

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

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.

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.



The content of this journal is licensed
under a Creative Commons Attribution-
Noncommercial 4.0 International License.

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 Puruṣhanda 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 worshipping 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*).

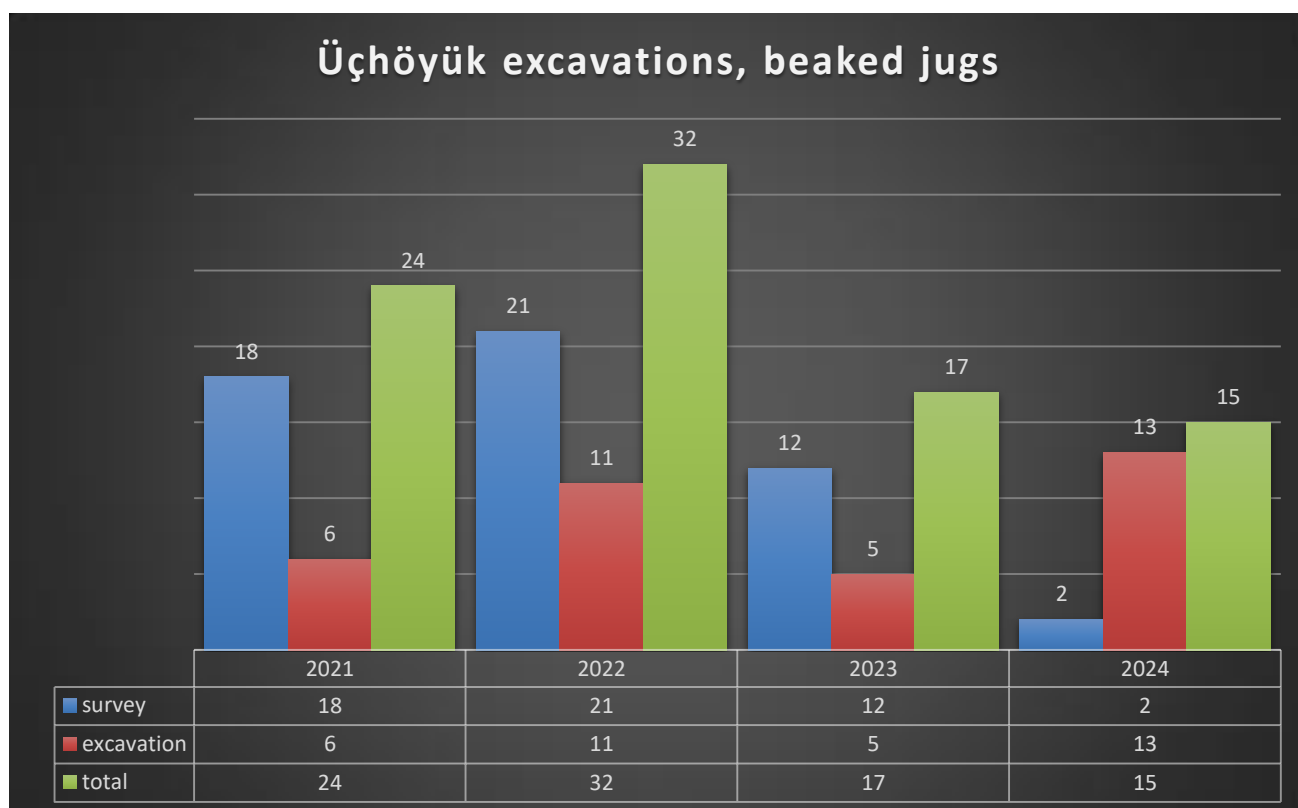


Table.1 Üçhöyük beaked jugs

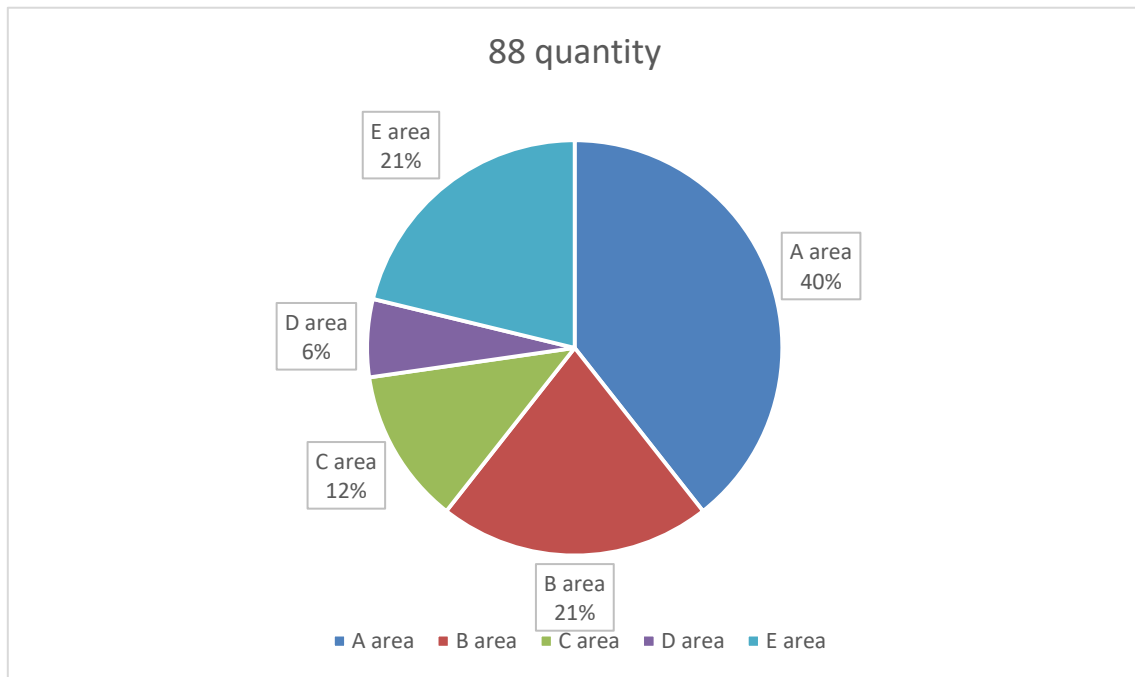


Table.2 Üçhöyük beaked jugs to trench

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). Moreover *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 *Kultepe, 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 *Büyükale-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 *Büyükale-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 *Çavlım 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*. Türk Tarih Kurumu Basmevi.
- Alkim, U. B., Alkim, H., & Bilgi, O. (1988). *Ikiztepe I: birinci ve ikinci dönem kazıları*. Türk Tarih Kurumu Basimevi.
- Alp, S. (1972). *Konya civarında Karahöyük kazılarında bulunan silindir ve damga mühürleri*. Türk Tarih Kurumu Basimevi.
- 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 adanmış 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/Agroun 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., & Küçükbezi, 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 heykeler. *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 Eskişehir. *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., Aytekin, 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)

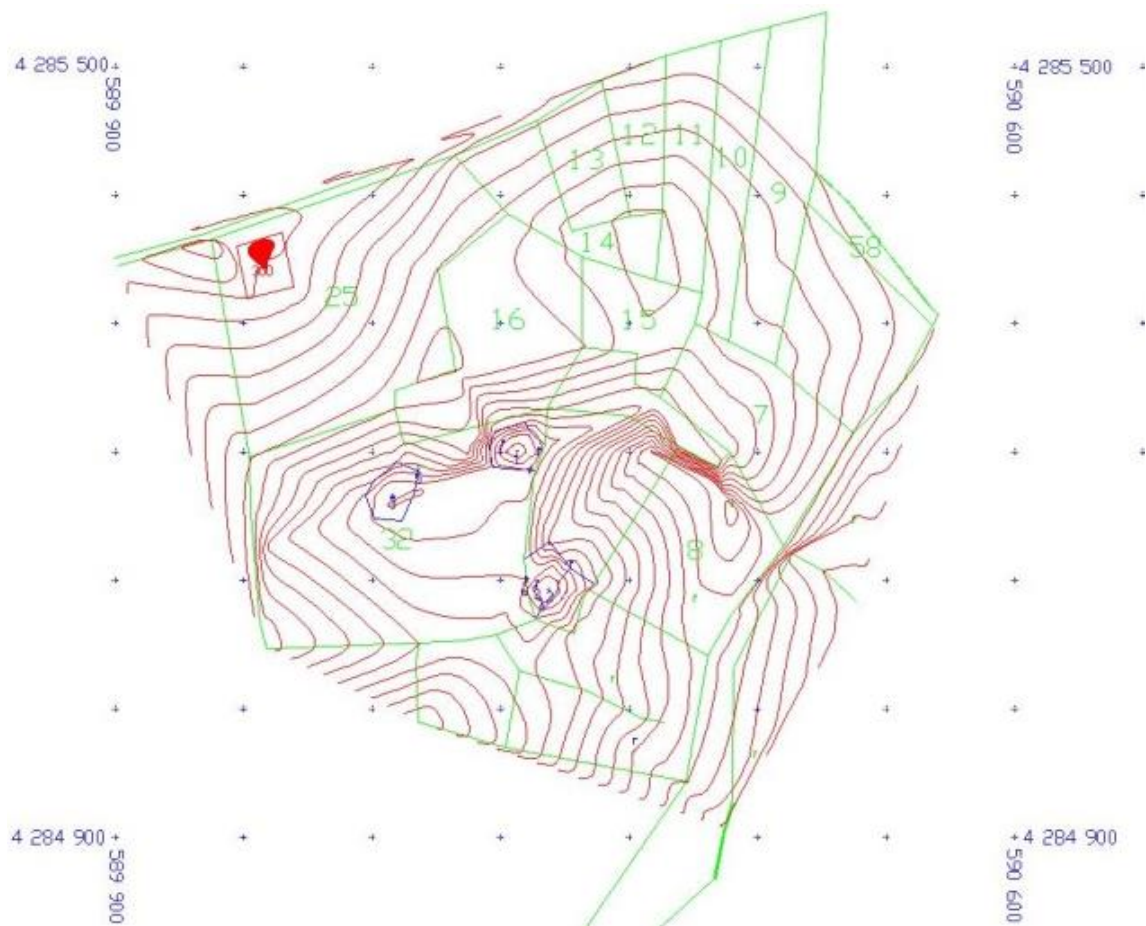


Fig.2. Map of Üçhöyük Hill settlement and current (Designed by Dr.Ömür Esen)



Fig.3. Üçhöyük excavations, Area D, and the district center (ÜÇH archive)

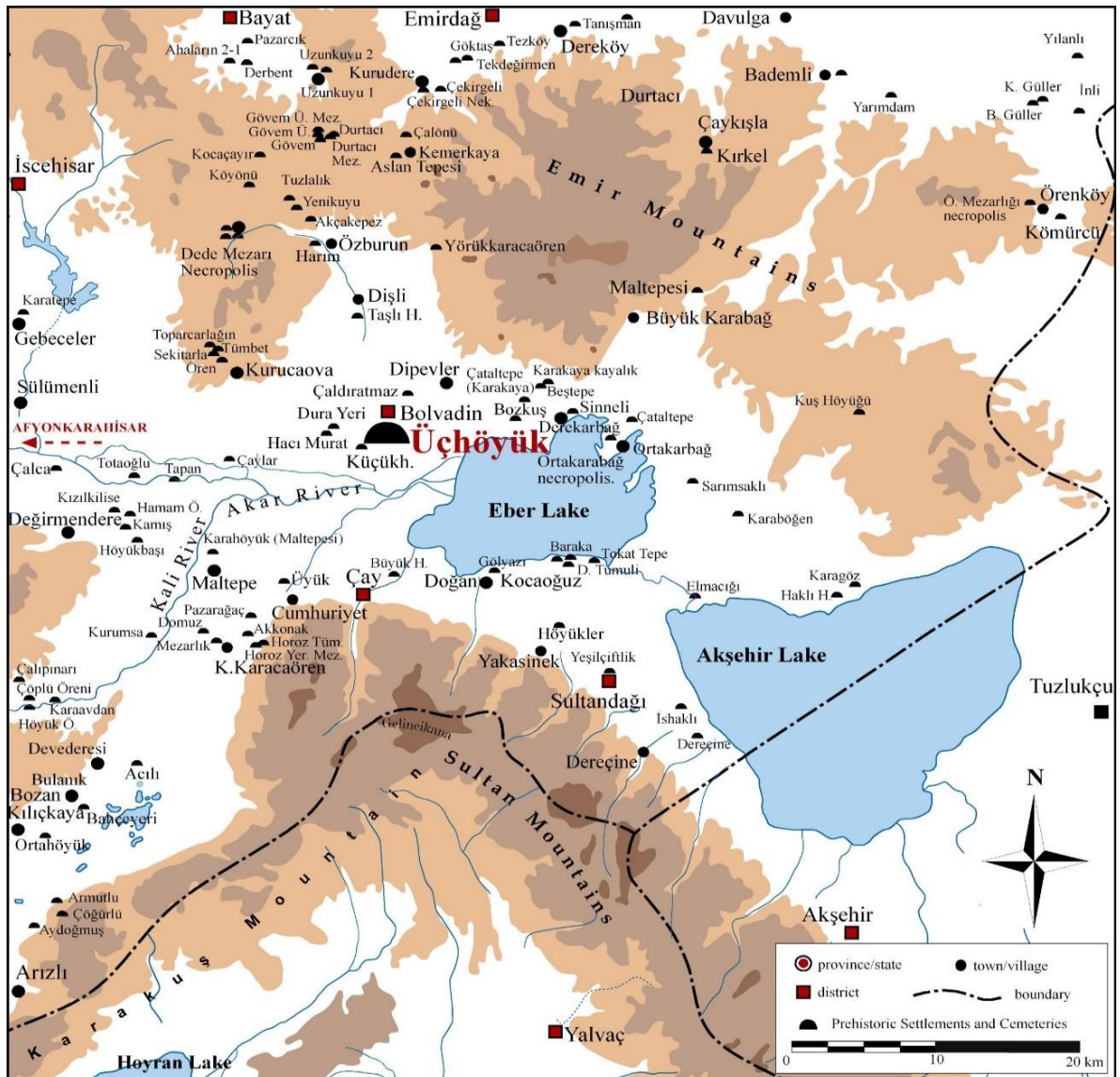


Fig.4. Map of Üçhöyük and surrounding settlements (Ö.Koçak archive)

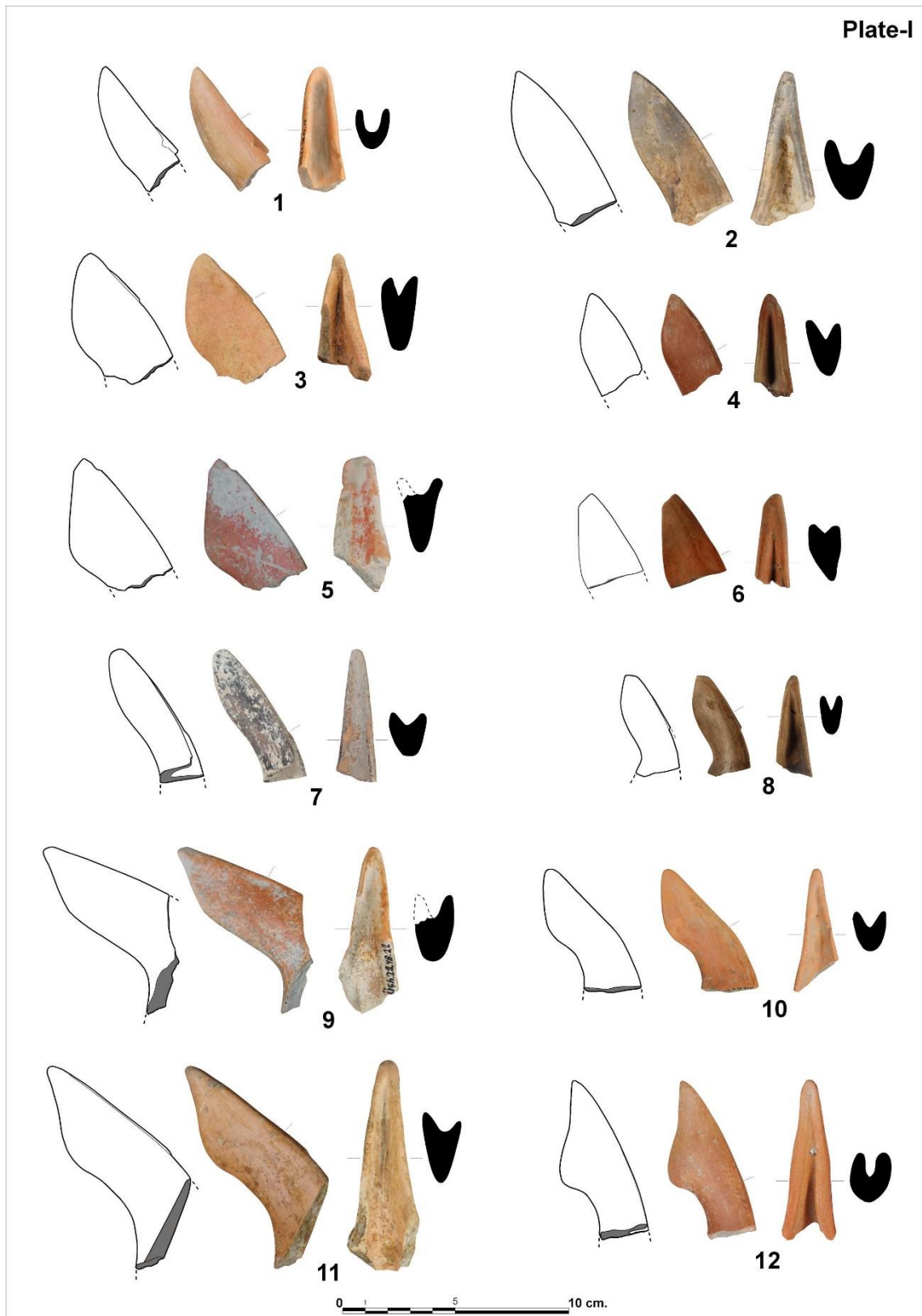


Fig.5. Examples from type. 1 and type. 2



Fig.6. Examples from type. 2 and type. 3

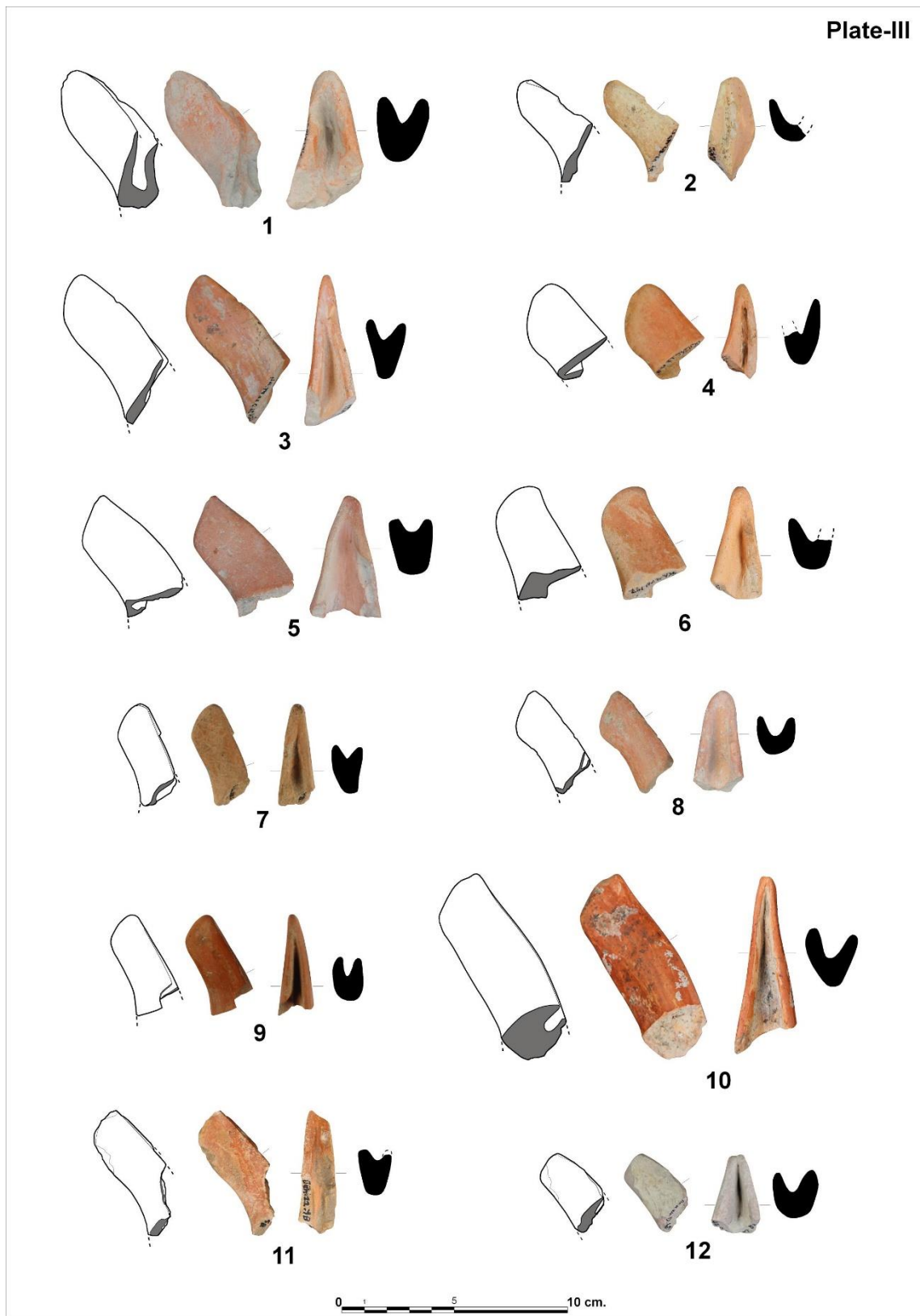


Fig.7. Examples from type. 4

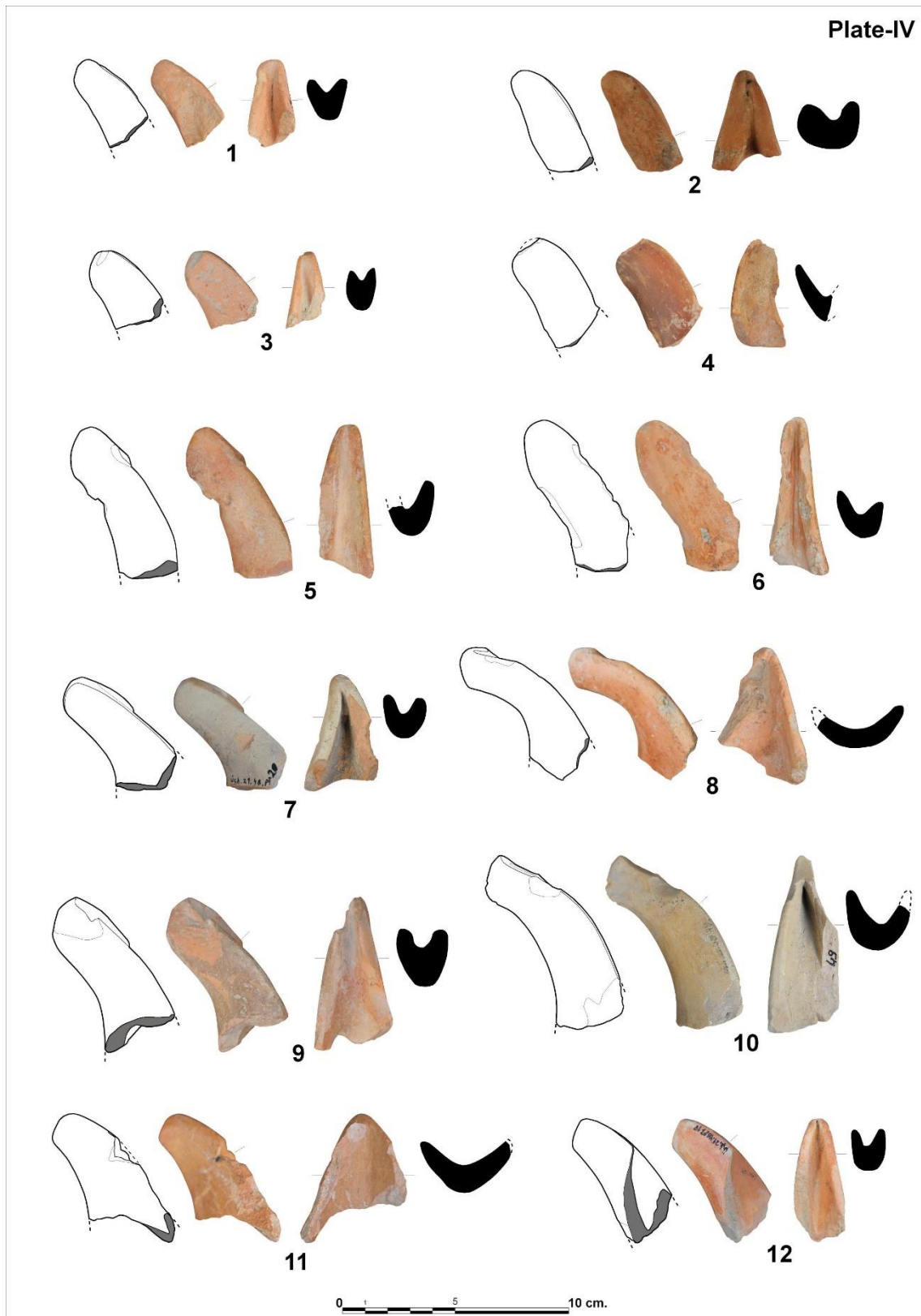


Fig.8. Examples from type.4 and type.5

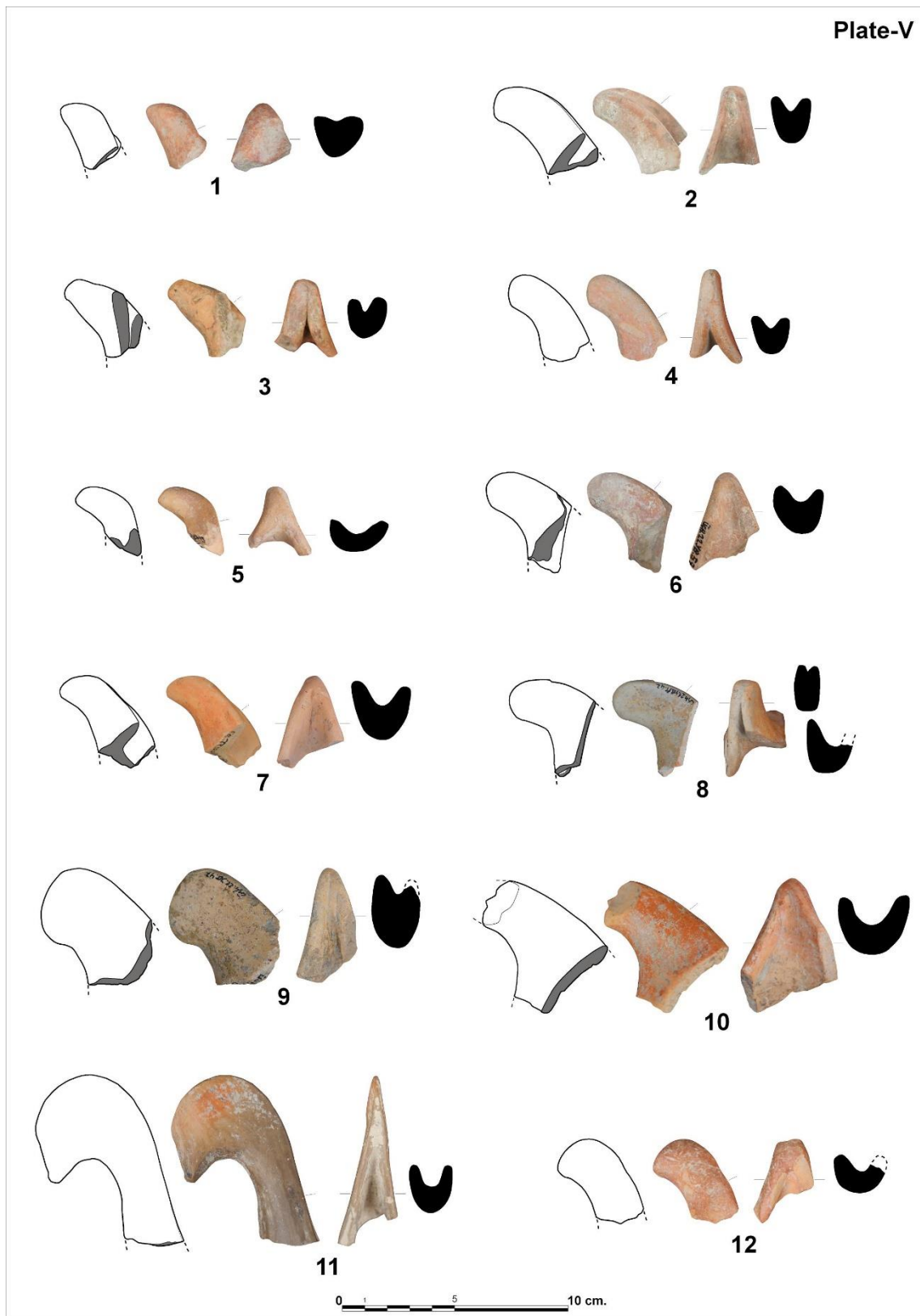


Fig.9. Examples from type.6 and type.7

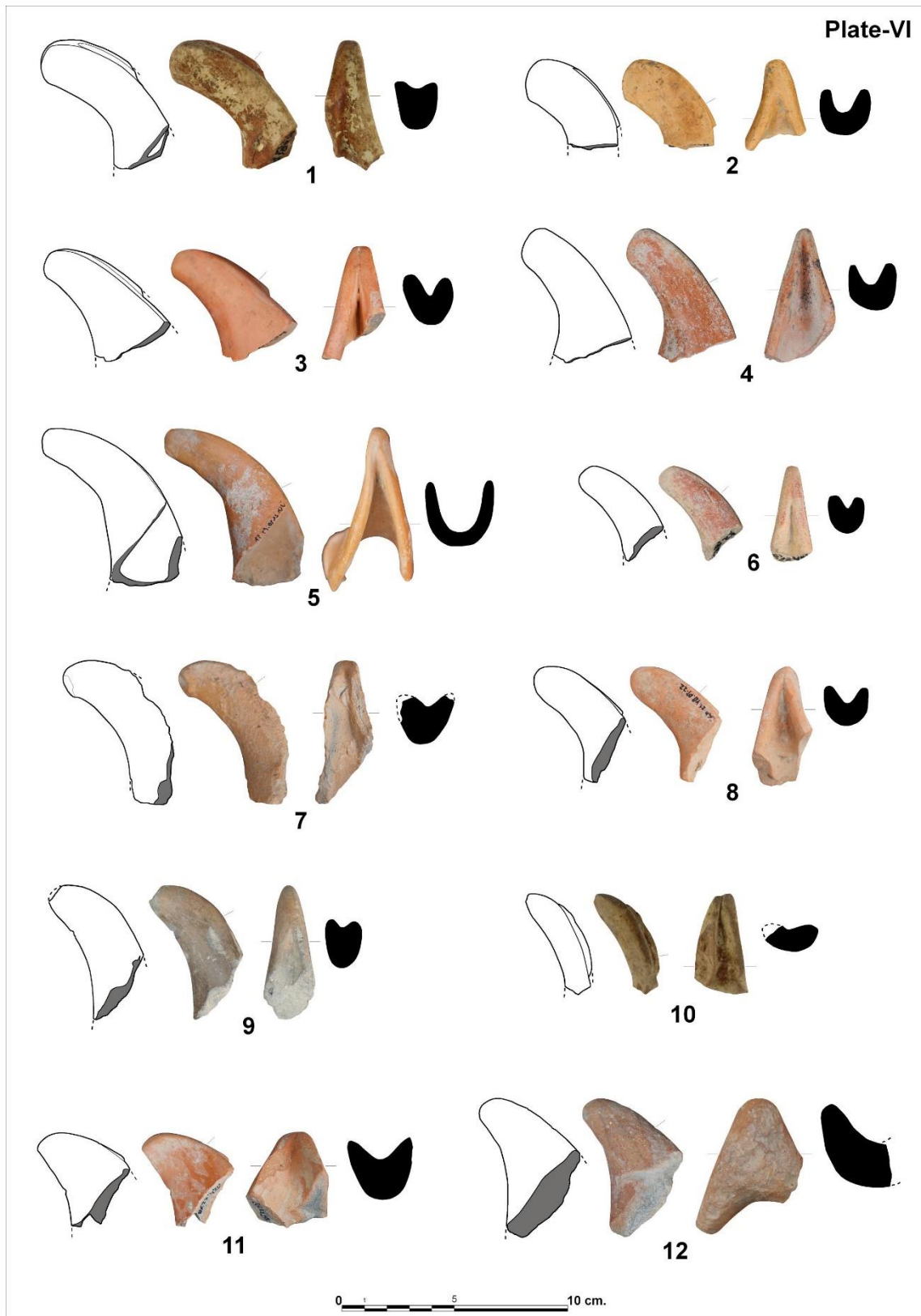


Fig.10. Examples from type.5 and type.8

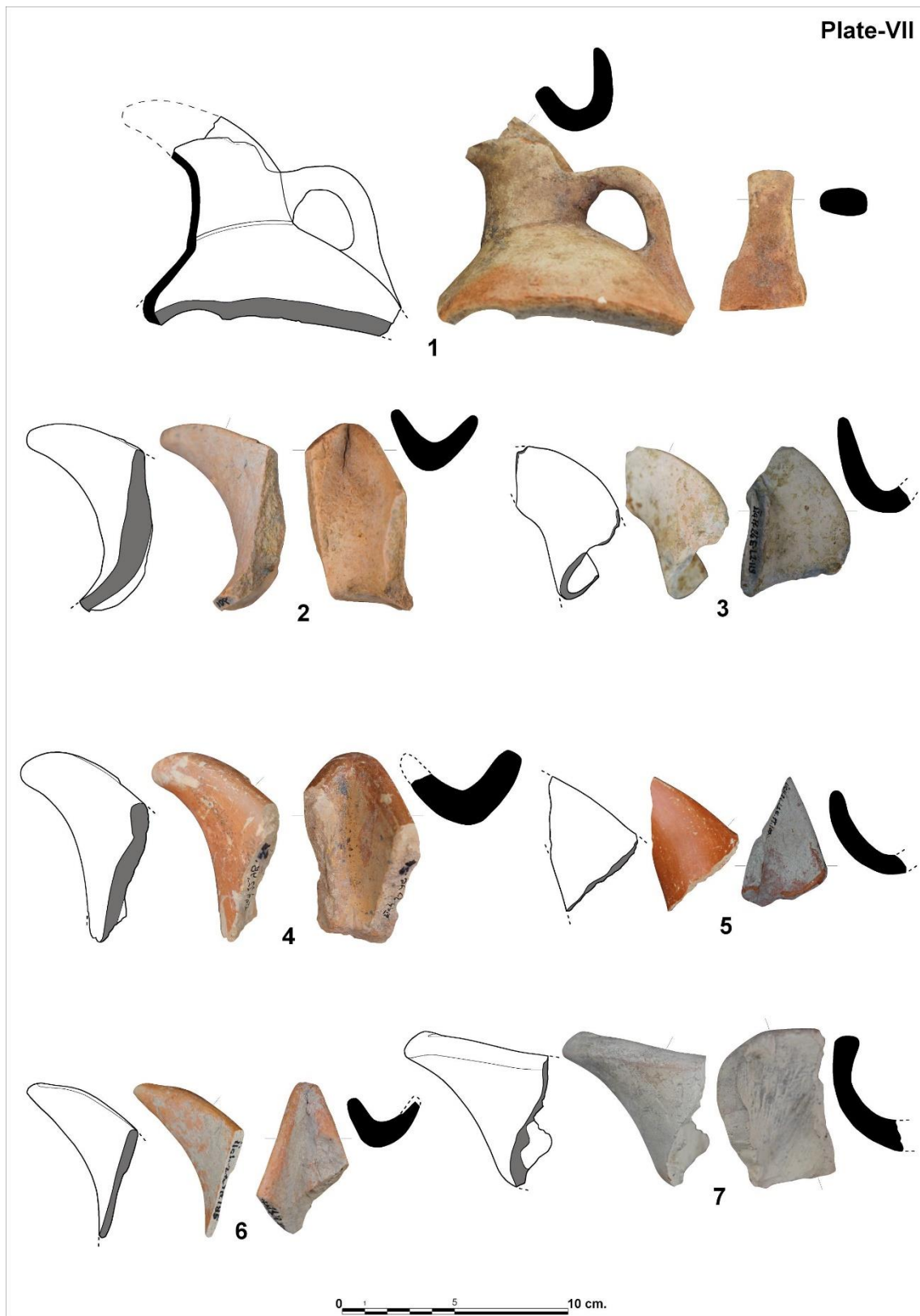


Fig.11. Examples from type.8

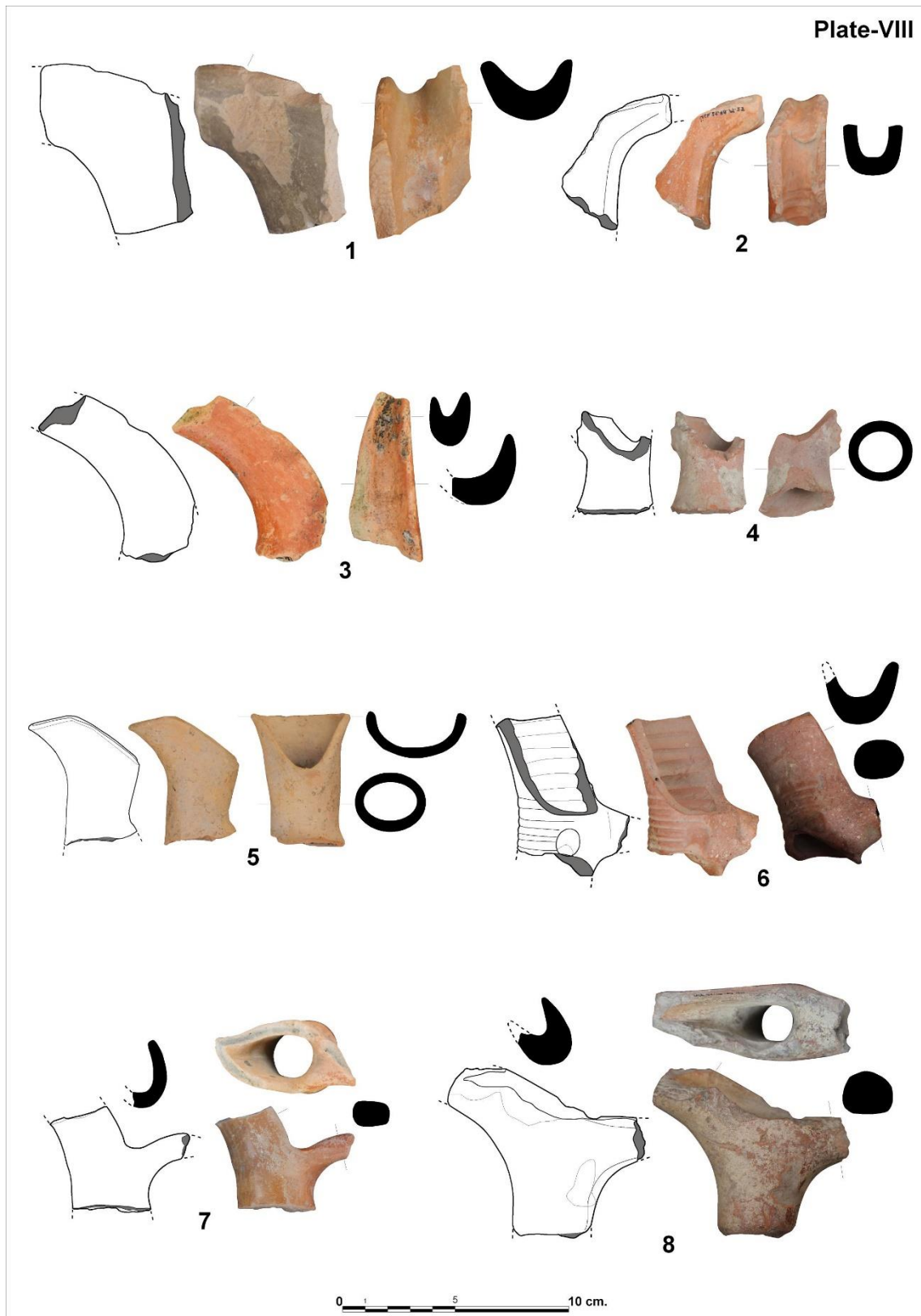


Fig.12. Examples from type.8 and type.9

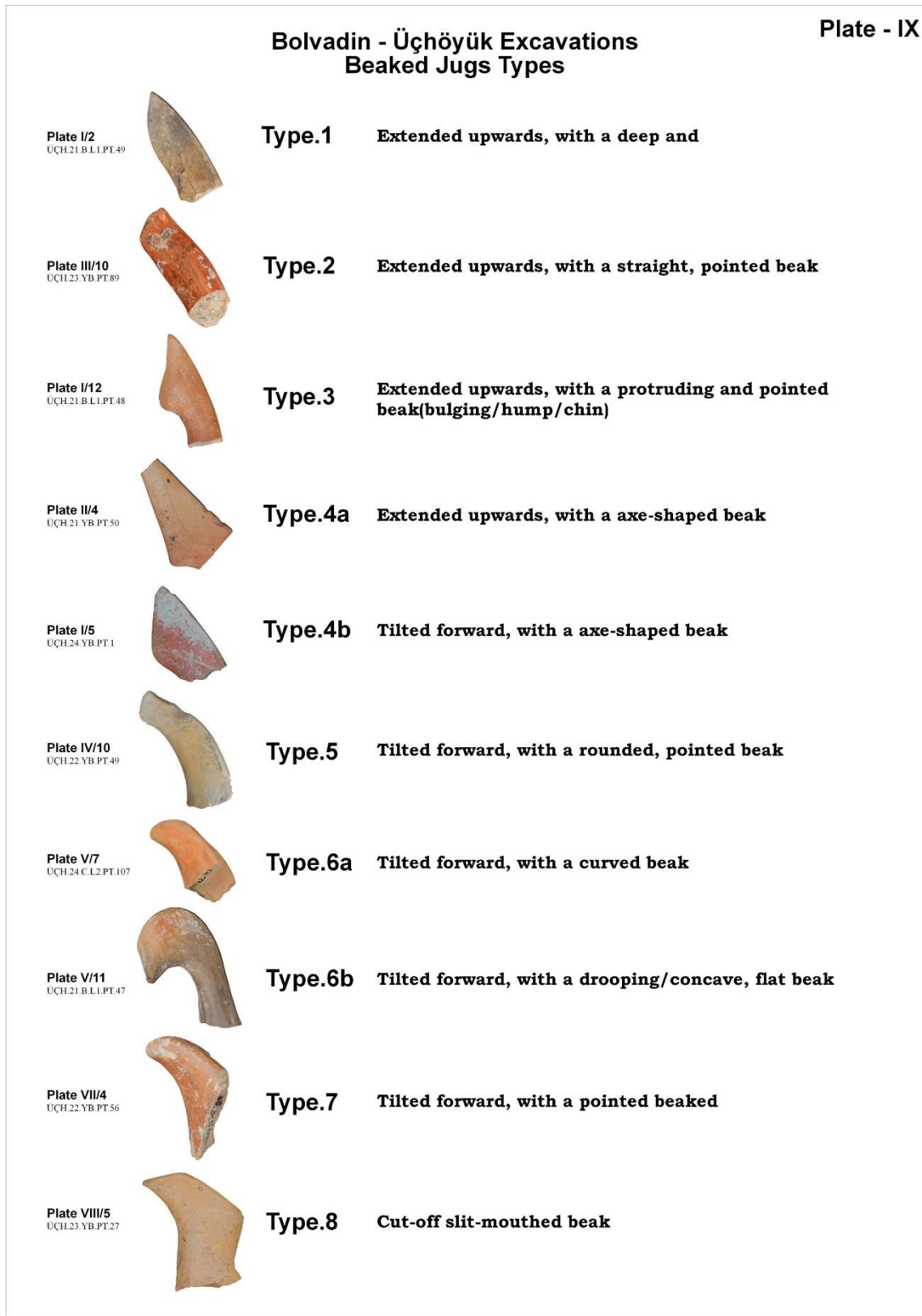


Fig.13. Types of beaked jugs from Üçhöyük Excavations

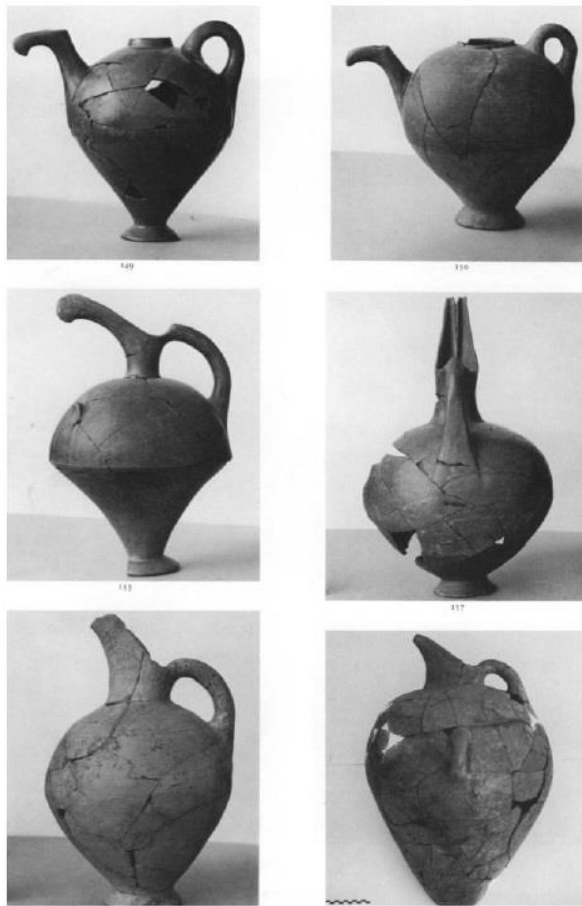


Fig. 14. Boğazköy VI-Büyükale (Orthmann 1979, Tafel. 4)

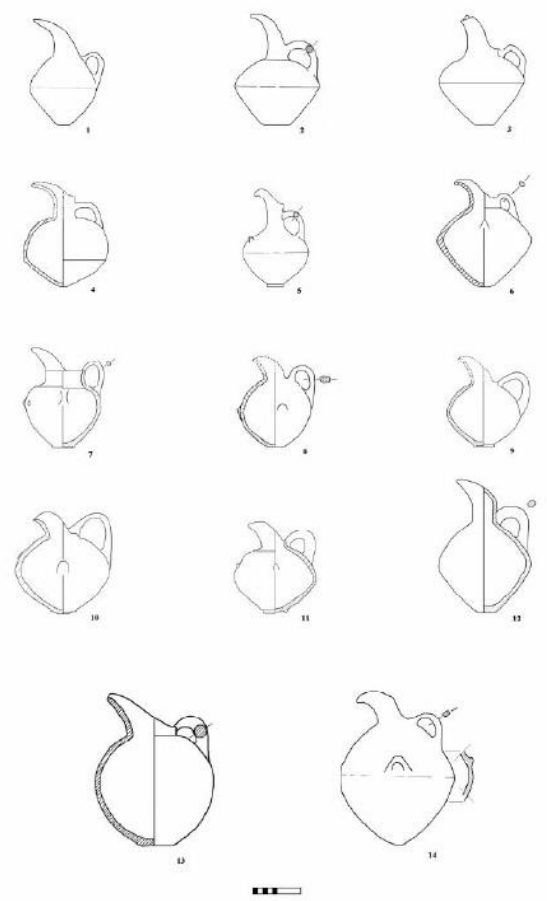


Fig. 15. Acemhöyük (Türker 2008, Lev. XXXVI)



Fig. 16. Hittite terra cotta long neck pitcher 16th century BC – Hattusa (Boğazköy), Museum of Anatolian Civilisations, Ankara, Türkiye.

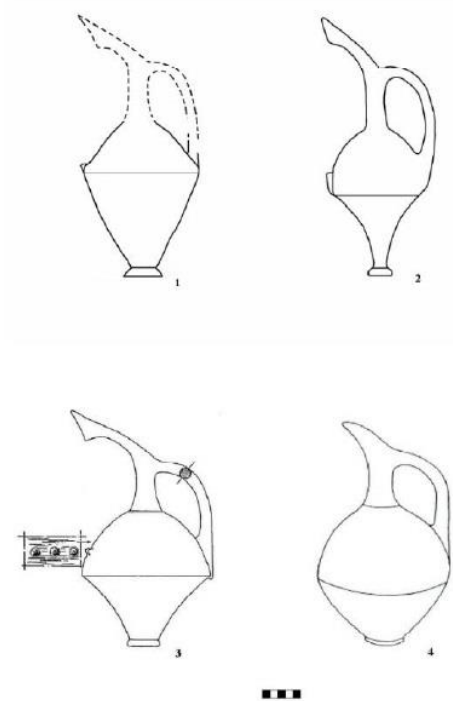


Fig. 17. Acemhöyük (Türker 2008, Lev. XXXVIII)

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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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 sandy, 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.