



Stamp from the Late Chalcolithic period of İkiztepe settlement on the Black Sea coast (Samsun, Türkiye)

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ABSTRACT

Located in the coastal zone of the Central Black Sea (near the city of Samsun), the settlement of İkiztepe represents one of the longest-running archaeological excavations providing data on the prehistoric periods of the region. Excavations conducted between 2021 and 2025 on Tepe I, the largest mound of the site, have revealed contexts dated to the Early Bronze Age I (3100–2900 BC) and the Late Chalcolithic period (3947–3326 BC). Research indicates that weaving activities were organised in a systematic manner at Tepe I from the earliest phases of the Late Chalcolithic onward. Within this context, a stamp uncovered in Level 8 of the Late Chalcolithic deposits constitutes the focus of this study. Discovered in association with weaving-related activities, this object represents the only known example from both İkiztepe and the Central Black Sea Region. The find demonstrates that the stamp tradition, widely attested across a broad geographic area since the Neolithic, was also present in the Black Sea basin. It provides significant evidence regarding İkiztepe's cultural interaction networks and regional connections.

KEYWORDS

Late Chalcolithic Period, İkiztepe, Black Sea Archaeology, stamp, textile

Introduction

The İkiztepe settlement is located 7 km to the northwest of Bafra District, Samsun Province, in the Central Black Sea Region (fig. 1). Comprising four elevations – two large and two small hills – this settlement stands out as one of the largest mounds in the region, measuring approximately 375×175 m (fig. 2). Systematic archaeological research has been conducted on different areas of the settlement during various periods. İkiztepe first came to the attention of the scholarly community through the surface surveys conducted in 1940–41. A team from Ankara University consisting of İ. Kılıç Kökten, Tahsin Özgüç, and Nimet Özgüç carried out investigations within the province of Samsun, during which they identified numerous settlements, including İkiztepe (Kökten et al. 1945, 395). Subsequently, Charles Burney visited İkiztepe in the course of his surveys covering the regions of Samsun, Sinop, and Kastamonu (Burney 1956, 181 ff.). During this visit, Burney examined pottery collected from the surface and observed that the settlement was occupied continuously from the Chalcolithic to the Middle Bronze Age. Nearly thirty years after its discovery, İkiztepe became the focus of more extensive investigations. In 1972–73, a team led by U. Bahadır Alkım carried out surveys at İkiztepe and its surrounding area. In 1974, systematic excavations at the site were initiated by Alkım on behalf of the Turkish Historical Society. These excavations continued under his direc-



Fig.1. Map of İkiztepe Settlement (author F.A. Yüksel)

tion until his death in 1981, after which leadership passed to Önder Bilgi, who directed the project until his retirement in 2012. Since 2021, the excavations have been conducted under the direction of the present author (Alkım 1975, 5–12, 23–30). The findings reveal that İkiztepe was inhabited since the Late Chalcolithic (3947–3326 BC) through the Hellenistic Period. In this respect, İkiztepe is currently the only excavation site that reflects the chronological development of the Central Black Sea coastal strip and documents this process stratigraphically (Alkım et al. 1988; 2003).

The systematic excavation work carried out since 2021 at Tepe I, the highest elevation of the settlement, has revealed that the first settlement in this area began in the Late Chalcolithic. On the other hand, it is seen that Tepe I was used as a cemetery in the Early Bronze Age and was resettled in the early Middle Bronze Age. These data are important archaeological evidence reflecting the functional transformations in the area and the cultural change in the region in terms of settlement pattern (Table 1). It is understood that İkiztepe had the characteristics of a town settlement consisting of a Late Chalcolithic architectural plan formed by separately positioned wooden structures. The fired clay stamp, which is the subject of this article, was found in Level 8 of the deposits from the Late Chalcolithic period (Table 1).

This study examines the stamp unearthed at İkiztepe, the only known example from the Central Black Sea Region. The discussion focuses on the possible association of the stamp with weaving activities, while also evaluating its place within the wider stamp tradition of Anatolia and the evidence it provides regarding İkiztepe's cultural interaction networks during the Late Chalcolithic.

Late Chalcolithic period in Tepe I

Three architectural layers dating to the Late Chalcolithic period have been identified at Tepe I. Calibrated radiocarbon results from organic remains obtained from these layers indicate a date range of 3947–3326 BC (fig. 3). At İkiztepe, it has been observed that the architectural arrangements were created with a planned and systematic approach throughout all settlement phases, starting from the

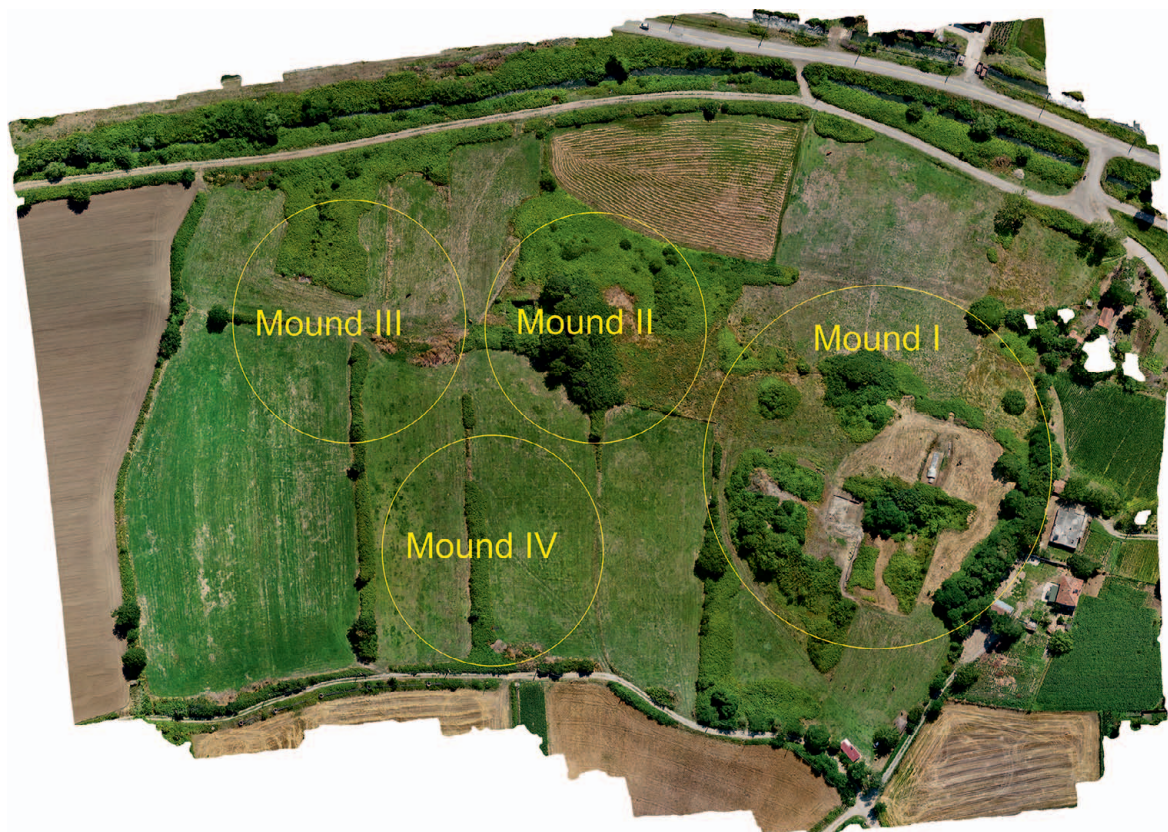


Fig. 2. İkiztepe Höyük (Mounds I, II, III, IV) (İkiztepe excavation archive)

Chalcolithic Age (Tuna 2009). This situation is direct reflection of the region's geological structure and general architectural preferences in this area. The primary material used in the construction of the buildings is wood sourced from the forests surrounding the settlement; the second structural element is clay plaster. Therefore, due to the nature of organic building materials, only carbonised beam holes and burnt wood marks can be detected in the excavations. In the first architectural phase (Level 7) of the Late Chalcolithic period, dense rubble debris, plaster fragments that had become brick-like due to high heat, and distinct burn marks on the floor were observed within the approximately 50 cm thick cultural fill. Within this layer, mostly dark-faced bowls with inverted mouth appear in large numbers. In addition, pottery, again consisting largely of dark-faced items, consists of inward-curving mouths, spherical bodies, and narrowing bases. However, this layer has been significantly damaged due to the destruction caused by the burials dating to the Early Bronze Age I phase. The second architectural phase (Level 8) of the Late Chalcolithic consists of cultural deposit that is approximately 60 cm thick (fig. 4). A large textile workshop was identified within this phase, where the stamp artefact discussed here was found. The pottery repertoire of this phase continues with the tradition of pottery with inward-closing mouths, while bowls with outward-opening mouths and flat bodies are prominent (fig. 5).

The third architectural phase (Level 9) of the Late Chalcolithic has been identified within a limited area. Apart from rubble consisting of burnt plaster fragments and a burnt floor, no architectural remains providing a complete plan were found in this phase. However, to the west of these plaster remains, a green, soft-textured deposit filled with mussel shells was uncovered. Analysis of the shellfish found in this deposit revealed that these mussels were transported to the settlement from the surrounding lagoons and were edible Mediterranean and sand mussels. The findings indicate that seafood played a significant role in the settlement's dietary economy at the beginning of the Late

DATING	LEVEL	CALIBRATED DATES	FIND AREA
Middle Bronze Age	1	1950-1700 BC	b.4200
	2	1950-1700 BC	b.4226
Early Bronze Age I Cemetery Area	3	3100-2900 BC	b.4210 (Sk. 717 - 716)
	4		b.4215
	5		b.4219
	6	3250-3100 BC	b.4222 (Sk. 719 Sk. 723)
Late Chalcolithic Period	7	3379-3326 BC	b.4235
	8	3642-3535 BC	b.4240
	9	3947-3648 BC	b.4256

Table 1. Stratigraphy of İikiztepe

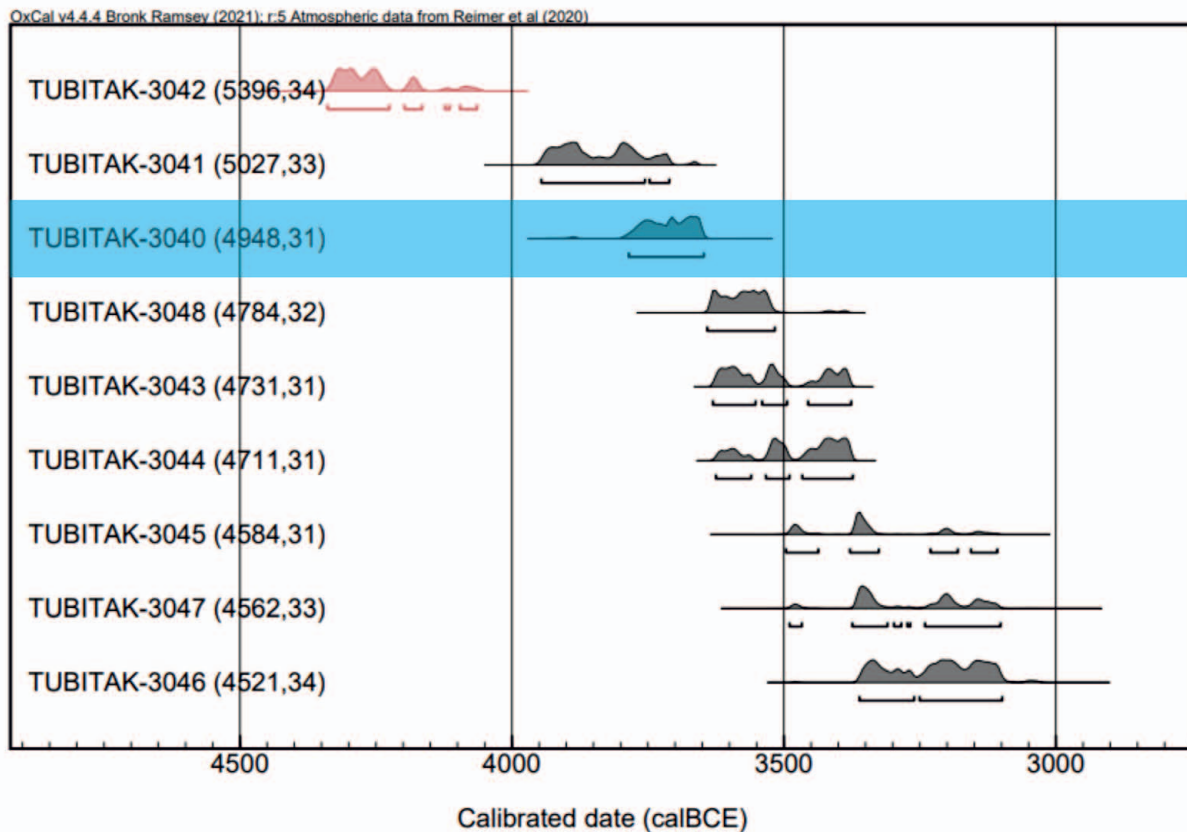


Fig. 3. İkoztepe radiocarbon dating. Analyses were performed at the AMS laboratory of the Turkish Academy of Sciences in Gebze (<https://mam.tubitak.gov.tr/>). Calibration of the data was performed using OxCal vers. 4.4.4 (2021) using IntCal 2020 (Reimer et al. 2020) according to Bronk Ramsey (2021)

Chalcolithic. Furthermore, the presence of a high concentration of animal bones in addition to mussel shells within this deposit suggests that this area was also used as a dumping ground. The majority of the assemblage in this layer, considered the earliest phase of the Late Chalcolithic, consists of pottery with sharply inward-turning mouths and dark surfaces.

During the archaeological excavations conducted at İkoztepe Tepe I over approximately five seasons, a fully planned structure has not yet been uncovered. However, the results of the excavations carried out so far indicate that the settlement organization on the northern slope of Tepe I, particularly during the third Architectural Phase (Level 8) of the Late Chalcolithic, consisted of workshops and courtyards for common use rather than individual dwellings. This situation reveals a spatial pattern that suggests the area may have served a production and communal use-oriented function.

The stamp and its architectural context

The fired clay stamp that is the subject of this study was uncovered in the Level 8, as mentioned above. The stamp in question is 6 cm in diameter and 2 cm in height (fig. 6a–b). Its clay is mixed with fine minerals and fine plant matter, its surface is coated with light brown glaze, and it is well fired. The stamp, whose handle is broken, has a printing surface decorated with a circular relief in the centre and concentric circle motifs carved deeply around it. The stamp was found inside a simple, square-plan, four-part structure measuring approximately 1.5×1.5 m, coated with clay plaster (fig. 7a–c). Sixty fired clay loom weights, ranging in weight from 70 to 200 gr, were also uncovered within the compartments of this structure. The fact that these weights were grouped together according to their weight suggests that they were stored for the production of fabrics of different thick-

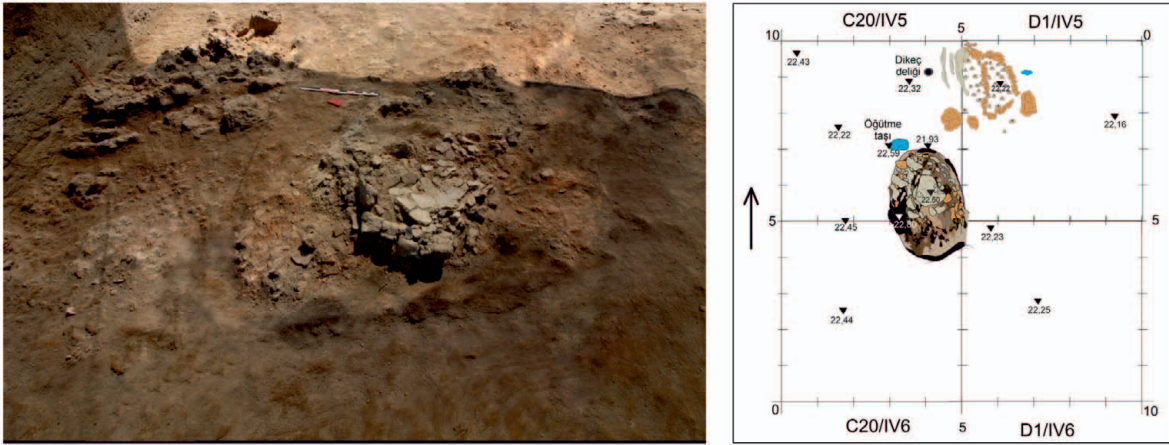


Fig. 4. Late Chalcolithic Period of İkiztepe, the architectural remains of the 2nd architectural level (drawing by B. Afşar)

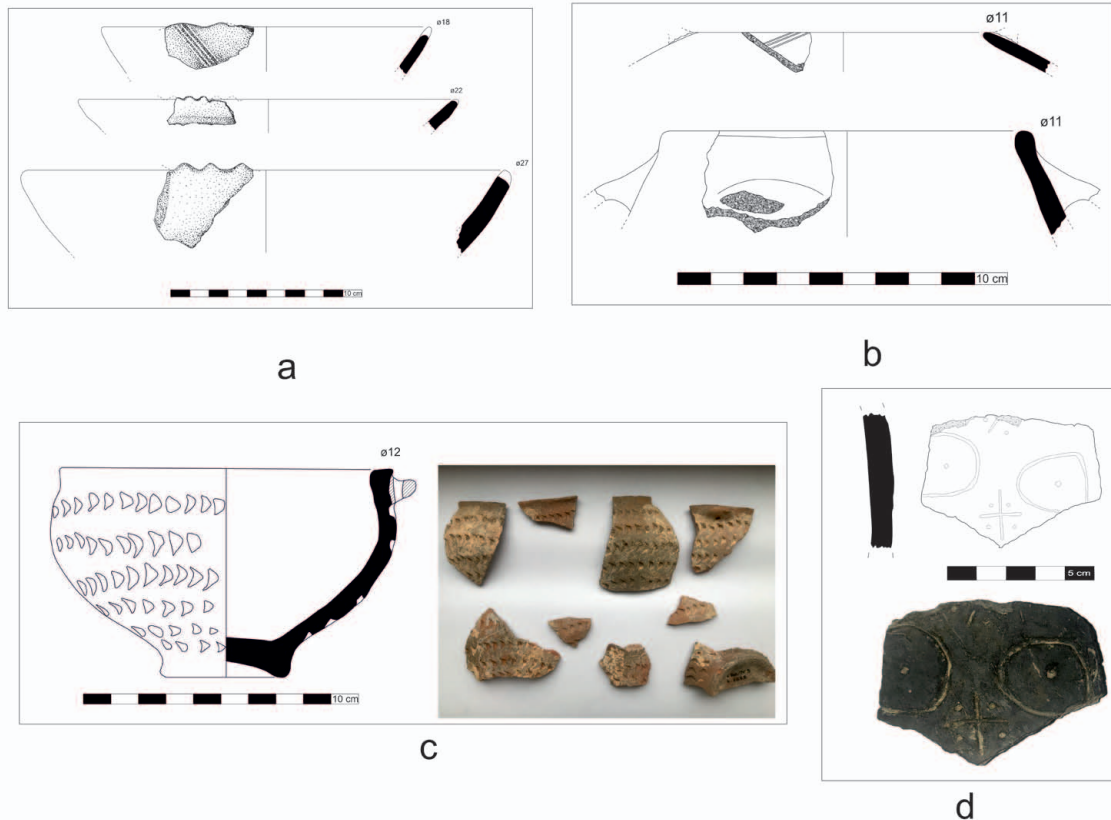


Fig. 5. Bowl shapes (a, c); pottery shapes (b); sherd with human face decoration in incised technique (d) (İkiztepe excavation archive, drawing by B. Afşar and B. Gülkan)

nesses. An oven measuring 2.5×2.5 m and 50 cm high was uncovered 80 cm east of this structure. The discovery of bone awls, bone threaders, and bone weights associated with weaving around the oven clearly indicates the connection of this area to textile production processes (fig. 8a–c). On the other hand, the wooden peg hole uncovered on the western edge of the structure provides important data about the architectural layout. This finding indicates that the structure was likely supported by a porch and that there were areas around it that served as workshops. When the structural characteristics of the remains and the distribution of finds are evaluated together, it is understood that the area in question was linked with weaving activities.

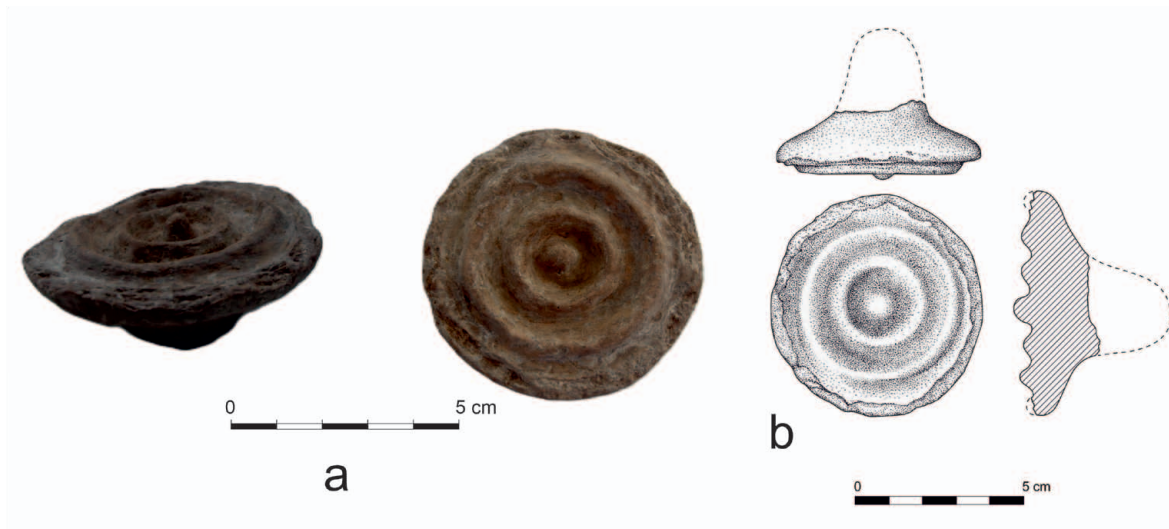


Fig. 6. The stamp (a–b) (İköztepe excavation archive, drawing by B. Gülkan)

The fact that this stamp, which has no known parallel in İköztepe, has been found within an architectural context provides important clues about the object's function. Since no microscopic analysis has been performed on the stamp, it is not known for certain whether there are traces of paint on it. However, the fact that only loom weights have been found in the architectural context in question strengthens the possibility that the stamp may have been used to decorate fabrics.

Evaluation and conclusions

Stamps have appeared across a wide geographical area, primarily in the Near East, South-east Europe and Greece, since the early stages of the Neolithic (Makkay 1984; Dzhahfezova 2003, 97–108; 2009, 145–159; Lichter 2011, 36–44). The earliest examples date back to the 8th millennium BCE in the Levant Region (Makkay 1984; Lichter 2005, 59–74; Skeates 2007, 183–98) and Anatolia. These stamps were produced in various shapes, such as round, square and oval, and feature geometric or linear decorations on their stamping surfaces. Among these decorative types, concentric circles and spiral motifs, in particular, constitute the two main types of decoration commonly found in Anatolia, Greece and Southeastern Europe (Lichter 2005, 69–70, fig. 3).

The examples of stamp discussed here, dated to the Neolithic and Early Chalcolithic periods, have sometimes been referred to as *pintaderas* in the literature (Cornaggia Castiglioni 1956, 109; Skeates 2007, 196)¹. Both the *pintadera* and the stamp seal concept have been comprehensively addressed by numerous researchers (Chapman 2000, 90–91; Skeates 2007, 183; Çilingiroğlu 2009, 3; Tekin 2017)². Research reveals the existence of similar findings in different regions and periods. Known since the Neolithic and continuing in subsequent ages, these findings appear under different names such as “*pintadera*” and “stamp seal” (Tekin 2017, 232–234). The fact that these finds serve different functional purposes also necessitates certain distinctions in terminology. While *pintaderas* are generally used for decorating or embellishing surfaces, seals represent a separate group of objects associated with the function of indicating identity, affiliation, or ownership. The example found at İköztepe, considering its architectural context, has been labeled with the more general term “stamp”

1 *Pintadera* is a Spanish-origin word referring to the *fired clay* stamps used by the indigenous peoples of Mexico to tattoo their faces and bodies.

2 Selected publications on the meaning of *pintadera*.

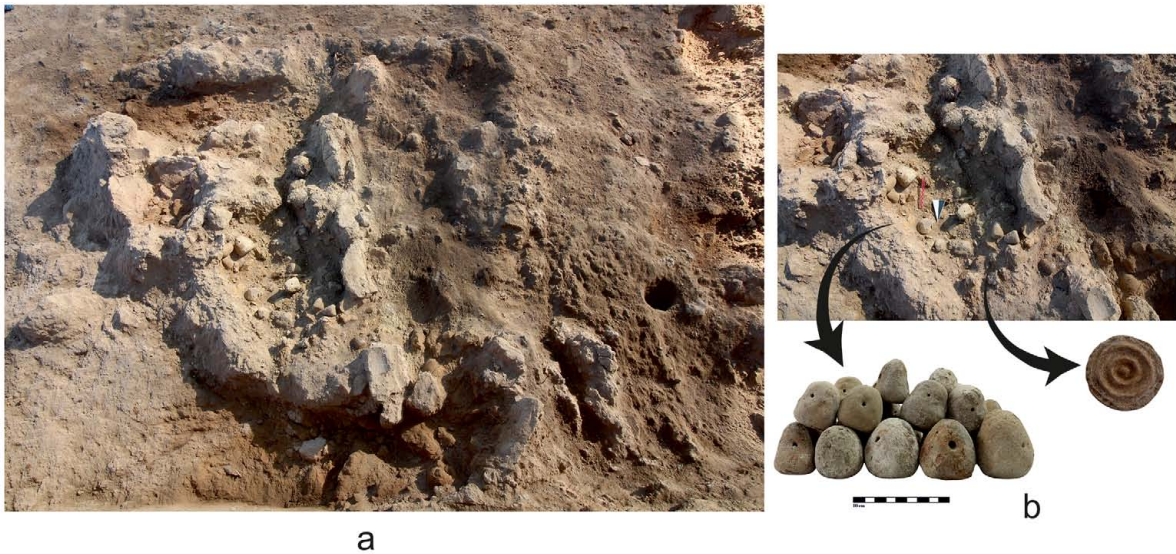


Fig. 7. Loom weight storage unit (a); the loom weights and the stamp recovered from the context (b)
(İkiztepe excavation archive)

due to its potential multifaceted use, encompassing both the decoration of textile surfaces and the function of identifying or distinguishing the owner of the associated weaving workshop.

At the same time, different views and suggestions regarding the use of these objects, called *pintadera* or stamp seals, are noteworthy. It has been suggested that they could have various functions, such as stamping bread or baskets, decorating pottery surfaces, marking animals, amulets, recording tools, decorating textiles, or tattooing the body (Gimbutas 1989, 144–174; Bailey 2000; Umurtak 2000; Budja 2003; Hodder 2006; Skeates 2007; Gheorghiu 2008).

J. Mellaart argued that the examples found at Hacilar and Çatalhöyük were used on woven surfaces and cited as evidence the garments depicted in the wall paintings, which had patterns similar to the stamp (Mellaart 1970, 164). R. Duru also emphasised that these objects were used to create patterns on fabric or leather (Duru 2000, 583–598). Similarly, M. Budja stated that stamps functioned specifically as a means of textile decoration (Budja 2003, 118). While R. Skeates suggested that these objects may have had different functions depending on their context (Skeates 2007, 194–196), D. W. Bailey noted that these objects formed a common cultural memory across different geographical areas (Bailey 2000, 110). Detailed assessments of the areas of use of the stamps have been comprehensively published by Ç. Çilingiroğlu (Çilingiroğlu 2009, 3–27). When evaluated together with the context in which it was found, the stamp we found at İkiztepe provides important clues about its function. The İkiztepe stamp is quite similar to well-known examples from the Neolithic in terms of its form and decoration.

C. Lichter states that concentric circle decorations appeared in the 7th millennium BCE in Central Anatolia and in the early 6th millennium BCE in Western Anatolia and the Aegean (Lichter 2005, 69).

Similar examples of the İkiztepe stamp appear particularly in Western and Central Anatolia during the Neolithic and the Chalcolithic. One of the settlements showing this similarity is Bademağacı. An example found in the Early Neolithic Layer 3 at Bademağacı has a very similar motif (Umurtak 2000, figs 3.1, 5.1). The closest counterpart to the İkiztepe stamp, both in terms of form and the spatial relationship in which the stamp was found, is known from Layers IV and V of Ulucak Höyük, dating to the Neolithic (Çilingiroğlu 2009, 15–18). On the other hand, similar stamps have also been found in the Neolithic layers of Çatalhöyük (Türkcan 2005 online; 2006, 45–49). It is understood from examples in settlements dated to different periods that stamps have a long tradition of use in

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Fig. 8. Bone warp separators (a); bone awls (b); bone and fired clay spindle whorls (c) (İkiztepe excavation archive)

Anatolia. In the Early Bronze Age of Anatolia, examples featuring concentric circle motifs have also been found at Koçumbeli (Tuna et al. 2012, 75), Kusura (Lamb 1937, fig. 12.16), Tarsus–Gözlükule (Goldman 1956), and on a “çeç” seal from Pulur–Sakyol (Koşay 1976, 68–70). The example uncovered at Alişar has been dated to the Hittite Imperial Period, and it has been suggested that this stamp seal was used to decorate pottery (Von der Osten 1937, 223, fig. 258). In Anatolia, no stamp bearing concentric circle motifs similar to the example from İkiztepe has been identified thus far in contemporaneous Late Chalcolithic settlements. This situation may be attributed to the limited number of archaeological excavations conducted for this period and the possibility that comparable artefacts have not yet been brought to light.

The regions outside Anatolia with the highest concentration of concentric circle-decorated stamps are primarily the Balkans and mainland Greece. These seals have been found in large numbers in settlements such as Azmak, Kovachevo, Kapitan Dimitrevo, Karanovo, Salmanovo, and Vinitsa in Bulgaria; Sesklo on the Greek mainland; Porodin in North Macedonia; and Cunesti and Hăbășești in Romania (Makkay 1984). However, V. Becker has stated that the context of Chalcolithic stamp found

in Bulgaria in particular is not fully understood, making it difficult to explain their function (Becker 2011, 296–298). J.G. Younger has noted that the tradition of the concentric circle motif persisted in the Balkans and Mainland Greece from the Early Neolithic to the Early Bronze Age without significant alteration³.

The decorations on the stamps have been interpreted by some researchers not only as decorative elements but also as symbols carrying different meanings. J. Yakar suggests that due to humans' innate emotional and associative thinking, societies in different geographical regions and time periods may have used similar symbols to encode spiritual concepts (Yakar 2016, 167). On the other hand, emphasising the similarity of human imagination in this universal tendency, he evaluates these symbols as one of the oldest forms of written language (ibid., 168). Gimbutas, on the other hand, states that stamps seals may have been used not only in weaving, mining, and music, but also with the understanding that the motifs on them symbolise goddesses (Gimbutas 1989, 67–71). Yet third, some researchers have associated these decorations with concepts such as the cycle of nature, seasons, fertility, life and death (Gimbutas 1989; Kupar 1993; Golan 1994; Yakar 2016, 165–178).

Research clearly demonstrates that stamps represent a tradition spanning a wide geographical area and thousands of years. The stamp found in the unit where loom weights were stored at İkiztepe was likely used for decoration and embellishment on fabric rather than for control or administrative purposes. Weaving in the settlement is strongly documented by various production tools such as fired clay loom weights, weights, awls, weft extractors, and weaving combs. The variety of these tools indicates that weaving was not only for daily needs but also an activity organised on an industrial scale. In this context, the stamp, which is a unique example for the settlement, is of particular importance. This finding reveals that weaving at İkiztepe, starting from the Late Chalcolithic, acquired not only a productive but also an aesthetic and symbolic dimension. The reappearance of this tradition, which began in Anatolia in the Neolithic, approximately two thousand years later at the İkiztepe settlement, shows that the cultural memory of the use of stamps is still alive in the minds of the communities living here. Therefore, stamps with their varied functions and powerful symbolic expressions since the early stages of the Neolithic, are considered a practice shared across a wide geographic area and passed down through generations.

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References

- Alkım, U.B. 1975. Samsun Bölgesi Çalışmaları 1973. *Türk Arkeoloji Dergisi* XXII.1, 5–12.
- Alkım, U.B., Alkım, H., Bilgi, Ö. 1988. *İkiztepe I, Birinci ve İkinci Dönem Kazıları*. Ankara: Türk Tarih Kurumu Yayınları.

³ “A Balkan-Aegean-Anatolian Glyptic Koine in the Neolithic and EBA Periods”. Paper presented at the VIth International Aegean Symposium, Athens, Greece (unpublished)

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- Alkim, U.B., Alkim, H., Bilgi, Ö. 2003. *İkiztepe II, Üçüncü, Dördüncü, Beşinci, Altıncı, Yedinci Dönem Kazıları*. Ankara: Türk Tarih Kurumu Yayınları.
- Bailey, D.W. 2000. *Balkan Prehistory: Exclusion, Incorporation and Identity*. London: Routledge.
- Becker, V. 2011. Chalcolithic Clay Stamps from Bulgaria. *Studia Praehistorica* 14, 221–241.
- Bronk Ramsey, C. 2021. OxCal v.4.4.4 [software]; <https://c14.arch.ox.ac.uk/oxcal.html>
- Budja, M. 2003. Seals, contracts and tokens in the Balkan Early Neolithic: where in the puzzle. *Documenta Praehistorica* XXX, 115–130.
- Burney, C.A. 1956. Northern Anatolia Before Classical Times. *Anatolian Studies* VI, 181–189.
- Chapman, J. 2000. *Fragmentation in Archaeology: People, Places and Broken Objects in the Prehistory of South Eastern Europe*. London: Routledge.
- Cornaggia-Castiglioni, O. 1956. Origini e distribuzione delle pintaderas preistoriche Euro-asiatiche. *Rivista di Scienze Preistoriche* 11, 123–153.
- Çilingiroğlu, Ç. 2009. Of Stamps, Loomweights and Spindle Wools: Contextual Evidence on the Function(s) of Neolithic Stamps from Ulucak, İzmir, Turkey. *Journal of Mediterranean Archaeology* 22.1, 3–27.
- Duru, R. 2000. Bademağacı Kazıları 1999 Yılı Çalışma Raporu. *Belleten* LXIV, 583–598.
- Dzhanfezova, T. 2003. Neolithic Pintaderas in Bulgaria (typology and comments on their ornamentation). In Nikolova, L. (ed.) *Early Symbolic Systems for Communication in Southeast Europe* (BAR International Series 1139). Oxford: Archaeopress, 97–108.
- Dzhanfezova, T. 2009. Towards An Interpretation of Pintadera: Questions and Possibilities for their use. In Marler, J., Dexter, J., Robbins, M. (eds) *Signs of Civilization, Neolithic Symbol System of Southeast Europe*. Santa Rosa: Institute of Archaeomythology, 145–159.
- Gimbutas, M. 1989. *The Language of the Goddess*. San Fransisco: Harper & Row Publishers.
- Gheorghiu, D. 2008. Materiality, experiment, experientiality. In Gheorghiu, D., Skeates, R. (eds) *Prehistoric Stamps, Theory and Experiments*. Bucuresti: Ediura Universităţii din Bucuresti, 85–103.
- Golan, A. 1994. *Mif i simvol*. Moskva: Russlit (in Russian).
- Goldman, H. 1956. *Excavations at Gözlükule, Tarsus, Vol. II, Text and Plates*. New Jersey: Princeton University Press.
- Hodder, I. 2006. *The Leopard's Tale: Revealing the Mysteries of Çatalhöyük*. London: Thames and Hudson.
- Koşay, H.Z. 1976. *Keban Projesi Pulum Kazısı, 1968–1970*. Ankara: Türk Tarih Kurumu Yayınları.
- Kökten, İ.K., Özgüç, T., Özgüç, N. 1945. 1940 ve 1941 Yılında Türk Tarih Kurumu Adına Yapılan Samsun Bölgesi Kazıları Hakkında İlk Kısa Rapor. *Belleten* IX.35, 361–400.
- Kupar, J. 1993. *Entsiklopedia na traditsionnite simvoli*. Sofia: Petar Beron.
- Lichter, C. 2005. Western Anatolia in the Late Neolithic and Early Chalcolithic: the actual state of research. In Lichter, C. (ed.) *How Did Farming Reach Europe? Anatolian-European Relations from the Second Half of the 7th through the First Half of the 6th Millennium Cal BC*. Istanbul: Ege Yayınları, 59–74.
- Lichter, C. 2011. Neolithic Stamps and the Neolithization Process. A Fresh Look at an Old Issue. In Krauß, R. (ed.) *Beginnings – new research in the appearance of the Neolithic between Northwest Anatolia and the Carpathian Basin*. Rahden/Westfalen: Verlag Marie Leidorf GmbH, 36–44.
- Lamb, W. 1937. Excavations at Kusura near Afyonkarahisar. *Archaeologia* 86, 1–64.
- Makkay, J. 1984. *Early Stamp Seals in South-East Europe*. Budapest: Akadémiai Kiado.

- Mellaart, J. 1970. *Excavations at Hacilar I–II*. Edinburgh: Edinburgh University Press.
- Reimer, P., Austin, W., Bard, E., Bayliss, A., Blackwell, P., Bronk Ramsey, C., Butzin, M., Cheng, H., Edwards, R.L., Friedrich, M., Grootes, P., Guilderson, T., Hajdas, I., Heaton, T., Hogg, A., Hughen, K., Kromer, B., Manning, S., Muscheler, R., Palmer, J., Pearson, C., Plicht, J., Reimer, R., Richards, D., Scott, E.M., Southon, J., Turney, C., Wacker, L., Adolphi, F., Büntgen, U., Capano, M., Fahrni, S., Fogtmann-Schulz, A., Friedrich, R., Köhler, P., Kudsk, S., Miyake, F., Olsen, J., Reinig, F., Sakamoto, M., Adam Sookdeo, A., Talamo, S. 2020. The IntCal20 Northern Hemisphere Radiocarbon Age Calibration Curve (0–55 cal kBP). *Radiocarbon* 62.4, 725–757.
- Skeates, R. 2007. Neolithic stamps: Cultural Patterns, Processes and Potencies. *Cambridge Archaeological Journal* 17, 183–198.
- Tekin, H. 2017. Hakemi Use'den Bir Pintadera. In Özkan, S., Hüryılmaz, H., Türker, A. (eds) *Sam-sat'tan Acemhöyük'e Eski Uygarlıkların İzinde. Aliye Öztan'a Armağan*. İzmir: Ege Üniversitesi Basımevi, 231–238.
- Tuna, C. 2009. *İkiztepe Kazıları Işığında MÖ 2. Binyıl öncesi Orta Karadeniz Bölgesi Kıyı Kesimi Mimarisi: İkiztepe Yapıları*. İstanbul: Arkeoloji ve Sanat Yayınları.
- Tuna, N., Buluç, S., Tezcan, B. 2012. *ODTÜ Arkeoloji Müzesi*. Ankara: TAÇDAM.
- Türkcan, A.U. 2005. Clay Stamp Seals. In Çatalhöyük 2005 Archive Report. On-line source (visited in April 2025): http://www.catalhoyuk.com/archive_reports/2005/ar05_30.html
- Türkcan, A.U. 2006. Çatalhöyük Stamp Seals. In Haydaroğlu, M. (ed.) *Çatalhöyük: From Earth to Eternity*. İstanbul: Yapı ve Kredi Bankası, 45–49.
- Umurtak, G. 2000. Neolitik ve Erken Kalkolitik Çağlar'da Burdur-Antalya Bölgesi Mühürçülüğü Üzerine Bazı Gözlemler. *Adalya* IV, 1–19.
- Von der Osten, H.H. 1937. *The Alishar Höyük Season of 1930–32, Part II*. Vol. XXIX. Chicago: The University of Chicago Press.
- Yakar, J. 2016. Symbols and Abstract Motifs in Neolithic Art: More than just Fanciful Aesthetic Designs? In Yalçın, Ü. (ed.) *Anatolian Metal VII, Anatolien und seine Nachbarn vor 10.000 Jahren*. Bochum: Deutschen Bergbau-Museum Bochum, 165–178.