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Eastern Iran Prehistoric Archaeological Project: First Season of Archaeological Excavations at Kake Kub, South Khorasan Province (2018), Relative and Absolute Chronology

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(135-159)

Abstract

Eastern Iran, especially in the prehistoric period, is a completely unknown region on the Iranian archaeological map. More than one hundred years after the beginning of archaeological excavations in Iran, the eastern regions have received little or no attention from archaeologists for various reasons, and there are very limited publications as well. Kale Kub is a prehistoric site that is located in Ayask town, in Sarayan District, South Khorasan Province, eastern Iran. It has sufficient cultural deposits to provide a chronological timeframe of cultural sequence for the prehistoric cultures of this region. The first season of Kale Kub excavations, carried out in 2019, led to the identification of unknown prehistoric cultures in the region, which are introduced in this article.

Perhaps the most significant achievement of this excavation was the identification of the 4th millennium BCE cultures, which are well known in the southwest of Iran and Mesopotamia and for which evidence has been obtained far from the centre of this culture. These cultural evidences, which can be considered to belong to the Susa II horizon or late Uruk cultures, include the typical pottery of this period, such as bevelled rim bowls, rough Banesh trays, tubular and nose handle jars, and fine and painted wheel-made pottery, which is well known in the south-western, western, north-western, south-eastern regions and central plateau of Iran, but which have now been identified and introduced for the first time in eastern Iran. In general, based on the excavation of two stratigraphic trenches (A and B) in this site, three cultural periods have been identified so far. They have been classified from the bottom level and the top of the virgin soil are: 1: KALE KUB I (Chalcolithic period, fifth millennium BCE), 2: KALE KUB II (Susa II horizon, fourth millennium BCE), and 3: KALE KUB III (Bronze age, third and second millennia BCE).

Keywords: Kale Kub, Stratigraphy, Relative and absolute Chorology, Susa II horizon

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1. Introduction

Kale Kub is located in Ayask town, Sarayan District, which is in South Khorasan Province, eastern Iran (58°21'53.20"E–3°52'56.97"N), 1360 m above sea level (Figures 1 and 2). Archaeological prehistoric studies are very limited in the eastern parts of Iran and almost all such studies have been focused in the southeast and northeast of Iran; the eastern part has received less attention because of the special climatic conditions and vast deserts of Lut and Dasht-e Kavir. Although in recent years almost the entire province of South Khorasan has been surveyed by local archaeologists, the quantity of materials identified that were related to the prehistoric period was very limited, and Kale Kub is perhaps one of the few prehistoric sites in this area with sufficient cultural deposits to make archaeological study possible.

Because the site is located at the edge of three very active alluvial fans, the sedimentation rate in the plain is very high. Therefore, fine-grained alluvial sediment layers measuring between one and one and a half meters cover this region, attracting local farmers who use this land for agriculture. High quality agricultural lands and gardens are located in the western and south-western parts of the city. Agriculture is the main occupation of the people, and in recent years the digging of several deep wells in the region has resulted in the planting of crops such as wheat, green cumin, and particularly saffron and pistachios in most of the areas with arable land. Kale Kub is located between these fields, which has resulted in the destruction of the surface levels of the site to provide for agriculture land. Consequently, those surface layers which probably belonged to the Iron and Bronze Ages, have been damaged.

Kale Kub was excavated for the first time between 2009 and 2012 (Anani, 1391: 1). The total dimension of the site is about seven hectares based on two seasons of excavation, and it was registered (No. 23005) among the national monuments of Iran in March 2008. Stratigraphic excavations at the site began in 2019 with the permission of the Cultural Heritage and Tourism Research Institute and the Archaeological Research Institute. The main purpose of this excavation was to conduct a stratigraphic study to present the relative and absolute chronology of the site and to identify the prehistoric cultural sequence of its settlements. For this purpose, two small trenches (2 ×2 meters) have been excavated in the central part of the site next to the previously excavated trenches (Azizi Kharanaghi et al.2018).

Geographical Location of South Khorasan

South Khorasan province is located in the east of Iran measuring about 89,830 square kilometres (34^0 6’ 42” N–52^0 12’ 13” E). This province covers about 5.4 percent of Iran, and borders Afghanistan on the east, Khorasan Razavi in the north, Yazd in the northwest and west, Kerman in the southwest, and Sistan and Baluchestan Provinces in the south. Greater Khorasan was divided into three administrative divisions in 2004: North Khorasan, centred on Bojnourd, Khorasan Razavi, centred on Mashhad, and South Khorasan Province, centred on Birjand. The most important cities of this province are: Birjand, Ghaenat, Nehbandan, Sarbisheh, Darmian, Ferdows, Sarayan, and Boshravieh (Deputy of Culture and Communication, 1384: 15–14).

Sarayan District is located in the northwest of South Khorasan Province at about 33^0 52’ N–58^0 30’ E. Sarayan is bordered on the north by the Kakhk part of Gonabad

District; on the south by Birjand City; on the east by Ghayen City; and on the west by Tabas City, and is 156 km from Birjand (the centre of the province). The region is characterised by a cold climate, due to the mountain ranges to the north of the city, and a hot and dry climate due to the presence of the desert plains in the south. The northern regions are cold in winter and temperate in summer due to the existence of numerous mountain ranges and green valleys, but most of the region is covered with dry deserts (Anani, 2012: 13–12).

In the south of Sarayan, there are vast fertile plains for agriculture, most of which are fed from the rivers in the rainy winter. The rural districts of this region are Se Qale (which is mostly comprised of deserts) and Aisak, (which has a relatively milder climate). Most people in this region are engaged in agriculture because of the existence of motor wells. Although in the past they used the Qanat system to provide water for drinking and agriculture, after they started using the deep motor wells, most of these Qanats dried up, which resulted in many people from these villages migrating to Sarayan (Sarayan County Master Plan, 2009, vol. 2: 8).

Figure 1. Geographical location of Kale Kub

2.Research Background

Iran's rich culture and brilliant historical civilization have always been of interest to archaeological studies. Khorasan witnessed the rise of fundamental movements and events throughout Iran's past; however, because of the hostile environmental conditions in South Khorasan Province (dry mountainous regions and large deserts) it has attracted fewer archaeologists and consequently continues to lack a clear archaeological chronology or archaeological timescale, especially for the prehistoric periods.

The lack of sources and reasoned historical and archaeological sources in South Khorasan combined with very little research has also resulted in many ambiguities in the field of archaeology in this region (Soroush, 2012).

From 1900 to 1979, 727 archaeological programs were conducted in Iran; however, only 18 (less than 2.5%) were allocated to Khorasan. However, since the Islamic Revolution the process of archaeological research in Khorasan has accelerated, and such research has helped us to better understand the historical ambiguities of Khorasan (Labaf

Khaniki, 2012: 28). This paper focuses on archaeological studies of South Khorasan Province. Jamal Rezaei and Sadegh Kia introduced the Parthian inscriptions of Kal Jangal for the first time during their archaeological survey in 1941 (Behnia, 2002: 371). In 1328, Carlton Coon (1951) from the University of Pennsylvania excavated the Khonik Cave, 18 km from Qaen, and identified settlements from 35,000 BC (Samadi, 1951: 71; Vandenberg, 1348: 14–15). A systematic archaeological survey of Khorasan from north to south was conducted in 1977 and 1978 under the supervision of Faeq Tawhidi, and a relatively full knowledge of the cultural and historical capabilities of each part of Khorasan was obtained (Tawhidi, 1977, 1978). Qasbeh Gonabad Qanat was constructed in 1990 by Labaf Khaniki during a one-month research program. The Qanat measures about 33/113 Kilometres and 472 wells have been drilled along it; the depth of the mother well is about 300 metres. Next to one of the wells of the main branch, some pottery sherds similar to those found at Dahaneh Gholaman/Sistan were unearthed, and based on this similarity it was estimated to be more than two thousand years old (Labaf Khaniki, 1997: 298–271). During the Birjand archaeological survey in Lakhmzar village, a wide collection of petroglyphs was discovered that revealed the beliefs and the art of the past and also established the presence of people and tribes such as the Heptalians in this part of Iran (Labaf Khaniki, Bashash, 1994: 76–74).

The archaeological surveys in Ferdows District in 1996 by Mahmoud Bakhtiari, in Ghaen District for two seasons in 1997 and 1998 by Ali Hassanabadi, in Bardaskan District in 1998 by Mahmoud Bakhtiari, in Sarayan District in 2004 by Alireza Nasrabadi, in Takhcharabad in 2000 by Ali Hasnabadi (Labaf Khaniki 2012: 152–142), and of Kale Kub in 2009 and 2010 (Yousefi, 2009), in addition to the surveys in 2009 in Kundari, a prehistoric settlement during the historical period in Ghainat 2, the Paleolithic cave of Chel Dokhtaran in Sarbisheh (Behnia, 2002: 383), and the prehistoric site of Sar Takht-e-Baghistan in 2005 (Zafranloo, 2004) have studied the archaeological sites which were organized by the Cultural Heritage Organization of South Khorasan Province. Takhcharabad is perhaps the only site belonging to the late prehistoric period which has been excavated in South Khorasan for four seasons (Dana, 2019: 406). This site is located near Birjand and archaeological studies are currently underway in the site. The chronology proposed by the excavator for this site is late Iron Age III and pre-Achaemenid (Dana, 2019).

3.Excavation Method

The context method and the Harris Matrix were used to present the priority and latency of different contexts. Layers that had a completely different texture, colour, density, or cultural data from the previous layer were considered a new context. For example, most of the texture was ash and different contexts were considered with the texture of the dense soil. Different contexts have different sizes, thicknesses, and dimensions based on their specific texture, and effort was made not to dig in different contexts at the same time so as to avoid data confusion. In different trenches, different numbers have been used to indicate different contexts. The context numbers for Trench A start from 1000, and the last context is numbered 1028. 28 different contexts were identified and excavated in this trench. The context numbers for Trench B start from 2000 and end at 2028, meaning that 28 different contexts were identified and explored in this trench as well. The Harris Matrix method was used to indicate the priority and latency of different

contexts and the architectural or related contexts such as wall, lining, clay mass, floor, and oven, which are denoted by a square shape, while other contexts such as soil texture and ash were denoted with a circle (Figure 5).

To accurately record the different cultural data based on different contexts and different dates, the Registry Number method (RN) was used for each set of data on different dates; hence, the data for each context and each day were given a specific number that differed in different trenches. For general findings obtained in large numbers during the course of each day, such as pottery and bone, only one number was considered per day in each context; however, a special number was allocated for specific findings. To accurately record the location of each artifact, the northeast corner of each trench was considered a fixed point of reference, and the length, width, and depth (X,Y and Z) of each find from this location was measured.

Figure 2. Arial photo of Kale Kub and location of Trenches A and B

4.Trench A

This trench was excavated in the central part of the site east of the previously excavated trench along the north-south direction with the dimensions 2.5 × 2 metres. The height of the fixed measuring point of this trench is 1360 metres above sea level (Figure 2). Excavations at this trench continued from the surface level to the virgin soil for cultural deposits, amounting to a depth of 5 metres, which included 28 different contexts (Figures 3 and 5). This trench was selected in a place that is somewhat higher than the rest of the site. The whole site was covered with alluvial sediment, which we believe dates to the late Iron Age period. Special objects have been found in this trench, including clay

animal figurines, pottery objects, various stone objects, stone beads, gold-plated bitumen beads, bone objects, clay objects of various shapes, and a raw rectangular clay object with a smooth surface. The excavation of this trench ended at a depth of 1355 metres above sea level.

Based on the simple burnished grey pottery been found in the upper layers of the trench, these layers can be considered to belong to the Bronze and Iron Age periods, which continue from the surface context of 1000 to 1006. Because of the high numbers of bevelled rim bowls, Banesh trays, nose handle jars, pipes, and drains of Shush II (Uruk type) as well as edge, body, and base types similar to the Silk III_{III-7} period, which have been found in contexts 1006 to 1011, these contexts can be dated to the 4th millennium BCE and the beginning of urbanization. Changes in the pottery types in the middle and lower layers of this trench indicate that the changes in the technology of making pottery seem to be related to a more local; however, in the lower levels, several fine red ware potteries similar to the Cheshmeh Ali or the Silk II period were dated to the 5th millennium BCE, which point to a relation between the east of Iran and the central plateau.

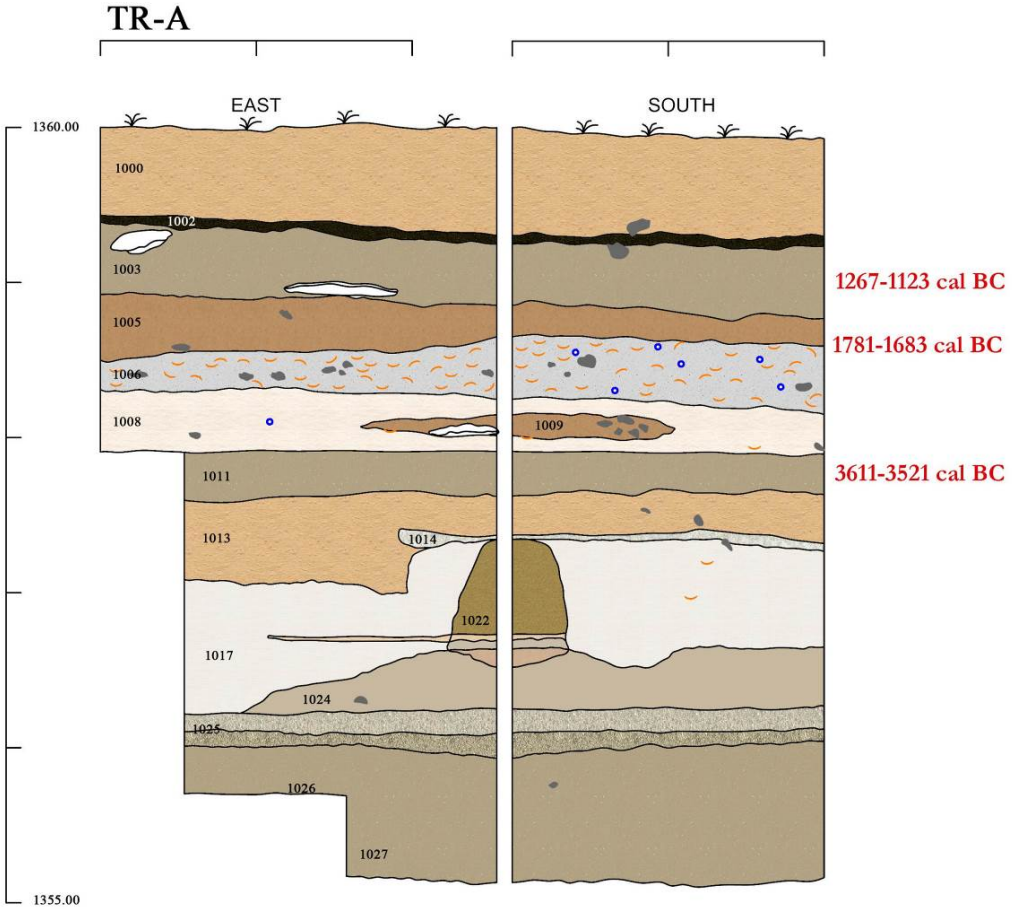


Figure 3. Eastern and Southern sections of TR. A

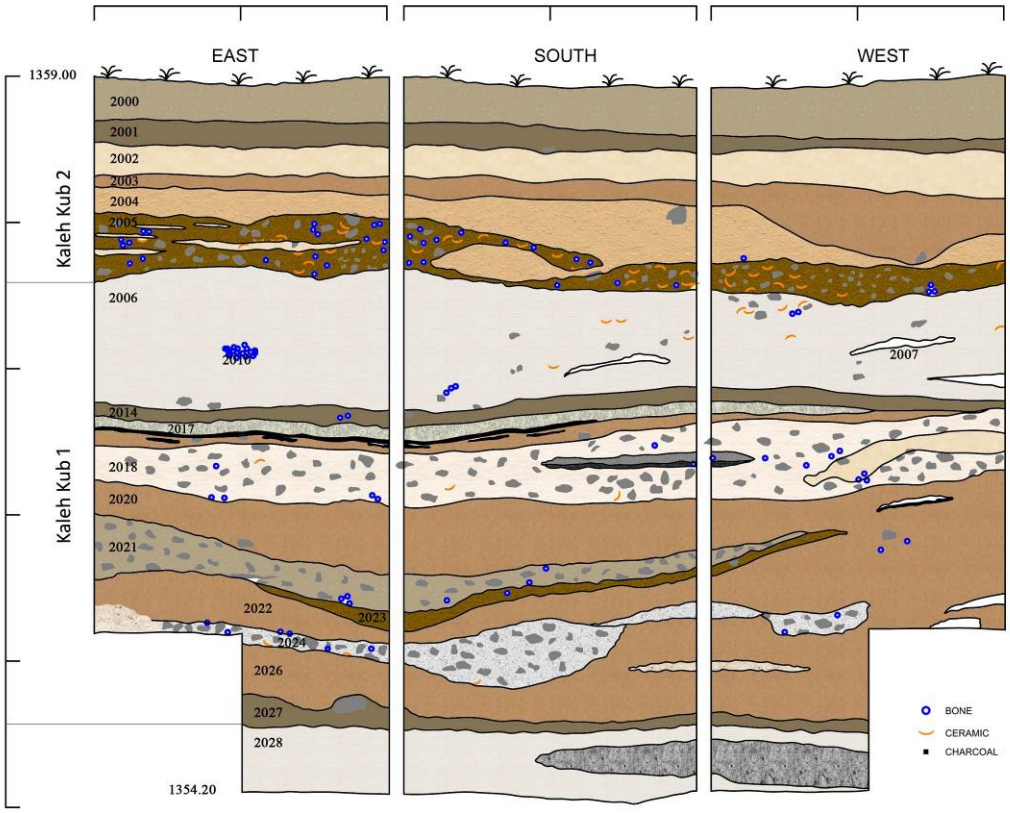


Figure 4. Eastern, Western and Southern sections of TR. B

5.Trench B

This trench is located approximately in the central part of the site with a dimension of 2×2 meters (Figure 2), including 28 contexts (Figures 4 and 5), and the fixed point of this trench is 1359 metres above sea level. Trench B has been opened and excavated along the southern wall of a previously excavated trench. The cultural sequence and cultural materials of this trench are quite similar to those of Trench A, and there is no significant difference between the two trenches. The thickness of the cultural layers in this trench was recorded as 4.15 metres.

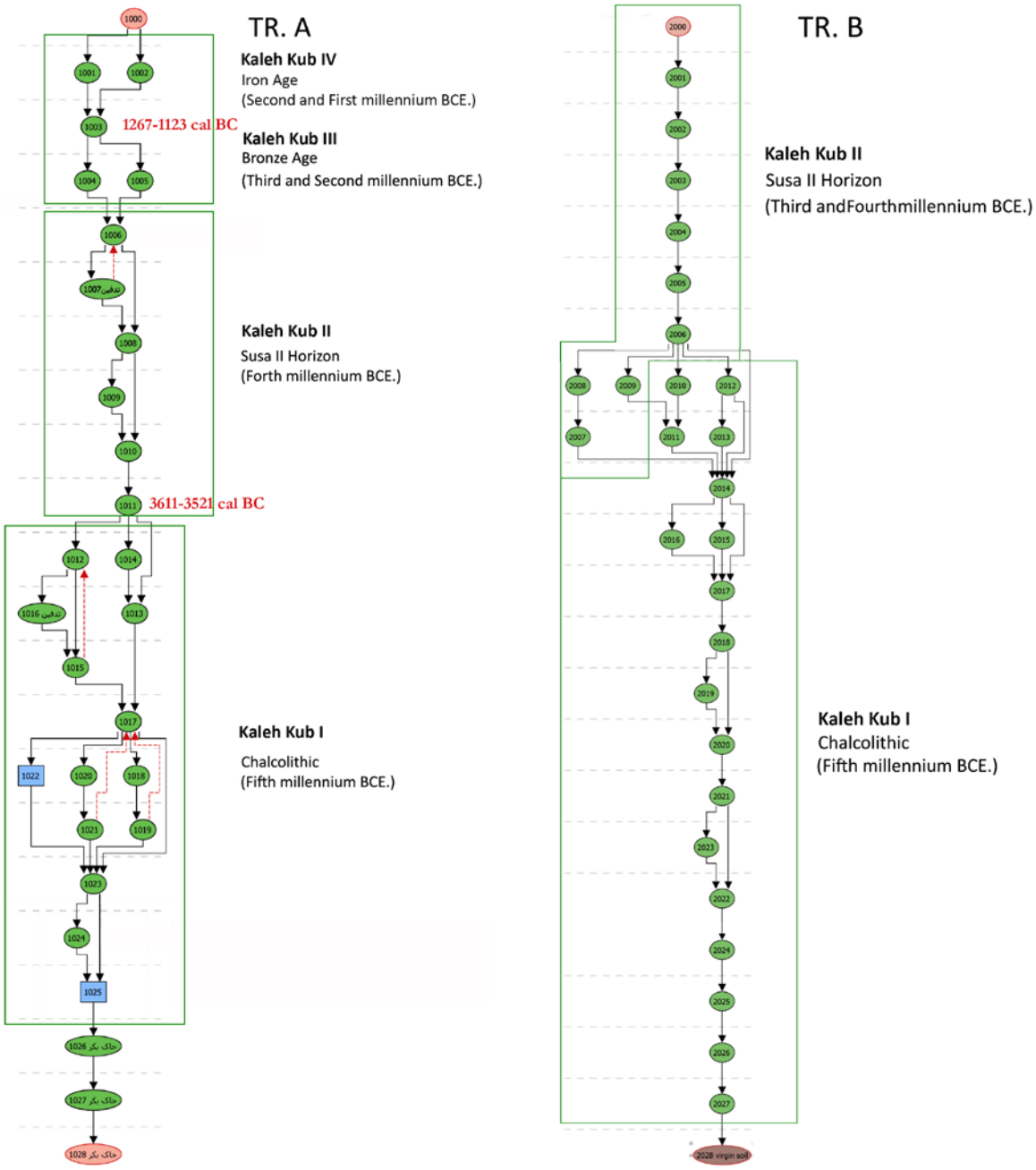


Figure 5. Harris matrix charts and stratigraphical sequence of TR A and B

6.Pottery typology

In general, from the excavations that were carried out in 2019 at trenches A and B of Kale Kub, six different types of pottery have been identified (Figure 13), which also have subsets. The variety and sequence of pottery types is based on the relative chronology of the site, which is presented below. The pottery study was conducted in two steps: First, the initial classification was made, in which all the pottery pieces were counted according to different types, weight, and classification and second, the locations of the diagnostic potteries were selected and accurately measured, describing each piece. In

general, 5197 (Trench A: 3116, Trench B: 2081) sherds were identified from the two trenches, which have been classified into six different categories:

A) Grey ware: Very few pieces of this type of pottery were from the upper disturb contexts of Trench A and in the chronological sequence of the site belonging to the Bronze and Iron Ages (Third and second millennium BCE). These potteries are handmade, have a mixture of sand, thin clay coating, and improper firing and include simple long bowls with simple rims (Figure 20).

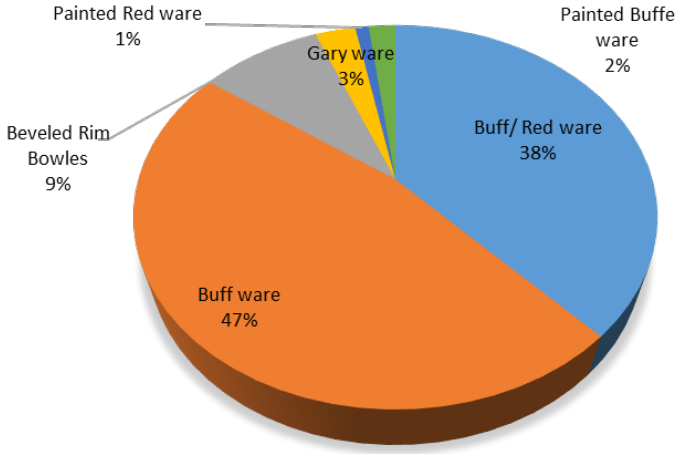


Figure 6. Chart of different Pottery types from TR A and B

B) Buff ware: Most of the pottery collections are of this type, and they can be divided into five main sub-types:

1. Simple Buff/reddish/orange ware: This type of pottery is found in almost all stratigraphic sequences of the excavated trenches. The lower layers comprise a coarser mix with sand and in the upper layers a finer mix with fine sand. It is handmade with colours ranging from orange to reddish, usually covered with a thin clay layer, and did not receive sufficient heat. The different forms are generally simple open-mouthed bowls with simple rims or small pots (Figure 14 and Figure 20, Nos. 1 to 3). Unfortunately, this type of pottery cannot be dated because of its simple form and its presence in all sequences with minor changes.

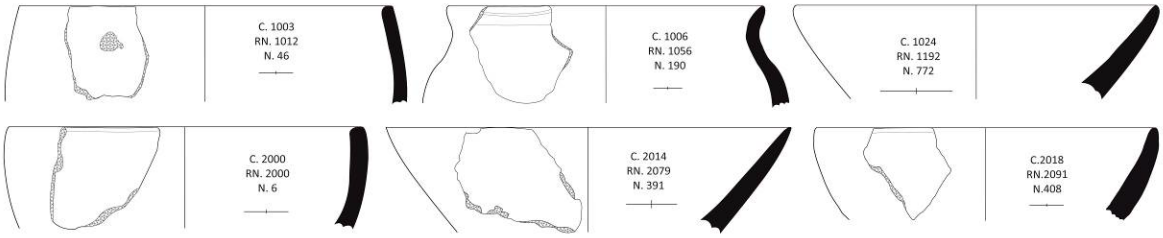


Figure 7. Samples of Simple Buff ware willing to reddish or orange of Kale Kub

2. Banesh Trays: This is a type of course, handmade tray that has a protruding rim, low height (3–4 cm), and a wide mouth (Figure 15), and they are one of the common forms of Susa II (Late Uruk) cultures and the Banesh period in Fars (Alden, 1979: 253, Figure 33) and are found in the 4th millennium BCE layers along with other types of diagnostic pottery of this period. This pottery has a mix of coarse chaff which is covered with a thin clay

layer, and the outside and inside are generally rough and coarse (Figure 21, numbers 9 to 11). Many different types of this kind of pottery have been found from Kale Kub, period II.

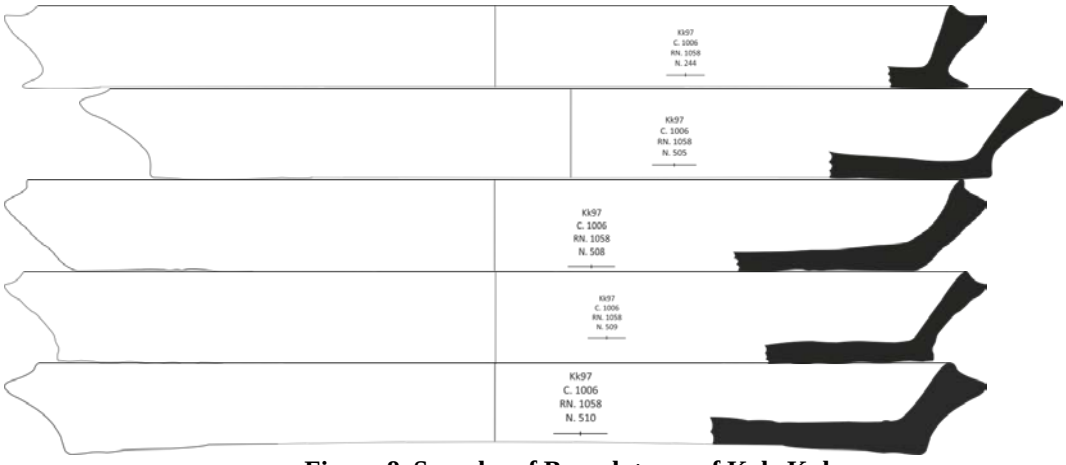


Figure 8. Samples of Banesh trays of Kale Kub

3. Wheel-made Buff ware: This type of pottery has been found along with other types of diagnostic 4th millennium BCE potteries and were identified as Kale Kub II period. They are wheel-made with a very fine sand temper, received adequate heat, and are covered with a thin layer of clay. They are generally decorated on the outside with parallel lines and the rims are turned outwards (Figure 16 and Figure 20, numbers 7 to 9).

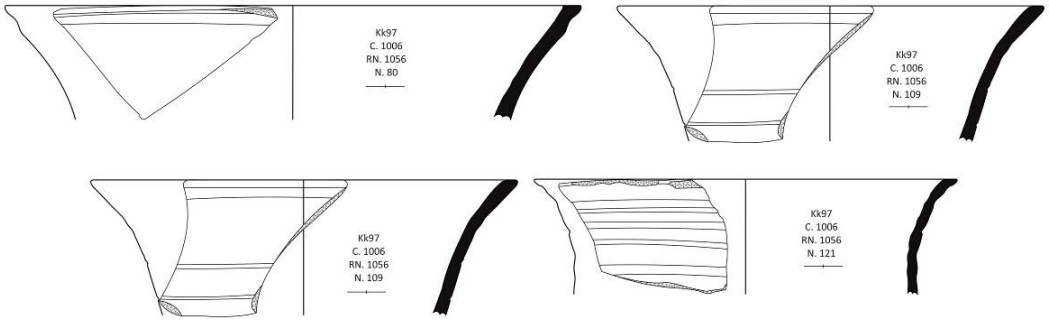


Figure 9. Samples of Wheel-made Buff ware of Kale Kub

4. String-cut base bowls: This type of pottery has been found along with other types of diagnostic 4th millennium BCE potteries that were identified as Kale Kub II period. They are simple, open-mouthed, wheel-made (possibly slow-moving) that used sand for tempering with enough heat, and covered with fine clay. The core colour ranges from Buff to orange, and some lines are visible on the base of pottery, which is an effect of the potter's wheel (Fig. 17 and Fig. 20, Nos. 18 and 20). Similar sherds have been found in the central plateau from the Tapeh Qabristan in the Qazvin plain (Fazeli Nashli, 2006: 147: Figure 21-4).

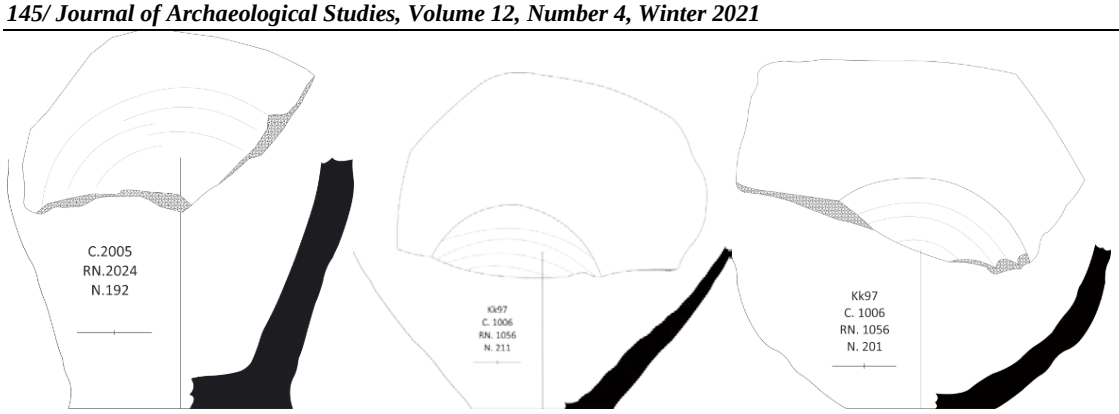


Figure 10. Samples of String-cut base potteries of Kale Kub

5. Nose-handle and tubular Buff pottery (Uruk types): This type has been found along with other types of diagnostic 4th millennium BCE potteries that were identified as Kale Kub II period, which are all simple, wheel-made, used sand for tempering, and have an orange-coloured core with adequate heat and covered with thin clay. Two diagnostic sherds of the Uruk nose handle and curved pipes of tall vessels from this period can be observed in this collection (Figure 18 and Figure 20, Nos. 16, 17, 19, 21, 22 and 23).

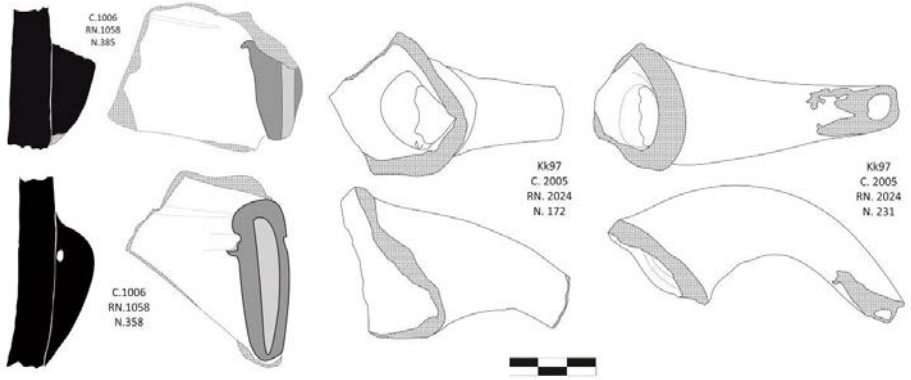


Figure 11. Samples of Nose-handle and tubular Buff pottery (Uruk types) of Kale Kub

C) Bevelled-rim bowls: Although Bevelled-rim bowls are also a part of Buff ware pottery, based on their special importance and characteristics, they have been introduced as a separate classification. Bevelled-rim bowls are coarse, hand-made bowls with an unsmooth rim, most of which have a porous outer surface and an inner surface slightly smoothed with a wet hand (Fig. 19 and Fig. 21, Nos. 1–8). Bevelled rim bowls have been identified from several areas in Mesopotamia, Iran, and a few areas in Pakistan. They have also been found in several areas from southwest to southeast and in the central and western regions of the Iranian plateau. The geographical distribution area of the bevelled-rim bowls reveals the widespread nature of the pottery culture in the Mesopotamian and the Iranian plateau. Bevelled-rim bowls have been recognized from southern Turkey to south-western Pakistan, however, no samples of these types have been found in Khorasan or Sistan (Mutin 2013, 61–62). Bevelled-rim bowls are considered to have appeared between 3500 and 2700 BCE, a long time, about 800 years (Abdi 1378, 66). Both trenches A and B display a layer of pottery accumulation, including bevelled-rim bowls and a Banesh tray (Azizi Kharanaghi, 1399), and a few of these pottery have

turned green-grey due to high heat, which indicates that they may have been locally produced in this area. These and other types of pottery that date from the 4th millennium BCE have been identified.

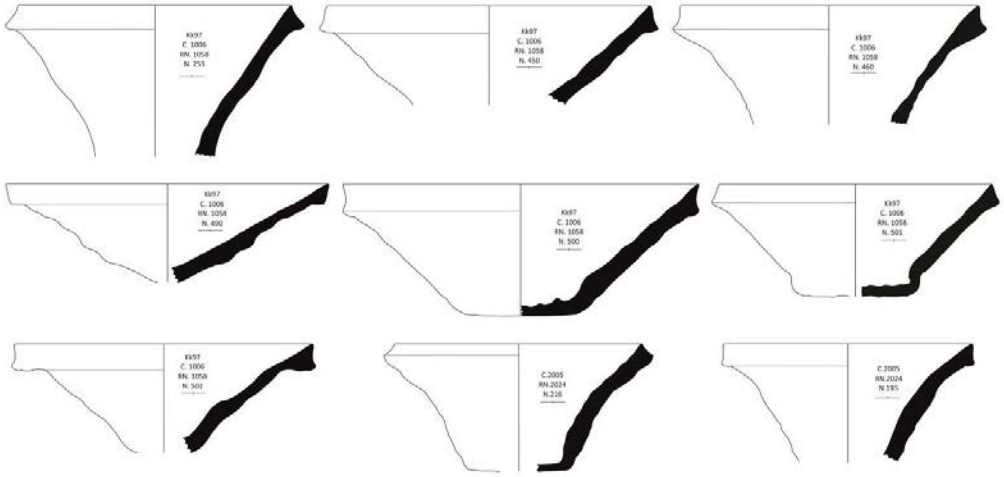


Figure 12. Samples of Bevelled-rim bowls from Kale Kub

D) Painted Buff ware: This type of pottery has been found along with other types of diagnostic 4th millennium BCE potteries that were identified as Kale Kub II period, which are wheel-made, fine, covered with a thin layer of clay, an orange-green Buff core, exposed to adequate heat, and decorated with black or brown geometric patterns on the outside surface of the vessels. The designs are generally wide parallel or diagonal lines, and the predominant forms are bowls with a simple open rim; however, cup-shaped forms and bowls with relatively high walls are also observed (Figure 20 and Figure 21, numbers 10 to 15).

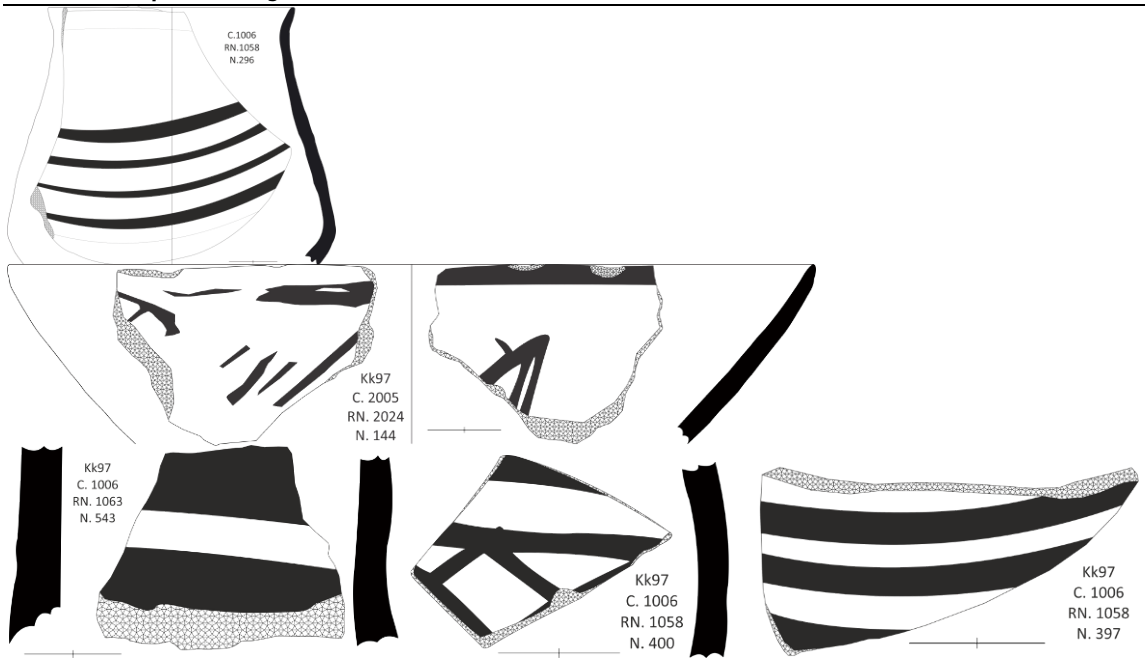


Figure 13. samples of painted Buff wares of Kale Kub

E) Painted red ware: This type of pottery comprises only one percent of the pottery collection of Kale Kub that were obtained from the lower layers of trenches A and B and in the stratigraphic sequence of the site belonging to the Kale Kub period I, and the proposed date is the 5th millennium BCE. These potteries are fine, handmade with enough heat and a very soft sand temper, which has a red slip, and the core is generally grey, decorated with simple geometric or intersecting lines in black. The predominant forms are simple bowls with an open mouth and simple rim (Figure 21: Numbers 24 to 28).

Table 1. Figure 21 pottery information

Pottery information	Reference
Tr. A, Context 1000, NO. 1, Pot rim, dimension 130, height 64, thickness 8 mm, handmade, core colour light grey, sand temper, orange thin clay slip.	
Tr. A, Context 1010, NO. 2, Buff ware rim, dimension 180, height 35, thickness 5 mm, handmade, fine chaff temper, buff thin clay slip.	
Tr. A, Context 1023, NO. 3, Buff ware rim, dimension 270, height 85, thickness 9 mm, handmade, fine chaff temper, buff thin clay slip.	
Tr. A, Context 1003, NO. 4, Grey ware rim, dimension 200, height 50, thickness 6 mm, handmade, sand temper, coarse slip, burnished surface.	
Tr. A, Context 1006, NO. 5, Grey ware rim, dimension 170, height 65, thickness 13 mm, handmade, sand temper, coarse slip.	
Tr. A, Context 1003, NO. 6, Grey ware rim, dimension 140, height 84, thickness 7 mm, handmade, sand temper, coarse slip, burnished surface.	
Tr. A, Context 1006, NO. 7, Buff ware rim, dimension 210, height 59, thickness 7 mm, wheel-made, fine sand temper, buff thin clay slip.	
Tr. A, Context 1006, NO. 8, Buff ware rim, dimension 140, height 37, thickness 5 mm, wheel-made, fine sand temper, buff thin clay slip.	
Tr. A, Context 1006, NO. 9, Buff ware rim, dimension 170, height 29, thickness 8 mm, wheel-made, fine sand temper, buff thin clay slip.	
Tr. A, Context 1006, NO. 10, Painted Buff ware body, Geometric brown cross lines on the surface, length 37, width 34, thickness 6 mm, wheel-made, fine sand temper, Buff thin clay slip.	
Tr. A, Context 1006, NO. 11, Painted Buff ware body, Geometric brown cross and parallel lines on the surface, length 67, width 177, thickness 5	

mm, wheel-made, fine sand temper, Buff thin clay slip.	
Tr. A, Context 1006, NO. 12, Painted Buff ware body, Geometric brown parallel lines on the surface, height 310, dimension 85, thickness 5 mm, wheel-made, fine sand temper, Buff thin clay slip.	Alden, 1979, P:275, No: 12.
Tr. A, Context 1006, NO. 13, Painted Buff ware body, Geometric brown parallel lines on the surface, length 80, width 66, thickness 6 mm, wheel-made, fine sand temper, Buff thin clay slip.	Grishman, 1938, P: 176, Pl. XXVI, No. 3
Tr. A, Context 1006, NO. 14, Painted Buff ware body, Geometric brown parallel lines on the surface, length 56, width 39, thickness 4 mm, wheel-made, fine sand temper, Buff thin clay slip.	Grishman, 1938, P: 176, Pl. XXVI, No. 3
Tr. A, Context 1006, NO. 15, Painted Buff ware body, Geometric brown parallel lines on the surface, length 18, width 35, thickness 2 mm, wheel-made, fine sand temper, Buff thin clay slip.	
Tr. A, Context 1006, NO. 16, pottery carved pipe, height 70, thickness 9 mm, handmade, fine sand temper, Buff thin clay slip.	Delougaz, Kantor, 1996, P: 44.
Tr. A, Context 1006, NO. 17, pottery carved pipe, height 50, thickness 10 mm, handmade, fine sand temper, Buff thin clay slip.	Alizadeh, 2014, P: 151, D.
Tr. A, Context 1006, NO. 18, string cut base, dimension 60, height 65, thickness 5 mm, wheel-made, fine sand temper, Buff thin clay slip.	Delougaz, Kantor, 1996, Plate: 17, Q. Alizadeh, 2014, P:129, J.
Tr. A, Context 1006, NO. 20, string cut base, dimension 80, height 35, thickness 9 mm, wheel-made, fine sand temper, Buff thin clay slip.	Fazeli Nashli, 1385: 147, Fig: 4-21 Copnik, Rasman, 1395:77, Fig: 4, 15
Tr. A, Context 1006, NO. 19, Body, Added Geometric motif, nose handle, length 66, width 48, thickness 12 mm, wheel-made, fine sand temper, Buff thin clay slip.	Delougaz, Kantor, 1996, P: 92. Alizadeh, 2014, P:156, D.
Tr. A, Context 1006, NO. 21, Body, Added Geometric motif, nose handle, length 52, width 42, thickness 14 mm, wheel-made, fine sand temper, Buff thin clay slip.	Alizadeh et al., 2015, P:158, No: 8. Sarlak, 1390:540, AV35:302:31
Tr. A, Context 1006, NO. 22, pottery pipe, length 44, width 20, thickness 8 mm, handmade, fine sand temper, Buff thin clay slip.	Delougaz, Kantor, 1996, P: 44.
Tr. A, Context 1006, NO. 23, pottery Spouted, length 60, width 30, thickness 5 mm, handmade, fine sand temper, Buff thin clay slip.	Alden, 1979, P:270, No: 9. KARLOVSKY, Potts, 2001, PHASE IVC2: 1.54A
Tr. B, Context 2024, NO. 24, Painted red ware body, Geometric black parallel lines on the surface, length 38, width 28, thickness 4 mm, handmade, fine sand temper, Red thin clay slip.	Majidzadeh, 1389:24, No. 7
Tr. B, Context 2024, NO. 25, Painted red ware body, Geometric black parallel lines on the surface, length 23, width 27, thickness 3 mm, handmade, fine sand temper, Red thin clay slip.	
Tr. B, Context 2024, NO. 27, Painted red ware body, Geometric black parallel lines on the surface, length 29, width 27, thickness 5 mm, handmade, fine sand temper, Red thin clay slip.	Vahdati, 2014: 14, fig: 2: h. Azizi Kharanaghi et al., 2016: 74, fig: 17 Azizi Kharanaghi et al., 1396: 96, No. 38.
Tr. B, Context 2024, NO. 26, Painted red ware body, Geometric black parallel lines on the surface, length 38, width 30, thickness 3 mm, handmade, fine sand temper, Red thin clay slip.	
Tr. B, Context 2024, NO. 28, Painted red ware body, Geometric black parallel lines on the surface, length 41, width 25, thickness 4 mm, handmade, fine sand temper, Red thin clay slip.	Vahdati, 2014: 14, fig: 2: c. Malek Shamirzadi, 1391: 92, No. 17: 10.

Figure 14. Pottery collection found from the 2019 season of the Kale Kub excavation

Table 2. Figure 22 pottery information

Tr. A, Context 1006, NO. 1, Bevelled-rim bowls, dimension 200, height 120, thickness 15 mm, handmade, Chaff temper.	Delougaz, Kantor, 1996, Plate: 80, S. Helwing, 2011: 247, fig 35: 202 Kopnik, Rathman, 195: 78, Fig: 4-16
Tr. A, Context 1006, NO. 2, Bevelled-rim bowls, dimension 200, height 85, thickness 13 mm, handmade, Chaff temper, Orange thin clay slip.	Alizadeh, 2008, P: 261, F. Grishman, 1379: 202.
Tr. A, Context 1006, NO. 3, Bevelled-rim bowls, dimension 240, height 73, thickness 16 mm, handmade, Chaff temper, Orange thin clay slip.	Delougaz, Kantor, 1996, Plate: 17, B.
Tr. A, Context 1006, NO. 4, Bevelled-rim bowls, dimension 220, height 80, thickness 16 mm, handmade, Chaff temper, Buff thin clay slip.	Hesari, 1396: 40, Fig: 1:4 Fazeli Nashli, 1385: 147, Fig: 4- 22
Tr. A, Context 1006, NO. 5, Bevelled-rim bowls, dimension 200, height 70, thickness 17 mm, handmade, Chaff temper, Buff thin clay slip.	Delougaz, Kantor, 1996, Plate: 17, F.
Tr. A, Context 1006, NO. 6, Bevelled-rim bowls, dimension 160, height 116, thickness 16 mm, handmade, Chaff temper, Orange thin clay slip.	Majidzadeh, 2008: 117, fig: 43: 3
Tr. A, Context 1006, NO. 7, Bevelled-rim bowls, height 30, thickness 16 mm, handmade, Chaff temper, Buff thin clay slip.	Chasemi et al., 1397: 60, Fig: 6 Zagarel, 1387: 185, Fig: 7-27

Tr. A, Context 1006, NO. 8, Bevelled-rim bowls, dimension 200, height 55, thickness 8 mm, handmade, Chaff temper, Buff thin clay slip.	Delougaz, Kantor, 1996, Plate: 83, L. Sarlak, 1390: 477, Fig: 18
Tr. A, Context 1006, NO. 9, Banesh tray, height 40, thickness 5 mm, handmade, Chaff temper, Orange thin clay slip.	Delougaz, Kantor, 1996, P: 59, XLVII. Helwing, 2011: 246, fig 34: 188
Tr. A, Context 1006, NO. 10, Banesh tray, height 27, thickness 7 mm, handmade, Chaff temper, Orange thin clay slip.	Delougaz, Kantor, 1996, Plate: 86, DD. KARLOVSKY, Potts, 2001, PHASE IVC2: E. Helwing, 2011: 247, fig 35: 191. Sarlak, 1390: 539, AV38: 303: 7
Tr. A, Context 1006, NO. 11, Banesh tray, height 60, thickness 10 mm, handmade, Chaff temper, Orange thin clay slip.	Alden, 1979, P:256. Kopnik, Rathman, 195: 115, Fig: 4-55, VI: 2 ،VI:2.

Figure 15. Samples of bevelled-rim bowls and Banesh trays from Kale Kub

Production Technology and Typology of Lithics Collection

A total of 753 flaked stone artefacts were excavated from Trench A and Trench B at Kale Kub (Table 1). Based on the excavated pottery, the samples can be dated to the period between the end of the 6th millennium BCE and the early 3rd millennium BCE. Because there are so few samples, it is currently challenging to undertake a quantitative and chronological analysis. Therefore, all the flaked stone artefacts excavated from Trench A and Trench B have been categorised together here. The stone tool production at Kale Kub can be divided into three categories: blade production, bladelet production, and flake production.

Table 3. Different types of lithic collections from Kale Kub (TR. A & B)

	Obsidian	Chert and White Chalcedony																				
	Debitage	Cores			Debitage										Tools							
	Obsidain Bladelets	Flake Cores	Blade Cores	Bladelet Cores	Bladelets	Blades	Partially Cortical Blades	Cortical Blades	Flakes	Partially Cortical Flakes	Cortical Flakes	Core Tablets	Crested blades	Chunks /Chips	Hammerstones	Sickle Blades	End Scrapers on Blades	Retouched Blades	Backed Bladelets	Notched Flake	Flake Scrapers	Retouched Flake	Arrowhead
Trench A Early 3rd Millennium BC and 4th Millennium BC	1	6	0	2	3	17	1	0	210	32	20	1	0	26	1	0	0	0	0	1	9	2	0
Trench A 5th Millennium BC (Chalcolithic Period)	0	1	0	0	2	5	1	0	51	9	7	1	0	11	0	0	0	0	0	0	3	0	1
Trench A End of 6th Millennium BC and Beginning of 5th Millennium BC (Transitional Chalcolithic?)	0	1	0	0	1	1	0	0	16	1	3		0	2	0	0	0	0	0	0	1	1	0
Trench B 4th Millennium BC	0	2	0	2	2	6	1	0	25	11	3	2	1	7	0	0	0	1	0	0	0	0	0
Trench B 5th Millennium BC (Chalcolithic Period)	0	6	1	3	11	26	1	1	127	16	7	2	0	21	0	2	1	1	1	0	10	2	0
Trench B End of 6th Millennium BC and Beginning of 5th Millennium BC (Transitional Chalcolithic?)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	16	1	7	19	55	4	1	429	69	40	6	1	67	1	2	1	2	1	1	23	5	1

For blade production, chert was mainly used as the raw material (Figure 23). Chert blocks procured from outcrops were probably preferred for blade production. It is likely that there are several chert outcrops in the eastern and western mountains. The chert blocks procured from outcrops are fresher and contain fewer internal fractures than riverbed cobbles. Therefore, the chert blocks procured from outcrops were more suitable for blade production. The colour of chert varies from white to green, and includes reddish, cream, brown, grey, and dark grey; even the same chert block displays internal colour variations. The morphology of the blades and blade cores excavated from the site strongly suggests that the blades were detached by pressure flaking rather than direct or indirect percussion (Figures 23–24). The blades were probably pressure-flaked using a long chest crutch. Blades were used as blanks for sickle blades, end scrapers, and retouched blades. It is noteworthy that blades were continuously produced from the end of the 6th millennium BCE to the early 3rd millennium BCE.

Figure 16. Blades and bladelets (Trench A Context 1006)

Figure 17. Blade core, bladelet cores, end scraper on blade, and blades (Trench B Context 2022)

Figure 18. Bladelet cores, bladelets, and blades

White transparent chalcedony was preferred as a raw material along with chert to produce bladelets (Figure 25). The chalcedony was probably procured from the eastern and western mountains. The preference of chalcedony as raw material for bladelet production is also reported at other transitional Chalcolithic sites. Bladelets were probably pressure-flaked using a hand-held pressure flaking tool. One backed bladelet was excavated from a 5th millennium layer of Trench B. It is noteworthy that bladelets were still produced even during the early 3rd millennium BCE/4th millennium BCE.

Figure 19. Flakes and partially cortical flakes (Trench B, Context 2022)

For the flake industry, chert cobbles collected from the adjacent river beds were used as raw materials. Unlike chert blocks procured from outcrops, the chert cobbles are generally coarse and have more internal fractures. Unlike blades and bladelets, flakes were detached by direct percussion with a stone hammer from flake cores (Figures 26). Although several flake tools such as notched flakes, retouched flakes and arrowhead were excavated from the site (Figure 28), flakes were mainly used as blanks for scrapers (Figure 27). In particular, thick flakes were preferred as blanks for flake scrapers.

Figure 20. Flake scrapers (Trench B, Context 2022)

Figure 21. Obsidian bladelet (Trench A Context 1006)

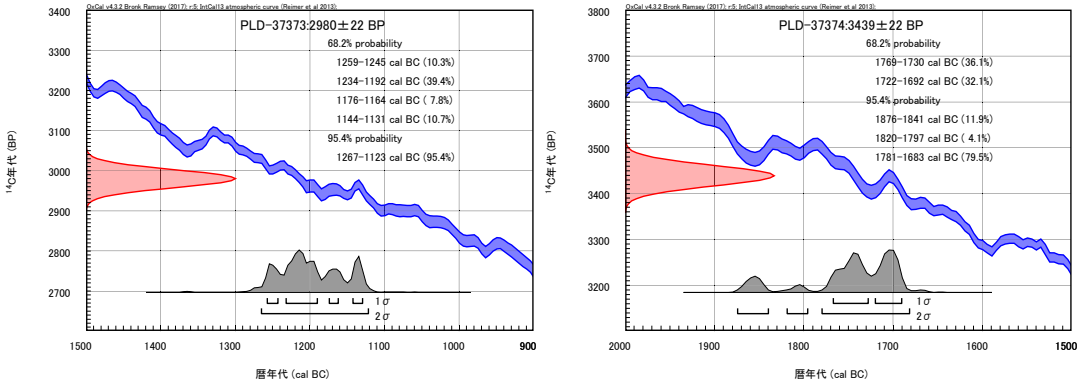
It is also noteworthy that one obsidian bladelet was excavated from an early 3rd millennium BCE/4th millennium BCE layer of Trench A (Figure 28). It is likely that this obsidian bladelet was not produced on site because no other obsidian debitage was excavated from the site. Kale Kub is probably one of the easternmost sites where obsidian was discovered. It is also noteworthy that several hoes were also collected on the surface at the site (Figure 29). Similar hoes were reported from other transitional Chalcolithic sites.

Figure 22. Stone Hoe (Surface collection)

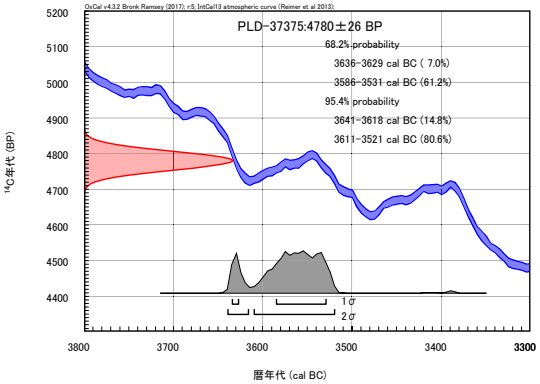
7.Absolute and Relative Chronology

One of the problems of Iranian archaeology, especially in the prehistoric period, is a lack of absolute dating and a reliance on relative and comparative dating; however, this has changed in recent years and C14 dating has become common. Archaeological research in eastern Iran is no exception to this problem, but unfortunately, unlike the

other parts of the country, it has not been published. It is thus not possible to provide a relative chronology in this area for the prehistoric era. As mentioned at the beginning of the paper, Kale Kub is perhaps one of the few prehistoric sites in the South Khorasan Province that has sufficient cultural deposits to provide a chronological sequence for the region. This article presents a relative date for each phase in the introduction and pottery typology sections; however, it is not yet possible to provide sufficient comparative evidence for the upper layers of this site (Kale Kub III period) entirely because of the location of the pottery types. In addition to the relative chronology, four coal samples from the upper, middle, and lower layers of Trench A, which had a more complete stratigraphic sequence than Trench B, were sent to the Tokyo Paleo Lab to perform a C14 dating (Figure 5). Of these, unfortunately, the bottom layer sample (Context 1024) displayed an error and no specific date was obtained. The date obtained is for context 1003, which is roughly the first relatively stable layer of Trench A, with a 95% probability of 1267–1123 BCE.



TR: A C.1003 RN:1011 TR: A C.1006 RN:1047



TR: A C.1011 RN:1112

Figure 23. TR. A, absolute dating

The second date is related to the beginning of context 1006, which is actually the gathering layer of different types of pottery belonging to the 4th millennium BCE; however, the results indicate that the tested sample was not present and had penetrated from the upper layers. This date with 79% probability is 1683–1781 BCE. The last example is related to Context 1011, the oldest layer from which the bevelled-rim bowls were obtained, which is in fact the transition stage from the 5th to the 4th millennium BCE. This date with an 80% probability is 3521–3611 BCE (Figure 30). The beginning of

the settlement and the absolute date of the pottery belonging to the beginning of urbanization in Kale Kub are not known, and it is hoped that in the coming seasons, the determination of more dates will make it possible to correct and complete this absolute chronology.

8.Conclusion

Archaeological excavations at Kale Kub of Ayask town, Sarayan District, South Khorasan Province, were carried out in June 2016 with the permission of the Research Institute of Cultural Heritage and Tourism and with the financial support of the General Directorate of Cultural Heritage, Handicrafts and Tourism of South Khorasan Province. This site was excavated for three seasons to determine the buffer zones and stratigraphy. Unfortunately, due to the lack of reports from the excavations, previous research data were not available. There are very few prehistoric sites in South Khorasan Province and very few sites where archaeological excavations can be conducted. Therefore, the General Administration of the province has sought re-financing to continue archaeological research in Kale Kub, which is one of the few prehistoric sites in the region that can be excavated.

Archaeological studies in the eastern regions of Iran are very limited and there have been very few archaeological research conducted in this area, most of which are not available, and this lack of information is more evident for the prehistoric period. Archaeological information from the northeast and southeast of Iran for the prehistoric period, although sparse, is remarkable; however, the eastern regions show striking differences for many reasons. Recent archaeological surveys conducted by local archaeologists have provided a general relative chronology for South Khorasan Province.

Kale Kub is located in South Khorasan Province and is one of the few prehistoric sites in eastern Iran that has a cultural sequence and adequate cultural deposits suitable for archaeological studies. The purpose of the excavations in this season was to present a relative and absolute chronology of this site with two excavations measuring 2 × 2 metres in stratigraphical trenches. The surface of the site has been completely disturbed due to agricultural activity and cultural materials have been scattered, rendering it impossible to identify the centre of the site. During the excavations which were carried out in this season in Trenches A and B from the surface to virgin soil, and according to the identified cultural materials, the stratigraphic sequence of the three cultural periods, which are called Kale Kub 1 to 3 from oldest to newest, have been suggested as follows:

Kale Kub I: The oldest cultural evidence of Kale Kub, which is directly on the virgin soil, represents Early Chalcolithic culture, which is known in the central plateau of Iran as the Silk II or Cheshmeh Ali period. The diagnostic pottery of this period in the Central Plateau of Iran is a type of fine painted red ware, of which several samples have been identified in the lower layers of both Trenches A and B. In addition to the few pieces of fine painted red ware mentioned above, the main potteries of the lower layer are generally coarse simple handmade buff wares. The proposed date for the beginning of settlement in the Kale Kub is early 5th millennium BCE.

Kale Kub II: The next period of Kale Kub, which is the top layer of the 5th millennium BCE layers, has provided perhaps the most important results from this season's excavation. Significant types of potteries, which were the most popular in the southwest of Iran, have been found from this period. These include the bevelled-rim bowls,

Banesh trays, tubular pottery, nose-handle, string-cut base and buff-painted Buff ware with black/brown motifs, which have a similarity to Khuzestan (Alizadeh, 2014, P: 129), Godin (Kopnik, Rathman, 2016: 77, Figure 4.15) in Central Zagros, and Silk (Grishman, 1938, P: 176, Pl. XXVI, No. 3), Arisman (Helwing, 2011) and Gholi Darvish (Sarlak, 1390: 540), and other types of wheel-made Buff ware similar to the final phase of Silk III culture (Late Chalcolithic period). The existence of this type of 4th millennium BCE pottery like those found in eastern Iran is very interesting and perhaps the most important discovery of this excavation.

Kale Kub III: The surface layers have been disturbed and most of the pottery is simple and coarse Buff type that cannot be dated at all. However, a few samples of grey wares have been found from the upper layers, and based on the presence of this type of pottery in addition to C14 dating indicate that this layer belongs to the Bronze and Iron Ages (3rd and 2nd millennium BCE).

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Reference

Abdi. K. 2008. *Beveled Rim Bowls: Its Application and Dispersion, in Archeology and Art of Iran, 32 articles in honor of Ezatullah Neghaban*, by Abbas Alizadeh, Yousef Majidzadeh and Sadegh Malek Shahmirzadi, Tehran, University Publication Center Pp: 64-84.

Alden. JR. 1979. *Regional Economic Organization in Banesh Period Iran*, the University of Michigan, PHD.

Alizadeh. A. 2008. *Choqa Mish II, The Development of a Prehistoric Regional Center in Lowland Susiana, Southwestern Iran, Final Report On the Last Six Seasons of Excavations, 1972- 1978*, The Oriental Institute of the University of Chicago, Oriental Institute Publications, Vol: 130.

Alizadeh. A. 2014. *Ancient Settlement System and Cultures in the Ram Hormuze Plain, Southwestern IRAN, Excavations at Tall-e Geser and Regional Survey of Ram Hoemuz Area*, with contributions by Loghman Ahmadzadeh and Mehdi Omidfar, Oriental Institute of the University of Chicago, Oriental Institute Publications, Vol: 140.

Alizadeh. A. Aghili Sh. Sarlak S. 2015. *Highland-Lowland interaction in the late 4th and early 3rd millennium BCE: the evidence from Qoli¯ Darvı¯s˘, Iranian Central Plateau*, Archäologische Mitteilungen aus Iran und Turan 45: 149- 168.

Anani. B. 1391. *Interaction Spaces in Eastern Iran Based on Findings from the Kale Kub, Sarayan*, MA Thesis, Zahedan, Sistan and Baluchestan University, unpublished.

Azizi Kharanagh. M.H. Masashi A. Jamshidi Y.S. Anani B. Akbari A. Goodarzi P. 2018. *Archaeological Report of strati graphical excavation at kale Kub, Sarayan, South Khorasan Province*, Archive report, Library of Archaeological Research Institute (unpublished).

Azizi Kharanaghi. M.H. in collaboration with Jamshidi Y.S. Akbari A. Pour Momen Sh. Kasraei N. Khajeh A and Beizai Doust S. 2017. *Archaeological Report of the second seasons of archaeological excavation of Tape Pahlavan, Jajarm District*, Library of Archaeological Research Institute (unpublished).
Azizi Kharanaghi. M.H. Jamshidi Y.S. Masashi A. Akbari A. 2020. *New Evidence of Beveled Rim Bowls from Kale Kub, South Khorasan Province*, Parseh Journal of Archaeological Studies, Vol: 12, Pp: 29-48.
Azizi Kharanaghi. M.H. Thomalsky J. Khanipoor M. Jafari J. 2016. *Archaeological research at Tappeh Pahlavan, North Khorasan Province (Northeastern Iran): Report on the 2014 season*, Journal of Ancient Near Eastern Studies (ANES), Vol: 53, pp: 59-79.
Behnia. M.R. 2002. *Birjand the jeweled of desert*, Tehran, University of Tehran publication.
Buikstra J.E. Ubelaker D.H. 1994. *Standards of Data Collection from Human Skeletal Remains*, Fayetteville: Arkansas Archaeological Survey Research Series.
Coon. C. S. 1951. *Cave explorations in Iran 1949*, Philadelphia university of Pennsylvania.
Dana. M. 2019. *Late Iron Age and Achaemenid Pottery Traditions in Eastern Iran*, Proceedings of the International Conference on Iron Age Archeology in Western Iran and Neighboring Areas, by Yousef Hassanzadeh, Ali Akbar Vahdati and Zahed Karimi, Kurdistan: Cultural Heritage, Handicrafts and Tourism of Kurdistan, Pp: 410-392.
Dana. M. Rafiei. S.R. 2019. *Preliminary report of the fourth Seasons of excavation at Takhcharabad, Birjand*, Proceedings of the 17th Annual Iranian Archaeological Conference, by Ruhollah Shirazi and Shaghayegh Horshid, Tehran: Cultural Heritage and Tourism Research Institute, Pp: 184 -182.
Delougaz. P. Kantor H.J. edited by: Alizadeh. A. 1996. *Choqa Mish I, The First Five Seasons of Excavations, 1961- 1971, Part 1: Text*, The Oriental Institute of the University of Chicago, Oriental Institute Publications, Vol: 101.
Delougaz. P. Kantor H.J. edited by: Alizadeh. A. 1996. C*hoqa Mish I, The First Five Seasons of Excavations, 1961- 1971, Part 2: Plates*, The Oriental Institute of the University of Chicago, Oriental Institute Publications, Vol: 101.
Deputy Minister of Culture and Cultural Heritage Communications. 2005. *South Khorasan Red Gold Land*, Tehran, Iranian Cultural Heritage and Tourism Organization.
Fazeli. N.H.2006. *Socio-political changes in Qazvin plain, Archaeological excavations of the Tepe Chabristan (Season 3 report)*, Tehran, Cultural Heritage, Handicrafts and Tourism Organization, Archaeological Research Institute, P.147.
Gershman. R. 2000. *Kashan Sialk, Vol: I*, translated by Karimi. A. Cultural Heritage Organization Publications.
Ghasemi. S. Hessari. M. Akbari. H. 2018. *Zavarehvar, the Central Site from of the Urbanization Period (Protoliterate) of Varamin Plain: Studying Pottery Features*. Parseh J Archaeol Stud. 2018; 2 (4) :51-68
Gopnik. H. Rothman. M.S. 2016. *On The Highroad, The History of Godin Tape, Iran*, Translate by: Mirghaderi. M.A and Saburi.H, Tehran, The Center for the Great Islamic Encyclopedia (center for Iranian & Islamic Studies).
Grishman, R, 1938, *Fouilles De Sialk, Pres De Kashan, 1933, 1934, 1397*, Vol: I.
Helwing. B. 2011. *Proto- Elamite pottery from areas A, C, D and E*, in Early Mining and Metallurgy on the Western Central Iranian Plateau, the first five years of work, editors: Vatandoust. A. Panzinger. H. Helwing. B. Archäologie in Iran und Turan, Band: 9, P: 196- 253.
Hessari. M. Akbari. H. Sardari Zarchi. A. 2017. *Bard Panir: A Station or Settlement of Proto-Writing in the North of Khouzestan*. Parseh J Archaeol Stud. 2017; 1 (1): 35-48
Karlovsky. L. Potts. D.T. 2001. *Excavations at Tepe Yahya, Iran, 1967-1975, The Third Millennium*, BUFFBODY MUSEUM OF ARCHAEOLOGY AND ETHNOLOGY, Harvard University, Cambridge, Massachusetts.

Labaf Khaniki. R.A. 1997. *Archaeological Survey of Gonabad Qanats*, Archaeological Reports (1), P: 289- 271.

Labaf Khaniki. R.A. 2012. *Review of Khorasan Archaeological Activities from the Beginning to the Present*, Proceedings of the 80 years of archeology in Iran, the first volume, edited by Hassanzadeh. Y. Miri. S. Tehran, Parineh publications, collaboration with the National Museum of Iran, P: 127- 158.

Labaf Khaniki. R.A. Bashash. R. 1994. *Lakh Mazar Birjand Petroglyphs*, Research Articles 1, Tehran, Deputy of Introduction and Education of the Iranian Cultural Heritage Organization.

Majidzadeh. Y. 2008. *Excavation At Tepe Gharistan, IRAN*, IsIAO, ROMA.

Majidzadeh. Y. 2010. *Excavations of Ozbaki, Vol: I, Pottery*, Cultural heritage, Handcrafts and Tourism of Tehran Province.

Malek Shahmirzadi. S. 2012. *Sialk Villagers*, Proceedings of The Review of Sialk, Research Institute of Cultural Heritage and Tourism.

Mutin. B. 2013. *Ceramic Traditions And Interactions On The South-Eastern Iranian Plateau During The Fourth Millennium BC. In Ancient Iran And Its Neighbours: Local Developments And Long-Range Interaction In The Fourth Millennium BC*, edited by Cameron A Petrie, 253–85. Oxford: Oxbow books.

Samadi. H. 1951. *Eight months of effort to follow the effects of the Stone Age of Iran*, Education Monthly, Vol: 25, No. 70- 85- 6.

Sarayan Town master plan, sustainable consulting engineers of structural design. 2009.

Sarlak. S. 2011. *Archeology and history of Qom, the results of archaeological excavations and stratigraphy of Gholi Darvish and Shadgholi Khan sites, Archaeological studies in the historical, cultural and religious axis of Qom*, Cultural Heritage, Handicrafts and Tourism Organization of Qom Province.

Sołtysiak. A. 2010. *Death and decay at the dawn of the city. Interpretation of human bone deposits at Tell Majnuna, Areas MTW, EM and EMS*, Warszawa: Instytut Archeologii UW.

Soroush. M.R. 2012. *Archaeological Research in South Khorasan*, Proceedings of the 80 years of archeology in Iran, the first volume, edited by Yousef Hassanzadeh and Sima Miri, Tehran, Parineh publications, collaboration with the National Museum of Iran.

Tohidi. F. 1977. *Khrasan (Sabzavar) archaeological survey report*, Khorasan Cultural heritage documentary center (unpublished).

Tohidi. F. 1978. *Khrasan (Bojnord) archaeological survey report*, Khorasan Cultural heritage documentary center (unpublished).

Vahdati. A. 2010. *Tepe Pahlavan: A Neolithic- Chalcolithic Site in the Jajarm Plain, North-Eastern Iran*, Iranica Antiqua, vol. XLV.

Yousefi. S. 2008. *Report of Buffer Zone determined of Tape Kondori*, South Khorasan Province cultural heritage and Tourism Archive, unpublished.

Yousefi. S. 2009. *Report of Buffer Zone determined of Kale Kub*, South Khorasan Province cultural heritage and Tourism Archive, unpublished.

Zafaranloo. R. 2004. *Archaeological Report of Buffer Zone Determining of Sardakht Baghistan Ferdows*, Archive of the Cultural Heritage and Tourism Organization of South Khorasan (unpublished).

Zagarell. A. 2008. *The Prehistory of Northeast Bakhtiari Mountains, The Rise of a Highland Way of Life*, Transtate by Roustaei. K. Cultural Heritage, Handicrafts and Tourism Organization of Chahar Mahal va Bakhtiari Province.

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ماساشی آبه

موسسه تحقیقات ملی توکیو برای ویژگی های فرهنگی ، توکیو ، ژاپن.

سپیده جمشیدی یگانه

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چکیده

شرق ایران در نقشه باستان‌شناسی، مخصوصاً در دوره پیش‌ازتاریخ، منطقه‌ای کاملاً ناشناخته است. با گذشت بیش از صد سال از شروع کاوش‌ها و مطالعات باستان‌شناسی در ایران، به دلایل مختلف مناطق شرقی کمتر یا اصلاً مورد توجه باستان شناسان قرار نگرفته و انتشارات بسیار محدودی از فعالیت‌های باستان‌شناسی در این بخش از ایران وجود دارد. محوطه باستانی کله‌کوب آیسک، یکی از محدود محوطه‌های پیش‌ازتاریخی استان خراسان جنوبی و در کل شرق ایران است که دارای نهشته‌های فرهنگی کافی به منظور ارائه گاهنگاری و شناخت توالی فرهنگی؛ فرهنگ‌های پیش‌ازتاریخ این منطقه است. کاوش‌های صورت گرفته در خرداد و تیر سال ۱۳۹۷ در این محوطه منجر به شناسایی فرهنگ‌های پیش‌ازتاریخی ناشناخته‌ای در منطقه شد که در این مقاله معرفی می‌گردند. شاید شاخص‌ترین دستاورد نخستین فصل کاوش در این محوطه شناسایی فرهنگ‌های هزاره چهارم پیش از میلاد با خاستگاه جنوب غربی و بین‌النهرینی است که شواهد آن بسیار دور از مرکز در این محوطه به دست می‌آیند. این شواهد فرهنگی که می‌توان آن‌ها را هم افق با فرهنگ شوش II یا اوروک جدید دانست، شامل انواع سفال‌های شاخص این دوره از قبیل سفال‌های لبه واریخته، سینی‌های خشن نوع بانشی، ظروف لوله‌دار و خمره‌های دسته دماغی، سفال‌های منقوش و سفال‌های چرخ‌ساز ظریفی هستند که در نواحی جنوب غربی، غربی، شمال غربی، جنوب شرق و فلات مرکزی ایران شناخته شده هستند ولی در شرق ایران برای نخستین بار شناسایی و معرفی می‌گردند. به طور کلی بر اساس کاوش در دو ترانشه لایه‌نگاری (A و B) در این محوطه سه دوره فرهنگی تاکنون شناسایی شده است که آن را از قدیم به جدید با عنوان کله‌کوب ۱ (دوره مس‌سنگی، هزاره پنجم پیش از میلاد)، کله‌کوب ۲ (افق فرهنگی شوش II، هزاره چهارم پیش از میلاد) و کله‌کوب ۳ (عصر مفرغ، هزاره سوم و دوم پیش از میلاد)؛ معرفی می‌کنیم.

واژگان کلیدی: کله‌کوب، لایه‌نگاری، گاهنگاری نسبی و مطلق، افق فرهنگی شوش II

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