



New Administrative Evidence from the Chalcolithic Period: A Token Assemblage from Kuy-E Keyvan Tepe, Azna Plain, Iran



Behzad Hoseyni Sarbisheh* and Samer Nazari

PhD student of Historical Archaeology, University of Tarbiat Modares, Tehran, Iran

Submission: March 28, 2023; Published: April 11, 2023

*Corresponding author: Behzad Hoseyni Sarbisheh, PhD student of Historical Archaeology, University of Tarbiat Modares, No. 161, Changizi St., Tehran, Iran

Abstract

Understanding the initial stages of recordkeeping has always been one of the main topics in the realization of socio-economic activities in non-literate, ancient societies. Among the archaeological data, tokens are sometimes interpreted as substantial evidence associated with these activities. The presence of tokens at archaeological sites represents social complexities, highly organized societies, and associated social technologies. The rescue excavation at the Kuy-e Keyvan Tepe reveals crucial evidence on administrative aspects of the Chalcolithic settlements of the eastern Central Zagros, Iran. It provides valuable data on several geometric clay tokens of multiple shapes, identified in layers belonging to the Late Chalcolithic period. This paper considers descriptions of the form and function of tokens. They indicate the cultural and economic growth on the Azna plain, and seem to be used for accounting purposes.

Keywords: Token; Late Chalcolithic; Kuy-e Keyvan Tepe; Azna Plain; Eastern Central Zagros

Introduction

The use of pebbles and similar objects to count and record quantities of goods has a long but scarcely investigated prehistoric past [1]. Tokens, in most cases, were made of clay, and this is why the less common stone specimens recorded in different Near-Eastern and Middle-Asian sites might point to early status distinctions. In early excavation reports, archaeologists had interpreted tokens as amulets, gaming pieces, fi ches or simply enigmatic objects. Tokens emerge in the tenth millennium B.C., the start of the Neolithic in West Asia, prevailing into the first millennium (Bennison-Chapman 2018); [2]. In Iran, the oldest tokens can be traced to the deepest layer of Ganj Dareh Tepe, which dates back to ca. 8000 B.C. The usage of tokens continued in Iran until the end of the Late Chalcolithic period [3]. During the recent archaeological excavations at Kuy-e Keyvan Tepe, located in Luristan province, an assemblage of geometric tokens was recovered along with other cultural materials such as pottery, seal, seal impressions, and stone tools from the layers belonging to the Late Chalcolithic period. This paper provides a documentation of the token collections from Kuy-e Keyvan Tepe, and studies their function.

Kuy-e Keyvan Tepe

The ancient settlement of Kuy-e Keyvan Tepe (33°27'33.21" N; 49°28'02.30" E) was formed on the west side of a natural hill, 300

meters east of the permanent Asgharabad River, on the eastern side of Azna County, Luristan Province, Iran (Figure 1). The Azna Plain is situated on the intercultural area between central Iran's plateau and Central Zagros. The site had been purchased by private owners and was not known to archaeologists until 2019. Many areas had been leveled by bulldozers, to ready it for new construction. During demolition of the site, part of a troglodytic architecture was revealed. In 2019, the Iranian Center for Archaeological Research (ICAR) conducted a rescue excavation in Kuy-e Keyvan Tepe in order to identify the layer sequence, record the stratigraphy, and excavate inside the troglodytic structure. It yielded various archaeological finds in the layers belonging to the pre-historic, historical, and Islamic periods.

The Excavations

Two 2 × 2 m and 1.5 × 2 m trenches (KKA.TS1 and KKA.TS2) were excavated in the western side of Kuy-e Keyvan Tepe. The archaeological surface surveys, and the presence of bulldozer cuts in this part of the site, indicate the more ancient layers than in other parts. Therefore, the more intact parts close to these cuts were selected for the excavations. A gray and black ashy soil layer, related to a pit, with an approx. depth of 75 – 310 cm, was identified in context 103 of the first trench. It yielded small geometric tokens

along with a number of pottery pieces, animal figurines, one stone stamp seal, seal impressions, and stone tools. Some other tokens, along with pottery pieces, were obtained from the second trench, in context 203 with a depth of approx. 135 – 185 cm. They were

recovered close to a small circular structure. The contexts of both 103 and 203 belong to the same archaeological time horizon [4] (Figure 2).

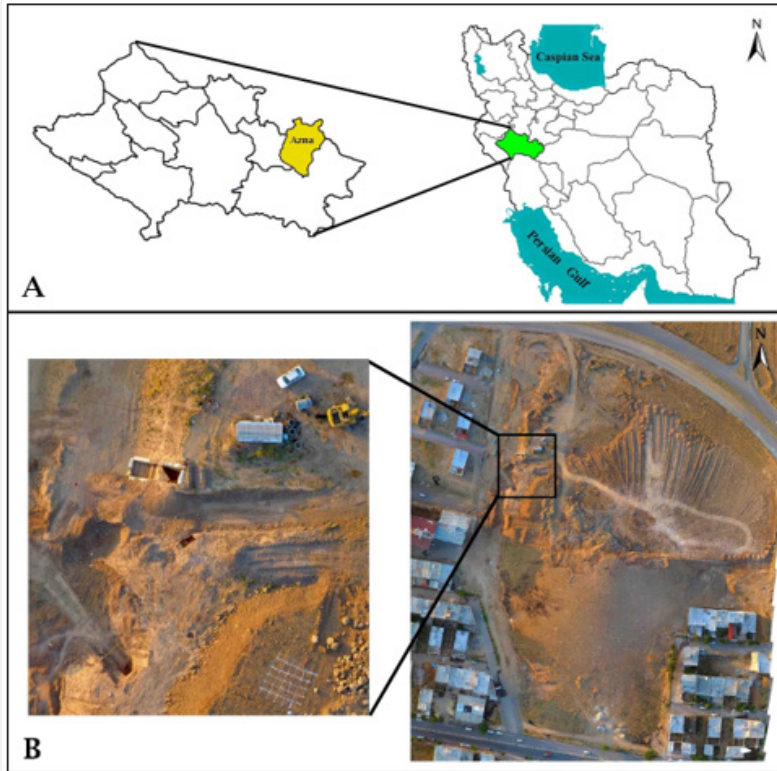


Figure 1: A. Geographical location of Azna County, Luristan Province, Iran.
B. Aerial image of Kuy-e Keyvan Tepe.

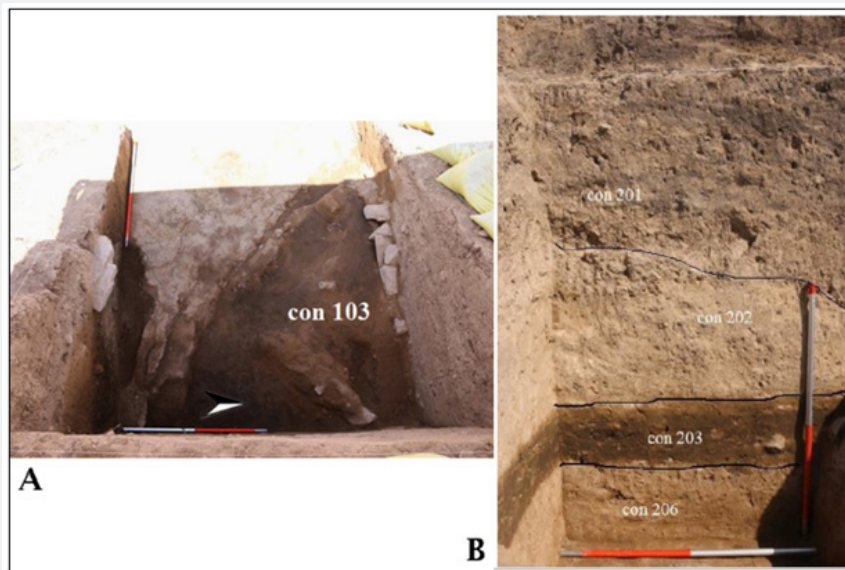


Figure 2: Stratigraphy of the trenches KKA.TS1 (A) and KKA.TS2 (B).

The Clay Assemblage

Animal Figurines

Among the findings of Kuy-e Keyvan Tepe, two animal figurines were found from Context 103 in Trench KKA.TS1. Figurine No. 1, in a relatively complete form, was dug out at a depth of 151 cm

below the surface. It has a hole from one part of the eye to the other. Figurine No. 2, of which only the head and part of its body remained, was obtained at a depth of 155 cm below the surface. Both figurines are composed of baked buff clay, tempered with straw (Figure 3).

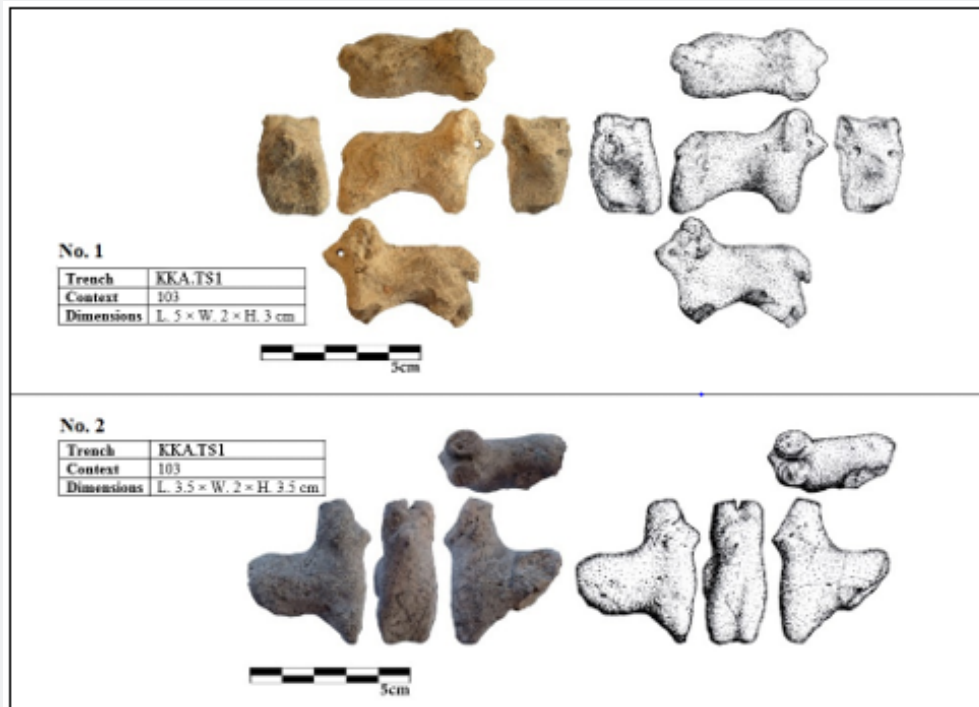


Figure 3: The zoomorphic clay figurines from Kuy-e Keyvan Tepe.

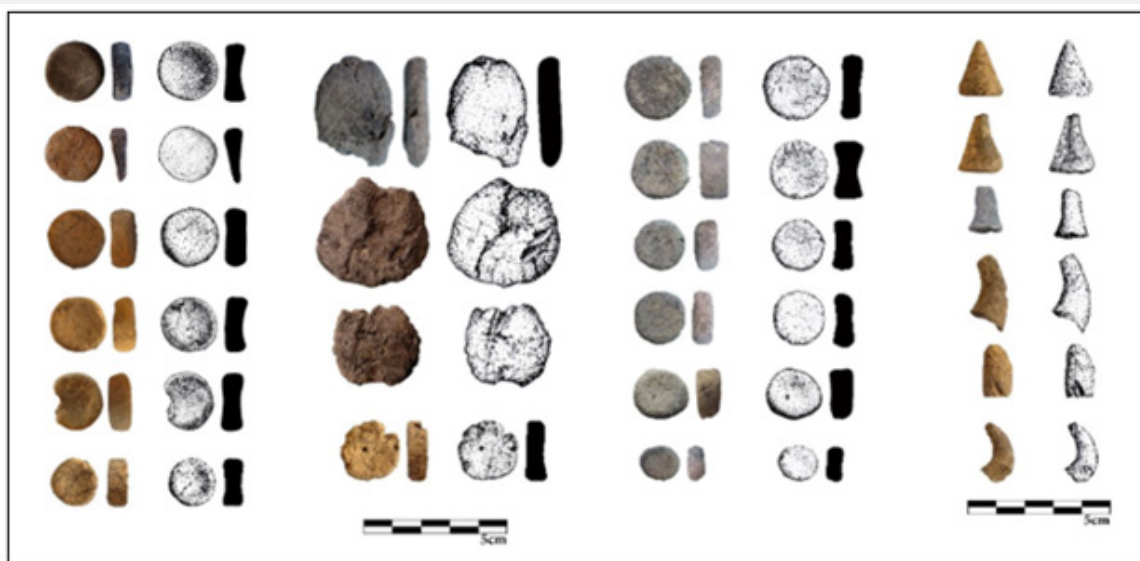


Figure 4: Disk and cone tokens from Kuy-e Keyvan Tepe.

Tokens

Overall, thirty-three pieces were recovered from Contexts 103, 121 and 203. All the tokens were made of baked clay in the colors of buff and gray. Most of the pieces have traces of straw in the clay. No bullae or envelopes related to them were identified. The geometric objects are divided according to their shapes into the following types: flat disk (13 pieces), sphere (2), semi-sphere (5), cylinder (1), cone (6), cuboid (2), and unknown form (1) (Figure 4,5). The objects vary between 5-13 mm thickness and 12-

30 mm in diameter. As Schmandt-Besserat (1996: 80-2) claims, each token shape was the symbol for a particular commodity and carries the specific meanings, including cereals, land, and animals. Foremost, the tokens are interpreted as a counting and record-keeping device. They were counters used to deal with food and other basic commodities of daily life [5]. In addition to their roles in economic transactions, various other functions have been suggested for the tokens, including ceremonial offerings, ritual purposes, children's toys, gaming pieces, and administrative counting aids [6-8].

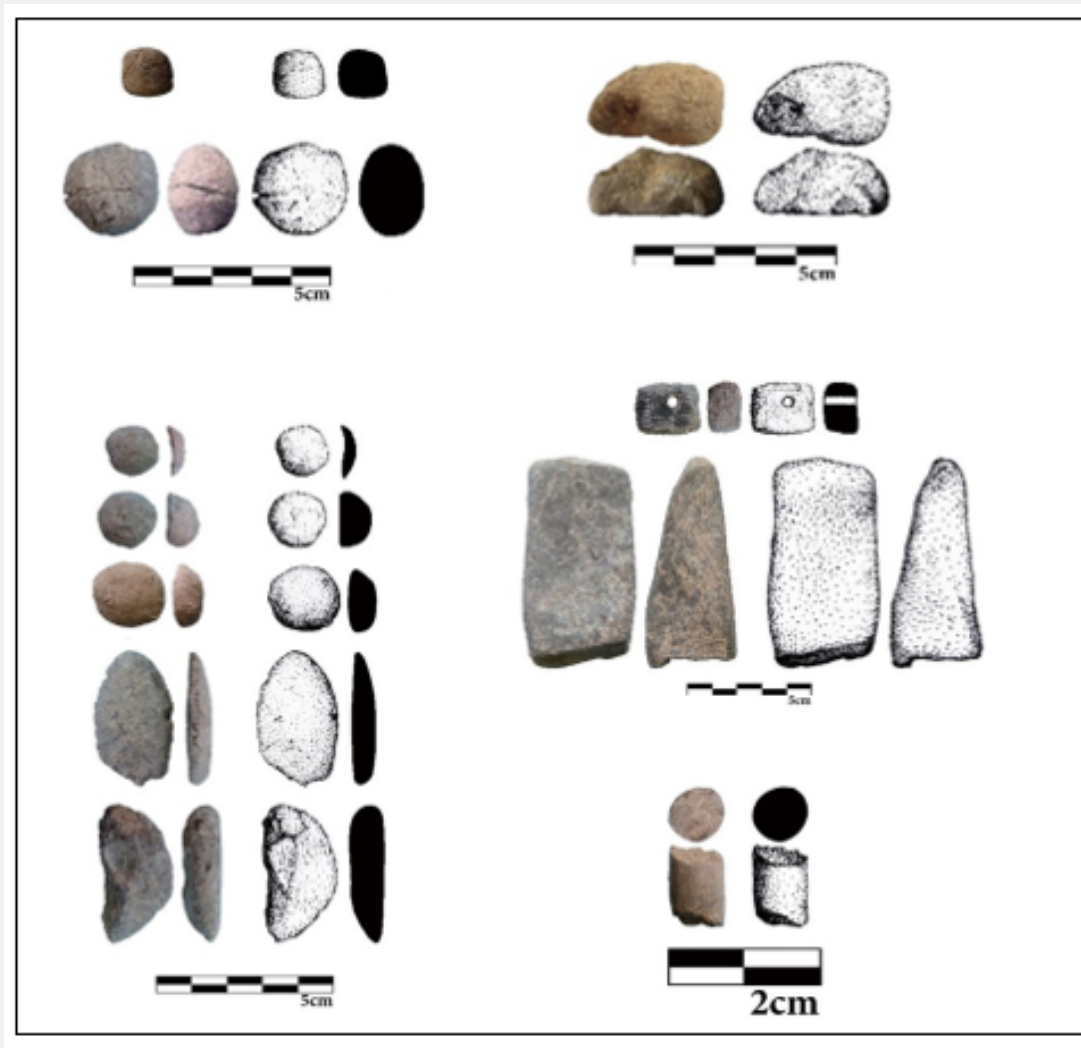


Figure 5: Sphere, semi-sphere, cylinder, cuboid, and unknown form tokens from Kuy-e Keyvan Tepe.

Conclusion

The results of the rescue excavations at the Kuy-e Keyvan Tepe have presented thirty-three small clay geometric objects as tokens belonging to the Late Chalcolithic period, recovered from two trenches. They were unearthed singly, from open-air, ashy fill,

layers alongside, or in the same contexts in which the seal and seal impressions were found. The most common shapes are disk and conical, which probably indicate the amount of cereals and the number of animals. The presence of two small, zoomorphic clay objects, together with other tokens, probably reinforces the theory that there is a connection between tokens and goods.

According to the limit of excavation, as well as the existence of seal and seal impressions, along with the tokens, an economic function associated with accounting and management activities is suggested for them. In other words, both tokens and seals in close association illustrates a Chalcolithic administrative context. It implies that a communal organization kept track of the movement of goods at the site. Future excavations will shed more light on the tokens' functions and illuminate the true nature of this Late Chalcolithic settlement.

Acknowledgement

The authors would like to thank Denise Schmandt-Besserat for providing her valuable comments on this subject.

References

1. Menninger K (1977) *Number Words and Number Symbols*. MIT Press, Boston, Massachusetts, United States.
2. MacGinnis J, Monero MW, Wicke D, Matney T (2014) *Artefacts of Cognition: The Use of Clay Tokens in a Neo-Assyrian Provincial Administration*. *Cambridge Archaeological Journal* 24(2): 289-306.
3. Schmandt-Besserat D (2018) *Prehistoric Administrative Technologies and the Ancient Near Eastern Redistribution Economy. The case of greater Susiana*, In: Álvarez-Mon J, Basello GP, Wicks Y (eds.), *The Elamite World*. Routledge, New York, United States, PP: 363-382.
4. Hoseyni Sarbisheh B (2019) *Report on the rescue excavation in order to stratigraphy, identification of troglodytic architecture, delimiting and surrounding suggestion of Kuy-e Keyvan Tepe, Azna, Lorestan*. An unpublished report. Archive of Iranian Center for Archaeological Research. (ICAR) Tehran, Iran.
5. Schmandt-Besserat D (1992) *Before Writing*. University of Texas Press, Austin, Texas, United States.
6. Bennison-Chapman L (2014) *The role and function of tokens and sealing practices in the Neolithic of the Near East: the question of early recording systems, symbolic storage, precursors to writing, gaming, or monitoring devices in the world's first villages*. PhD dissertation, University of Liverpool, England, United Kingdom.
7. Niemi T (2016) *Near Eastern Tokens: A Contextual Analysis of Near Eastern Tokens from the 8th to the 4th Millennium BC*. Master thesis, The University of Bergen, Norway.
8. Palka JW (2021) *Not Just Counters: Clay Tokens and Ritual Materiality in the Ancient Near East*. *Journal of Archaeological Method and Theory* 28: 414-415.



This work is licensed under Creative Commons Attribution 4.0 License
DOI: [10.19080/GJAA.2023.13.555854](https://doi.org/10.19080/GJAA.2023.13.555854)

Your next submission with Juniper Publishers will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats
(Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission

<https://juniperpublishers.com/online-submission.php>