

Corcoran, T. H. (1963). Roman fishermen. *The Classical World*. *56*(4). 97-102.

Curtis, R. I. (1991). *Garum and salsamenta: production and commerce in materia medica*. Brill.

Çakırlar, C. (2016). Early bronze age foodways in the Aegean: social archaeozoology on the eastern side. In E. Pernicka, S. Ünlüsoy, & S.W.E. Blum (Eds.). *Early bronze age Troy: chronology, cultural development and ınterregional contacts* (pp. 291–304. *Proceedings of an International Conference held at the University of Tübingen*.

Çoruh Kurt, H. (2022). Kyzikos'un denizcilik yaşantısından izler. Bayyiğit, M., Özkan, M. et al. (Eds.). *Geçmişten Günümüze Balıkesir'in Kültürel Mirası- 2* (pp.198-208). Palet Yayınları.

Cunliffe, B. W. (2017). *On the ocean: the Mediterranean and the Atlantic from prehistory to ad 1500.* Oxford University Press.

Dalby, A. (2002). *Empire of Pleasures: Luxury and ındulgence in the Roman World,* Routledge.

Dalby, A. (2003). *Food in the Ancient World from A to Z*. Routledge.

Delemen, İ. (2003). *Antik dönemde beslenme*. Türk Eskiçağ Bilimleri Enstitüsü Yayınları, İstanbul.

Di Natali, A. (2014). The ancient distribution of bluefin tuna fishery: how coins can ımprove our knowledge. *Collect. Vol. Sci. Pap. ICCAT.* 70(6). 2828-2844.

Diomidis, A. P. (2009). The body ın the landscape: Aristides' corpus ın light of the sacred tales. W. V. Harris (Ed.). *Brooke Holmes, Aelius Aristides between Greece, Rome, and the Gods*. Brill.

Dumankaya, O. (2018). Antikçağ Anadolusu'nda su ürünleri tüketimi ve ticareti-I: paleolitik çağ'dan tunç çağı'na. L. G. Gökçek, E. Yıldırım & O. Pekşen (Eds.). *Anadolu'nun eski çağlarında iktisadi ve zirai hayat* (pp. 153- 186). Değişim Yayınları.

Dumont, J. (1976). La pêche du thon à byzance à l'époque hellénistique, Revue *des Études Anciennes*, Tome 78-79, No:1-4, 96-119.

Elsner, J. & Rutherford, I. (2005). *Pilgrimage in Graeco-Roman and early Christian antiquity: seeing the gods,* Oxford University Press.

Ertan, A. (2010). *İstanbul boğazı'nda balıkçılık*. Arkeoloji ve Sanat Yayınları.

Ertüzün, R. M. (1998). *Kapıdağı yarımadası ve çevresindeki adalar, tarihi ve arkeolojisi üzerinde* araştırmalar. Ozan Sanatevi.

Felici, di E. (2017). Le tonnare antiche, *Semestrale di archeologia subacque navala* Anno XXIII, 66 n.s.2, 2-21.

Friedell, E. (1999). *Antik yunan'ın kültür tarihi.* Dost Yayınevi.

Gallant, T. W. (1985). *A fisherman tale's:an analysis the potential productivitiy of fishing in the ancient World*. Belgian Archaeological Mission.

Gorman, V. B. (2001). Miletos, the ornament of ıonia: a history of the city to 400 b.c.e. University of Michigan Press.

Greaves, A.M. (2003). *Miletos bir tarih.* Homer Kitabevi.

Gündem, C. Y. (2010). *Animal based economy in Troia and the Troas during the maritime troy culture (c. 3000-2200 bc.) and a general summary for west Anatolia*. [Doctoral dissertation, Eberhard Karls Universität, Tübingen].

Güney, H. (2012). *The reosurces and economy of roman Nicomedia,* [Doctoral dissertation, University of Exeter].

Habicht, C. (2013). Eudoxus of Kyzikos ptolemaic explaration of the sea routa to India. K. Buraselis, M. Stefanou, D.J. Thompson, (Eds.). *The ptolemies, the sea and the nile: studies in waterborne power* (pp. 197–206). Cambridge University Press.

Hansen, H. M. & Nielsen, T. H., (2004). An *inventory of archaic and classical poleis*. Oxford University Press.

Hamilton, W. J. (2012). *Researches in Asia Minor, Pontus, and Armenia: with some account of their antiquities and geology*. *2*. Cambridge University Press.

Harland, P. A. (2013). *Associations, synagogues, and congregations: claiming a place in ancient Mediterranean society*. Kitchener.

Harland, P. A. (2014). *Greco-Roman associations: texts, translation and commentary, north coast of the Black Sea, Asia Minor*. Walter de Gruyter GmbH.

Harland, P. A. & Last, R. (2020). *Group survival in the ancient Mediterranean: rethinking material conditions*. Bloomsbury Publishing.

Hasluck, F. W. (1910). *Kyzikos.* Cambridge.

Horejs, B., Milić, B., Ostmann, F., Thanheiser, U., Weninger, B. & Galik, A. (2015). The Aegean in the early 7th millennium BC: maritime networks and colonization. *Journal of World Prehistory*. *28*/4. 289-330.

Hurter, S.M. & Liewald, H.J. (2006). Die frühesten Typen der Elektronprägung von Kyzikos, Thunfische, Thunfischköpfe und – hinterhälften. *Schweizerische numismatische Rundschau* Schweizerische. Numismatische Gesellschaft. *85*. 5-17, Tafeln 1-4.

Irby, G. L. (2021). *Using and conquering the watery world in Greco-Roman antiquity.* Bloomsbury Publishing.

Irmak, E. & Alparslan, M. (2008). A new record for Çanakkale (Turkey) strait: luvarus imperialis rafinesque, 1810 (pisces: luvaridae), *Journal of Fisheries Sciences. 2*(3). 506-509.

King, C. (2004). *The Black Sea: A History*. Ashford Colour Press.

Kroll, J., H., (2018). Two fifth-century lead weights of Kyzikos on the commercial standard of Athens, *Second International Congress on the History of Money and Numismatics in the Mediterranean World – Proceedings*. 85-90. Oksijen Basım ve Matbaacılık.

Koçhan, N. (2011). *Kyzikos tarihi ve mimari kalıntıları* Renkvizyon Ofset Form Matbaacılık.

Koçhan, N. (2018). Kyzikos nekropolünden bir taş örgü mezarı ve buluntularının değerlendirilmesi. *Akademik Sosyal Araştırmalar Dergisi. 6*(70). 14-32.

Kraay, C. M. (1976). *Archaic and classical Greek coins*. Methuen.

Leblanc, T. (2021). Poids et mesure en propontide hellenistique: le cas de cyzique. *Bulletin De La Socıete Française De Numismatique*. *76*(04). 137-143.

Livie, K. (2014). *Chesapeake oysters: the bay's foundation and future, American palata*. The United States.

Lovell, M. S. (1867). *The edible mollusks of Great Britain and Ireland*. London.

Lytle, E. (2006). *Fisheries and the ancient Greek economy*. [Doctoral dissertation, Duke University].

Lytle, E. (2012). Fishermen, the sea, and the limits of ancient greek regulatory reach. *Classical* Antiquity. *31*. 1–55.

Lytle, E. (2018). Fishing with fire: technology, economy and two greek ınscriptions. *Historia*. *67*/1. 61–102.

Mansel, A.M. (1999). *Ege ve Yunan tarihi.* Türk Tarih Kurumu.

Marzano, A. (2013). *Harvesting the sea: the exploitation of marine resources in the Roman Mediterranean.* Oxford University Press,

Marzano, A. (2018). Fish and fishing in the Roman world. *Journal of Maritime Archaeology.13*. 437–447.

Mccann, A. M. (2017). *The Roman port and fishery of cosa: a center of ancient trade.* Princeton University Press.

Mclaughlin, R. (2016). *The Roman empire and the silk routes: the ancient world economy & the empires of Parthia, central Asia & han China*. Pen and Sword Books.

Mildenberg, L. (1995). The cyzicenes: a reappraisal. *American Journal of Numismatics.* Second Series 5-6 (1993-1994). 1-12. Plate 1-2.

Morrisson, C. (2002). *Antik sikkeler bilimi nümismatik genel bir bakış.* Arkeoloji ve Sanat Yayınları.

Motor, H. (2010). Bursa, Balıkesir ve Bandırma müzelerindeki Kyzikos sikkeleri. [Doctoral dissertation, Atatürk University].

Mylona, D. (2021). Catching tuna in the Aegean: biological background of tuna fisheries and the archaeological implications, *Anthropozoologica. 56*(2). 23-37.

Peirano, I. (2009). Mutati artus: scylla, philomela and the end of silenus' song in virgil "eclogue" 6. *The Classical Quarterly. 59*(1). 187-195.

Prêteux, F. (2008). Le commerce de Cyzique au IVe siècle, dans J. NAPOLI (dir.), *Ressources et activités maritimes des peuples de l'antiquité, actes du colloque international de boulogne-sur-mer, mai 2005*. Les Cahiers du Littoral. *2*(6). 353-368.

Psoma, S. E. (2016). Choosing and cahnging monetary standars in the greek world during the archaic and the calssical periods. E. M. Harris, D. M. Lewis & M. Woolmer (Eds.). *The ancient Greek economy: markets, households and city-states* (pp. 90- 115). Cambrige University Press.

Robert, L. (1950). Inscriptions de l'hellespont et de la propontide. *Hellenica IX*. 78-97.

Robinson, D. M. & Blegen, E. P. (1935). Archaeological news and discussions. *AJA 39*(3). 378-411.
Roesti, R. M. (1966). The declining economic role of the mediterranean tuna fishery. *AJHS.* 25(1). 77-90.
Roller, D.W. (2004). *The world of Juba II and Kleopatra Selene: royal scholarship on Rome's African frontier.* Routledge.
Sevin, V. (2016). *Anadolu'nun tarihi coğrafyası I.* Türk Tarih Kurumu.
Skinner, J. E. (2012). *The invention of Greek ethnography: from Homer to Herodotus*. Oxford University Press.
Tekin, O. (2010). *Eskiçağ'da İstanbul'da balık ve balıkçılık*. Arkeoloji ve Sanat Yayınları.
Tekin, O. (2013a). Weights of Cyzicus in Athens numismatic museum. Anatolia Antiqua, 21, 167–173.
Tekin, O. (2013 b). Two Hellenistic weights of Cyzicus from dascylium. *Anadolu/Anatolia*. 39. 121–127.
Tillie, C. (2017). *Oyster: a global history*. Reaktion Books.
Van neer, W. & Uerpmann, M. (1998). Fish remains from the new excavations at Troy. H. Buitenhuis, L. Bartosiewicz & A. M. Choyke (Eds.), *Archaeozoology of the near east iii. proceedings of the third international symposium on the archaeozoology of southwestern Asia and adjacent areas* (pp. 243-254). ARC-Publication.
Vargas, E. G. & Del Corral, D. F. (2007). The origin and development of tuna fishing nets (almadrabas), In T. Bekker-Nielsen, & D. B. Casasola (Eds.), *Ancient nets and fishing gear proceedings of the ınternational workshop on "nets and fishing gear ın classical antiquity: a first approach*" (pp. 205-228).
Von Den Driesch, A. (1999). Archäozoologische untersuchungen an tierknochen aus dem dritten und ersten vorchristlichen jahrtausend vom Beşik-Yassıtepe, West Türkei. *Studia Troica* 9. 439-474.
Vermaseren, M. J. (2015). *Corpus cultus cybelae attidisque (CCCA), I: Asia minör.* Brill.
Walser, A.V. (2022). Asia Minor. S. Reden (Ed.). *The cambridge companion to the ancient Greek economy* (pp. 77–93). Cambridge University Press.
Watson, D. F. (2016). Paul and boasting. J. P. Sampley (Ed.). *Paul in the Greco-Roman world: a handbook: I* (pp. 77–100). Bloomsbury Publishing.
YIldırım, Y. S. (2010). *Metropolis buluntuları ışığında Batı Anadolu'daki Hellenistik Roma dönemi mutfak kültürü.* [Doctoral dissertation, Dokuz Eylül University].
Zając, B. (2023). *Between roman culture and local tradition: Roman Provincial Coinage of Bithynia and Pontus during the Reign of Trajan (98-117 AD).* Archaeopress Publishing Ltd.