



پژوهش‌های باستان‌شناسی ایران

PAZHOSH-EHA-YE BASTANSHENASI IRAN
P. ISSN: 2345-5225 & E. ISSN: 2345-5500
Homepage: <https://nbsh.basu.ac.ir/>
Vol. 13, No. 37, Summer 2023



The Late Neolithic in the Central Zagros Foothills: New Evidence from Remremeh, Mehran Plain

Darabi, H.¹

<https://dx.doi.org/10.22084/NB.2023.27811.2591>

Received: 2022/11/23; Accepted: 2023/03/12

Type of Article: **Research**

Pp: 35-59

Abstract

As far as the Neolithic period is concerned, the focus of research has been on the study of the early domestication and sedentary life throughout the central Zagros. However, insufficient attention is paid to later developments during the late Neolithic, and our current knowledge is largely based on the investigations of the 1960-70s, especially those carried out in the foothills which played a role as a ‘transition zone’ between Mesopotamia and the Zagros. In this context, the nature of cultural interactions in local and regional contexts is of particular importance. Moreover, the probable reasons that brought an end to the Neolithic way of life in the region are not yet known. The new, brief excavations at the site of Remremeh in the Mehran Plain have therefore shed new light on these issues. So far, as attested by AMS dates and ceramic analysis, a long sequence from the 7th to the 6th millennium BC has been excavated at the site. Accordingly, the central part of the site contains the late Neolithic remains with artifacts similar to the Deh Luran plain while the eastern part yielded a combination of local late Neolithic and Hassuna and late Samarra materials. It seems that the local Neolithic materials and thus the traditions were preserved until the end of the 7th millennium BC when Hassuna and Samarra elements were introduced to the region, respectively. After a few centuries of coexistence of local and Mesopotamian entities, the so-called late Samarran or Chogha Mami Transitional (CMT) materials, especially the black-on-buff ware, dominated the Mehran plain and other nearby lowlands in southwestern Iran. This may mark the end of the Neolithic period in the region, although the nature of this cultural transition or replacement remains controversial. However, to date, the finds from the site would help with better understanding of the cultural development and interaction in the borderland foothills over the late Neolithic.

Keywords: Late Neolithic, Central Zagros Foothills, Remremeh, Mesopotamia, Cultural Interactions.

1. Associate Professor, Department of Archeology, Faculty of Literature and Humanities, Razi University, Kermanshah, Iran.

Email: h.darabi@razi.ac.ir

Citations: Darabi, H., (2023). “The Late Neolithic in the Central Zagros Foothills: New Evidence from Remremeh, Mehran Plain”. *Pazhohesh-ha-ye Bastan Shenasi Iran*, 13(37): 35-59. <https://dx.doi.org/10.22084/NB.2023.27811.2591>

Homepage of this Article: https://nbsh.basu.ac.ir/article_5319.html?lang=en

PAZHOSH-EHA-YE BASTANSHENASI IRAN
Archaeological Researches of Iran
Journal of Department of Archaeology, Faculty of Art and Architecture, Bu-Ali Sina University, Hamadan, Iran.

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Introduction

The Neolithic period saw critical developments in the pace of human life. Across west Asia, due to the focus of research on the Levant and Anatolia, most of the evidence currently available comes from these two regions, while the Zagros has received comparatively little attention in the last several decades. Even in the Zagros region itself, previous studies have, on the one hand, focused on the emergence of domestication and sedentary life during pre-pottery Neolithic (Bangsgaard et al., 2021; Braidwood and Howe 1960; Braidwood et al., 1961; 1983; Dally et al., 2021; Darabi 2015; Hole 1996; Matthews et al., 2013; 2020; Riehl et al., 2013; 2015; Weide et al., 2018; Zeder 2005; 2008). On the other hand, the later socio-cultural developments of the Neolithic are poorly known, as our current knowledge is still based on the research undertaken in the 1960-70s. When it comes to the late Neolithic, one may address different topics, especially the appearance and distribution of early ceramic styles (Mortensen 1991), domestication of sheep, pig and cattle (Arbuckle et al., 2016; Zeder 2008) and increasing interactions between highlands and lowlands (Hole 2011) during the 7-6th millennia BC.

As a 'transition zone' connecting the two main landscapes of the eastern Fertile Crescent, the Zagros highlands and Mesopotamian lowlands, the foothills of the Zagros mountains seem to have played a key role in cultural transformations and interactions during the Neolithic (Darabi 2021). This zone is an elongated frontier marked by a distinctive ecotone where human communities could maximize better access to the resources of major adjacent regions, including the nearby low-lying plains, the northern Zagros flanks, and even the sea of the Persian Gulf to the south (Matthews and Fazeli Nashli 2022:13). This transitional zone has been occasionally under archaeological research correlated with the Neolithic period as shown by the excavations at Ali Kosh (Hole, Flannery and Neely 1969; Darabi 2018), Chogha Sefid (Hole 1977), Tulaei (Hole 1974) and Chogha Golan (Conard, Riehl and Zeidi 2013). Of these, the excavations at Chogha Sefid, Deh Luran plain, represented a cultural change in the local Neolithic sequence that has long been supposed to have been caused by migrant people from the Mandali region, eastern Iraq, in the second half of the 6th millennium BC (Hole 1977; 1987; also see below). This idea was not further addressed against new data in the last four decades. Thus, to better understanding of the late Neolithic, especially its termination, in the Zagros foothills the new promising site of Remremeh was dug on the Mehran Plain in May- June 2020. This article not only presents new

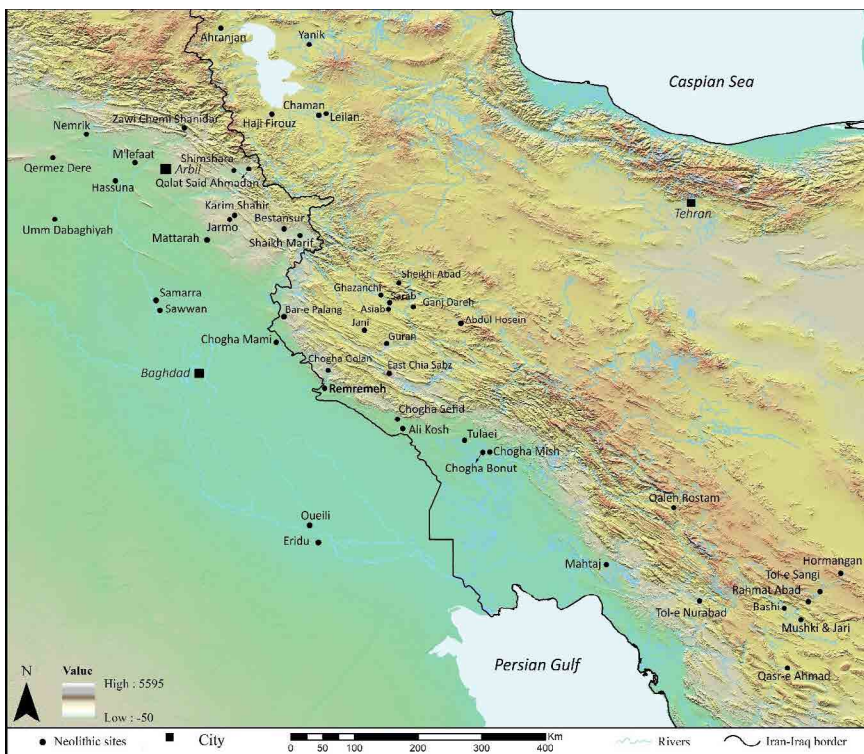
archaeological finds from the site but also discusses how largely the plain was important in social interactions during the 7-6th millennia BC.

Late Neolithic in the foothills of the central Zagros

Archaeological investigations indicate that the appearance of pottery in western Aisa took place around 7000 BC, which is known as the beginning of the late Neolithic (see Tsuneki, Nieuwenhuys & Campbell 2017 and contributions therein). This event is also evident in the Iranian Zagros Mountains or foothills (Alizadeh 2021; Darabi 2018; Petrova & Darabi 2022). However, when it comes to the aforementioned transition zone, there is a scarcity of correlated records. On the one hand, recent investigations have been limited to general reconnaissance, although some have yielded promising results (see Alibaigi and Salimiyan 2020; Darabi 2020; Mansouri and Mansouri 2016). On the other hand, the excavated finds date to the late Neolithic carried out from the 1960-70s excavations at Ali Kosh and Chogha Sefid in the Deh Luran plain (Hole 1977; Hole et al., 1969) and to the southeast at Tulaei, Chogha Bonut and Chogha Mish in the Susiana plain (Alizadeh 2003; Delogaz and Kantor 1996; Hole 1974). These two low-lying plains showed an intense interaction during the late Neolithic as indicated by their general archaeological repertoires. Nevertheless, some artefacts could also determine locally different criteria. In Susiana, the longest late Neolithic sequence comes from Chogha Mish, Archaic Susiana 1-3, in the local chronological sequence (Delogaz and Kantor 1996). Moreover, the earlier pottery phases known as Formative Susiana and Archaic 0 have only yet been discovered at Chogha Bonut (Alizadeh 2003). In the Deh Luran plain, the late Neolithic period coincided with the Mohammad Ja'far, Sefid and Surkh phases. Subsequently, Mesopotamian finely painted ceramics, the late Samarran black-on-buff, introduced to the both plains. They are stylistically different from the local Neolithic collections (Darabi 2020). The same can be observed in Mesopotamia itself, where Samarran elements incorporated into the preceding Hassuna assemblages and then replaced it through time (see Braidwood et al., 1952; Lloyd & Safar 1945; Mervet and Munchaev 1978; Mortensen 1970; Odaka et al., 2020; Tsuneki et al., 2016; 2019).

Following the excavations by J. Oates at Chogha Mami in the Mandali region, where she suggested a transition from Samarra to Ubaid pottery (Chogha Mami Transitional/CMT) (Oates 1969; 1987; 2013), the introduction of a similar style in the Deh Luran plain led F. Hole (1977; 1987) to argue that this was caused by the migration of people from the

former to the latter. This hypothesis has not yet been tested against new empirical excavated data from the region, although some recent surface finds have been thought to consider eastward spread of the Samarran phenomenon (see Darabi 2020). Regardless of the most likely reasons, which remain to be investigated, the appearance of black-on-buff pottery marked the end of local Neolithic entities in the Zagros foothills. In this respect, the sites that show both local Neolithic traces and later regional Samarran elements are of particular importance to study this cultural change. This could highlight the recently excavated site of Remremeh in the midpoint of Mandali and Deh Luran (Fig. 1).



◀ Fig. 1: Geographic distribution of Neolithic sites, including Remremeh, throughout the Zagros (map: H. Ghabadizadeh).

The site of Remremeh: natural setting and research objectives

Remremeh (E 611893, N 3667097) is located in the northwestern part of the Mehran Plain, Ilam Province, at an altitude of 170m above sea level. The town of Mehran lies about 2 km south/southwest of the site on the Iran-Iraq border line (Fig. 2). Like the nearby plain of Deh Luran, Mehran is a small alluvial plain enclosed on the north and south by the Zagros and Jebel Hamrin ridges, respectively (for geomorphological information on the Deh Luran plain see Kirkby 1977:251-288). The gradient thus appears to be higher than in the open plains of Khuzestan and southern Mesopotamia. The plain is drained mainly by three major perennial rivers,

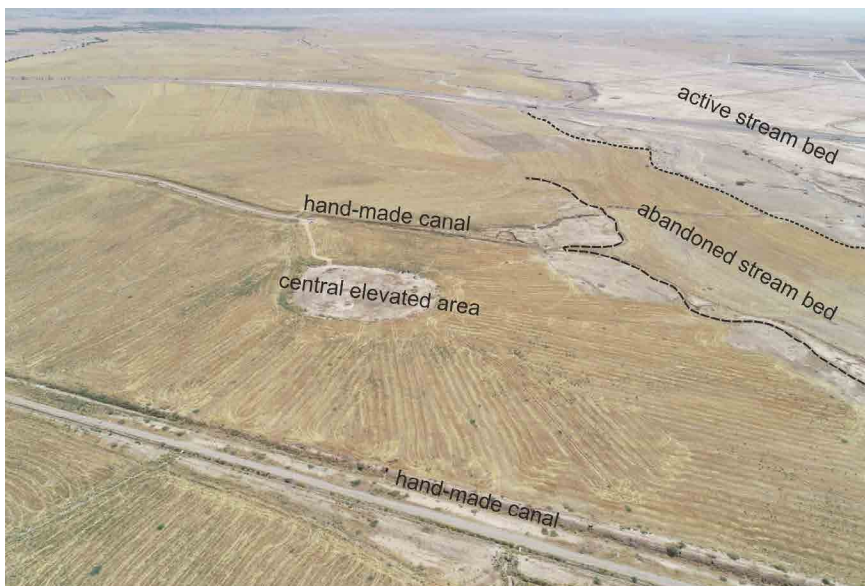
including Konjancham, Gavi, and Changuleh. These rivers, along with several alluvial fans, played an important role in the formation and uplift of the present plain. The Gavi is a braided river that has not deeply incised the plain and largely changed its main channel during flood times. This is likely to have affected the settlement patterns through the plain.

Due to massive sedimentation, Remremeh is not easily visible above the surrounding fields, although its central part is elevated to a small extent, 1-2m (Fig. 3). Currently, almost the entire area of the site is intensively ploughed for agricultural products using a wide irrigation canal system. This and several deepening gullies, have destroyed the northern, north-eastern and southern corners of the site. On the surface, there is a high density of archaeological finds such as shreds, chipped stones, and grinding stones, but these are mainly clustered in the central and eastern/northeastern areas. In this respect, the Neolithic traces are concentrated in the central and, to a lesser extent, in the eastern area, while the rest of the site has finds from the Early Chalcolithic (east/northeast) and the Proto-lithic (southeast). This spatial variability of the site appears to have resulted from its location at the base of several alluvial fans seen to the north. These fans formed two seasonal streams to the east. In addition, a small channel is derived from the Konjancham stream to the west. The present-day abandoned course of the channel is visible in the southern/southwestern area of the site. Since the first occupation of the site, the natural environment has been so geomorphologically active that the surface of the plain has been raised by up to 6m with silt and clay deposits during the Holocene (see below). The test pits for delineation and the surface finds dated to the late Neolithic to late Chalcolithic suggest that occupation of the site varied spatially and temporally.

Remremeh was first discovered during a reconnaissance survey in 2010 (Darabi et al., 2020; Javanmardzadeh et al., 2013), although the plain had been under various occasional investigations since 1996 (see: Khalilian, 1996; Nokandeh, 2010). Due to the high intensity of Neolithic and CMT potsherds on the surface of the site, the main objectives of the excavation were to obtain new stratified evidence dating to the late Neolithic, to investigate the nature of the spread of the CMT phenomenon in the low-lying plains of the central Zagros foothills, and, finally, to study the natural environment of the site and its development through time. It is noteworthy that the site was also delimited by digging small pits, 1.5x1m in size, around it.



◀ Fig. 2: The location of Remremeh and the nearby rivers and alluvia fans shown in the satellite image (adopted from google earth).



◀ Fig. 3: An aerial view of the site showing surrounding natural and anthropogenic features, looking northeast (photo: H. Darabi).

Excavation areas

An early consideration of the site formation and alternation brought to mind that it is composed of different deposits derived from different Neolithic and Chalcolithic occupations. However, as mentioned above, Neolithic artifacts on the surface, including stone tools and soft wares, are mainly limited to the central and eastern/northeastern areas. In this context, the eastern and northeastern areas even contain a combination of stone tools, plant-tempered buff and red sherds, together with fragments of fine painted black-on-buff ware, while the central raised area lacks a notable amount of the latter. This insightful distribution, also supported by the sections of gullies, was helpful in locating the excavation areas. In order to achieve the

above research objectives, five areas, designated Area A-E, were opened in central and eastern portions of the site (Fig. 4). All areas, with the exception of E, were originally 2x2 m in size, but were then reduced in size during the course of their excavation.

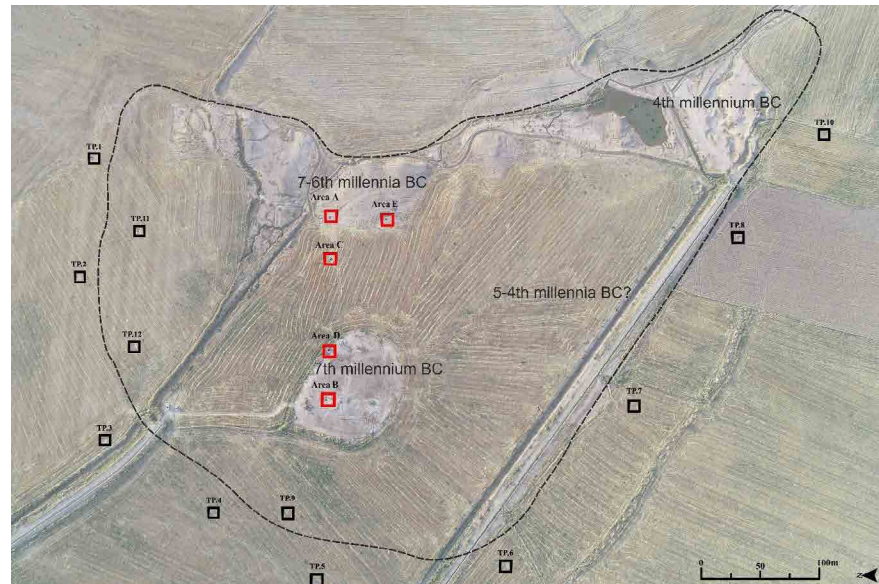


Fig. 4: The location of the excavation areas and test pits shown in the aerial photograph of the site (photo: H. Darabi). ►

Area A was opened at the eastern edge of the site, where the highest concentration of plant-tempered Neolithic and black-on-buff CMT sherds is found. The main objective was to find out the stratigraphic relationships between these different pottery styles at the site. The size of the excavation was reduced to 1x1m at a depth of 0.65m below the surface. Overall, roughly 2m of deposits of sandy silt were excavated over the virgin soil. Based on the unusually high number of pottery sherds and the presence of sand, which was sometimes concreted over the sherds, the finds appear to have been redeposited by water through fluvial action over time. However, the large fragments of a broken vessel still found in situ in association with a stone alignment suggest that the pottery sherds might not have removed far from their original context (Fig. 5).

Area B was opened on the top of the central part of the site. The area was first reduced to 2x1m at 0.6m and then to 1x1m at 1.1m below the surface. Finally, the excavation was stopped after digging 2.15m of predominantly silty-clay to clayey deposits. Here, a few sherds and what appeared to be aligned stones were recovered. In addition, remains of ash were found in the lower layers. However, due to the low intensity of the finds within alluvial silty clay deposits and time constraints, the excavation was not continued down to the virgin soil.

When it became apparent that the materials from Area A were mostly subject to fluvial activity, a new area (Area C) was opened to the west of it to find in situ finds that may have washed east to where Area A was located. Area C was also reduced in size, to 2x1m at 0.4 m depth and then to 1x1m at 0.9m depth below the surface. Excavation was finally terminated at 2m below topsoil. The deposits consisted entirely of silty-clay and clayey sediments, devoid of in situ archaeological finds though a few ceramic sherds were found.

The main body of stratigraphic information comes from Area D in the central part of the site. At a depth of 1.5 m and then 2 m below the surface, the excavation size was reduced to 1.5x1 m and 1x1 m respectively. The deposits became increasingly moist at deeper levels, making them difficult to distinguish stratigraphically. However, thanks to the recovery of architectural remains of pise walls, plastered or beaten floors and intensified horizontal distribution of finds over the same levels, a total of 10 occupational phases could be recognized within a 5.8 m deep cultural sequence, overlying virgin soil consisting of sand and gravel (Fig. 6; also see Fig. 15). As indicated by the finds, particularly the ceramic types, and the radiocarbon dates (see below), this area contained only a long sequence from the late Neolithic without any in situ evidence of later periods.

Area E was opened up to recover and document some stone alignments that were not only visible on the surface, but also in adjacent to a mixture of a large amount of both Neolithic and CMT sherds in the eastern part of the site to the south of Area A. The stone lines were left almost in place as the area had not yet been ploughed for agricultural activities. Area E was initially 4x2 m, but was then reduced in size and finally stopped its excavation at a depth of 1.24 m below the surface. Here, three superimposed phases were distinguished by architectural remains characterized by scatters of cobbles of different sizes, sometimes aligned. In terms of deposition, a similar process to Area A took place here, and a large number of sherds, sometimes quite large, were also deposited by fluvial activity (Fig. 7). A ceramic vessel was even found in situ in the lowest excavation level. The upper phase had a large number of finely painted CMT sherds mixed with fragments of coarse plant-tempered samples, while the proportion of the former decreased sharply in the two lower phases.

Ceramics

A large number of ceramic fragments (ca. 14,000 pieces) were recovered, mainly from Areas A and E. Such a large number, compared to the small excavation areas, resulted from the intensity of potsherds in the eastern

Fig. 5: General final view of Area A representing an in situ broken ceramic vessel along with a stone alignment and a high intensity of sherds in the section (photo: H. Darabi). ▶



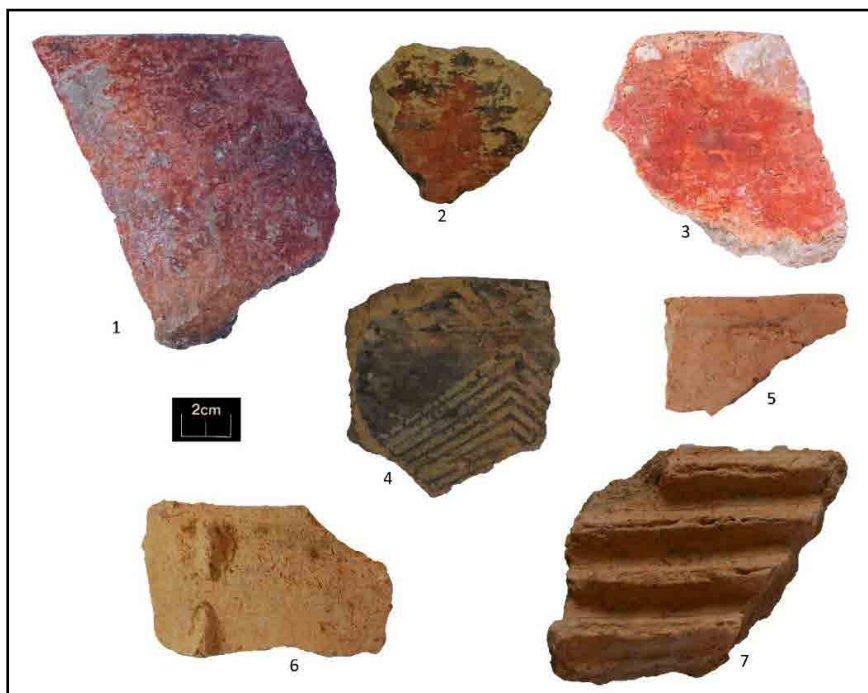
Fig. 6: a pise wall and the correlated space (c.4014) exposed in Area D. (photo; S. Mostafapour) ▶



part of the site. The Neolithic assemblage bears strong similarities to previously reported samples from Neolithic sites in the neighbouring Deh Luran plain (see Hole 1977; Hole, Flannery and Neely 1969; Petrova & Darabi 2022). In addition, the presence of Hassuna styles, including the so-called coarse plant tempered ware and husking tray is remarkable at the site (for comparisons see Braidwood et al., 1952; Lloyd & Safar 1945; Merpert & Munchaev 1978; Mortensen 1970; Odaka et al., 2023). As mentioned above, the painted black-on-puff fine pottery attributed to the



◀ Fig. 7: The intensity of ceramic sherds in adjacent to stone alignments in Area E (note the presence of painted black-on-buff in the proximity of coarse Neolithic sherds seen in the foreground to the right corner) (photo: H. Darabi).



◀ Fig. 8: The Neolithic ceramics from Rem-remeh (1-2. Sefid black-on-red; 3. Khazineh red; 4. White-on-black; 5. Ja'far Plain; 6. Hassuna coarse plant-tempered with applique decoration; 7. Husking tray).

late Samarra/CMT period (see Blackham 1996; Braidwood et al., 1944; Hole 1977; Nieuwenhuys 1999; Nieuwenhuys et al., 2001; Oates 1969; 1987; 2013) is present in remarkable quantity, especially in the upper layers of Areas A and E. General analysis of the ceramic collection suggests that a variety of styles, including Ja'far Plain, Sefid black-on-red, Khazineh Red, white-on-black, coarse plant-tempered buff ware and husking tray as well as CMT black-on-buff can be determined at the site (Fig. 8). While the first three styles are already well known in the Neolithic context of

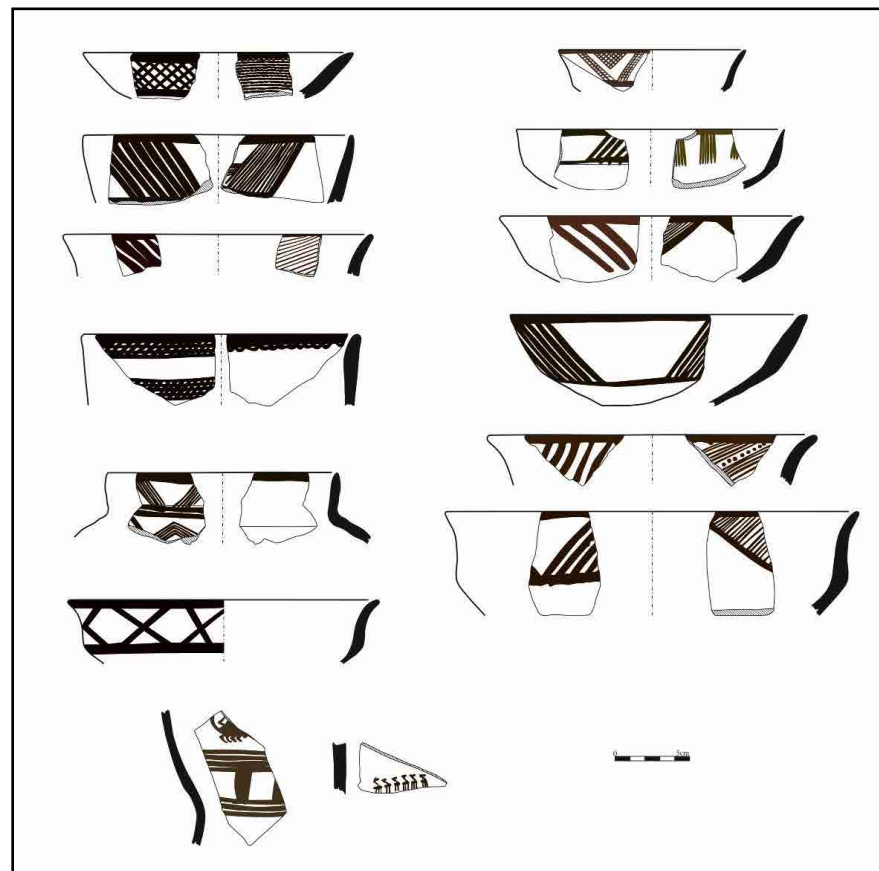


Fig. 9: The CMT black-on-buff ceramics depicting various motifs (drawings: S. Zeinali). ►

the Deh Luran plain, the last two are associated with Hassuna (Darabi et al., 2020). It is noteworthy that only one sample was found in Area D, depicting white geometric motifs on black paste. This style is reminiscent of those reported from Sarab in Kermanshah (see McDonald 1979). The most common forms are carinated vessels with straight and convex or concave walls (for typological and technological characteristics see Hole 1977; Hole, Flannery and Neely 1969). In addition to a large quantity of Hassuna coarse plant-tempered buff ware and a few samples with applique decoration, the presence of husking trays is of great interest at the site.

The CMT samples with black painting were mostly found in the upper levels of Areas A and E together with Hassuna coarse buff or Khazineh red styles. They show a high quality, tempered with fine grit and painted with black to brown motifs on buff or greenish buff paste. A wide range of motif mostly including geometric ones like cross-hatching, chevrons, zigzags, oblique and horizontal close lines or bands is predominant (Bernbeck 2008; Nieuwenhuyse et al., 2001) (Fig. 9). Interestingly, representational motifs of scorpion and birds are also seen among the collection. Such motifs are usually recovered from the classic sites representing early phase of Samarra in the central Mesopotamia.

Lithics

Totally, ca. 1200 pieces of lithics were recovered, mostly from Areas A and D. A variety of raw materials including finely-grained dark or medium gray flint, dark reddish brown or light olive gray chert, black or medium dark gray or dark greenish gray obsidian and brownish gray siliceous limestone was knapped at the site. Of these, flints (75%) are common. Except for obsidian, the rest are locally available in the surrounding landscape, either over the hillocks or in the riverbeds. Various types of cores are seen, struck for making flake, blade or bladelet as primary blanks. Flake cores are predominant while blade (let) cores are less present. Only two typical bullet-shaped cores were found from lower levels in Area D that are chronologically dated to the early 7th millennium BC (Fig. 10; also see below). At all, 363 pieces were recorded as various tool, made on flake (41%), blades (34%), bladelets (21%) and unknown (4%) blanks. Tools are typologically predominated by denticulates, notches, retouched pieces, utilized blades/bladelets and scrapers while a small number of (micro) burins, sickle blades and geometrics are observable (Figs. 11&12). Presence of chopping-tools is also remarkable at the site, especially among the surface assemblage in the central part. Although the whole excavated spoil was screened no debris was found suggesting that they must have been washed away through time. The excavated collection is more oriented toward making flake generally. However, one may also find a considerable number of tools are made on blade (lets). Interestingly, smaller tools were mostly produced from high quality darkish flint that has sometimes a cortex of lime easily available in the nearby river beds. On the other hand, larger tools were made of a local reddish cortical chert, a material that was



◀ Fig. 10: Bullet-shaped bladelet cores found in lower levels of Area D (photo: H. Darabi).

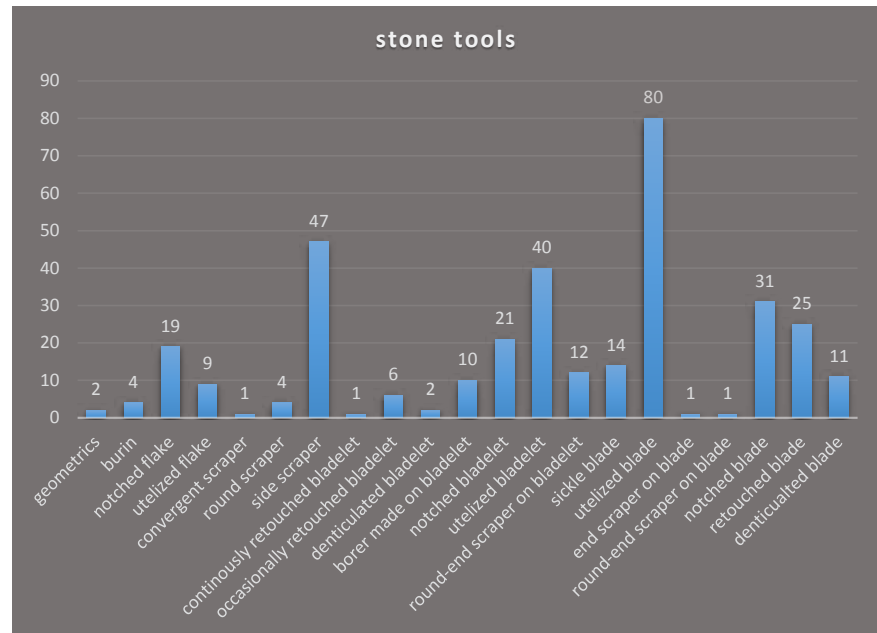


Fig. 11: The proportion of different types of stone tools (chart: H. Darabi). ►

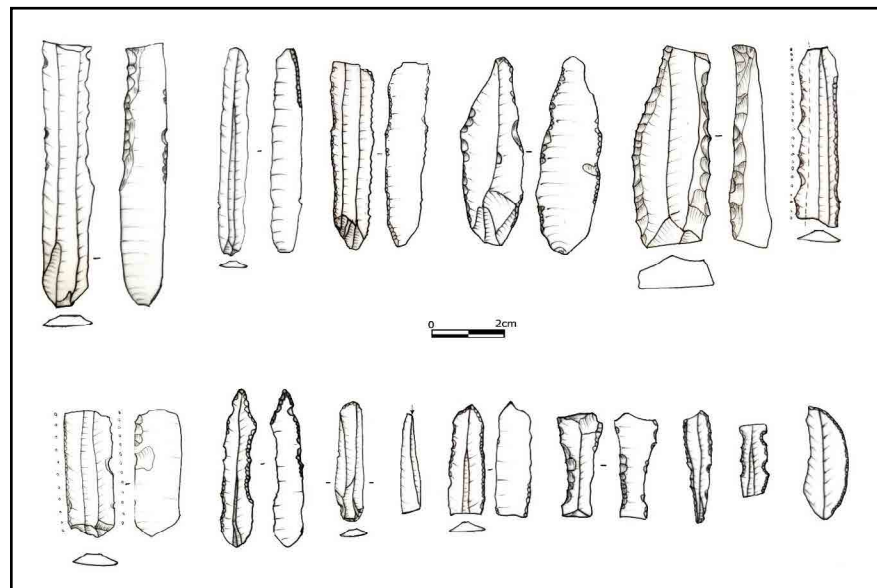


Fig. 12: Different samples of stone tools (drawings: H. Darabi). ►

in use since Paleolithic times onwards on the plain (cf. Darabi et al., 2011). No dia-chronic change can yet be seen in the collection. The transition from local Neolithic to Samarran levels, however, might have coincided with some change in knapping method at the site. This idea needs to be placed against further finds in the future. At the moment, the lithic industry of Remremeh does not well fit with the early M'lefatian industry though pressure technique is evident. Instead, presence of tools like wide blades and, in some cases, geometrics places it within the late M'lefatian industry (cf. Kozłowski 1999).

Miscellaneous

A total of 166 samples of various artifacts, including ground stones, clay tokens, clay figurines, nail-like objects, beads, a stamp seal, and other objects made of ceramic, bone and stone, were recovered from the site. The intensity of various types of ground stones, such as saddle-shaped slabs, large, well-formed pestles, and pounders, is noteworthy among the surface finds, although their fragments were also found in the excavation areas (Fig. 13). Interestingly, an unfinished mortar is also seen in the collection. The tokens are spherical and mostly have a diameter of 9-12 mm. Among the figurines are fragments of three T-shaped samples and a painted terracotta (see Darabi et al., 2020:51, Fig. 9). The former has already been reported from Neolithic sites such as Ali Kosh (Hole, Flannery, and Neely 1969), Chogha Sefid (Hole 1977), Tulaei (Hole 1974), Sarab (Broman Morales 1990), and Jarmo (Broman Morales 1983), while the latter is known as a characteristic artifact of the Samarran sites in Mesopotamia (see Oates 1969, Pl.38-39; 2013:413, Fig. 37.9). The presence of some nail-like clay or stone objects is also considerable at the site (Ibid). These objects have been labeled as “muller”, “labrets” (cf. Hole 1977:368, Pl.54) “toilet items” or “ornaments” (Oates 1969:130). However, they have been usually reported from the Samarran context as previously documented from sites such as Chogha Sefid, Chogha Mami and Yarim Tepe I. Other ornaments include various types of beads made of shell and clay (Fig. 14). A few bone awls and a needle were also recovered. In addition, nine samples of circular objects were found. They are made of various types of ceramic sherds. Four fragments of stone vessels are the other finds from the site. Lastly, discovery of a broken stamp seal from the upper levels at Area E is significant. It is made of fired clay and presents incised checkered pattern.



◀ Fig. 13. Various-sized pestles from the site (photo: H. Darabi).



Fig. 14: Beads made of shell and clay (photo: H. Darabi). ►

Chronology

To establish an absolute chronology for the site, four samples were analyzed at the AMS center in Aarhus University, Denmark. The calibrated range was calculated using OxCal v4.4.2 with the IntCal.20 calibration curve (Reimer et al., 2020) at 68.2% (1σ) and 95.4% (2σ) probabilities. Although the dated samples are not yet sufficient to provide a firm temporal framework for the excavated layers in the different excavation areas, the results obtained provide important implications regarding the Neolithic finds in Area D. So far, only the upper and lower layers of this area have been radiocarbon dated, suggesting with the highest probability a time span of ca. 7000-6000 BC (tab.1; Fig. 15). As mentioned above, only Neolithic objects were found in Area D, which did not contain Samarran material. No radiocarbon dates are yet available for the layers in the eastern part of the site, which have a combination of Hassuna, Samarran, and local (Surkh phase) ceramic styles. However, radiocarbon dates from the contemporaneous site of Said Ahmadan, Iraqi Kurdistan, yielded 6300-5900 and 6100-5900 BC for the Hassuna and Samarra levels respectively (Tsuneki et al., 2019). This indicates that their cultural material coexisted for a period of two hundred years, which was most likely the case at Remremeh as well, as evidenced in Areas A and E. In general, we can tentatively place the remains from Hassuna and late Samarra in a period between the late 7th and early 6th millennia BCE.

As indicated by the dates and also in light of other regional evidence, the deposits excavated at Remremeh could generally be dated to between the beginning of the 7th and 6th millennium BC. Undoubtedly, more dates

Lab No.	Area	Context	Material	Depth (cm)	Calibrated Age (1 σ)	Calibrated Age (2 σ)
33870	D	4004	Charred seed	78	6233BC (12.4%) 6195BC (55.9%)	6358BC (5.9%) 6225BC (89.5%)
33872	D	4007	Charcoal	109	6218BC (40.0%) 6096BC (23.1%) 6044BC (5.2%)	6262BC (95.4%)
33869	D	4043	Charred seed	540	7048BC (21.7%) 6974BC (24.5%) 6886BC (22.0%)	7044BC (92.4%) 6723BC (3.0%)
33873	D	4044	Charcoal	550	7036BC (64.7%) 6789BC (3.6%)	7061BC (95.4%)

◀ Fig. 12: Different samples of stone tools (table: H. Darabi).

will provide us with a more precise chronology that will contribute to a better understanding of the nature and timing of the eastward spread of the Samarran phenomenon into the Zagros foothills (Darabi 2020).

Conclusion

The earliest evidence found so far in Remremeh dates to the beginning of the 7th millennium BC, which coincides with the emergence of the pottery Neolithic in the region. Stratigraphic excavations at the nearby site of Chogha Golan, 27 km to the north, (see Conard, Riehl, and Zeidi 2013) provide evidence for a gap of about five hundred years between the two sites. However, the possible presence of earlier evidence, pre-pottery Neolithic, at Remremeh requires further excavation at the site. The early Neolithic settlements were established in the lowlands of southwestern Iran since the mid-8th millennium BC (Darabi et al., 2021). This could also indicate the possibility of pre-pottery finds, as previously excavated at Ali Kosh and Chogha Sefid.

The brief excavations at Remremeh suggest that the late Neolithic people of the Mehran Plain initially interacted closely with their eastern neighbors in the Deh Luran Plain. This appears to have continued throughout the 7th millennium BC. Nevertheless, the end of this period coincided with the appearance of Mesopotamian elements. Hassuna ceramics seem to have appeared throughout the alluvial foothills of the western central Zagros at the end of the 7th millennium BC. To the east, in Hamedan province, the presence of husking tray-like samples has been attributed to a later period, namely the Early Chalcolithic (Balmaki 2017), although this idea needs to be further tested using stratified and dated finds from the region. Further north, in the Lake Urumia basin, Hassuna materials are already well attested (Voigt 1983) and have been recovered more recently during stratigraphic excavations at the sites of Leilan and Chaman (Abedi 2023, personal communication). Along the western central Zagros foothills,

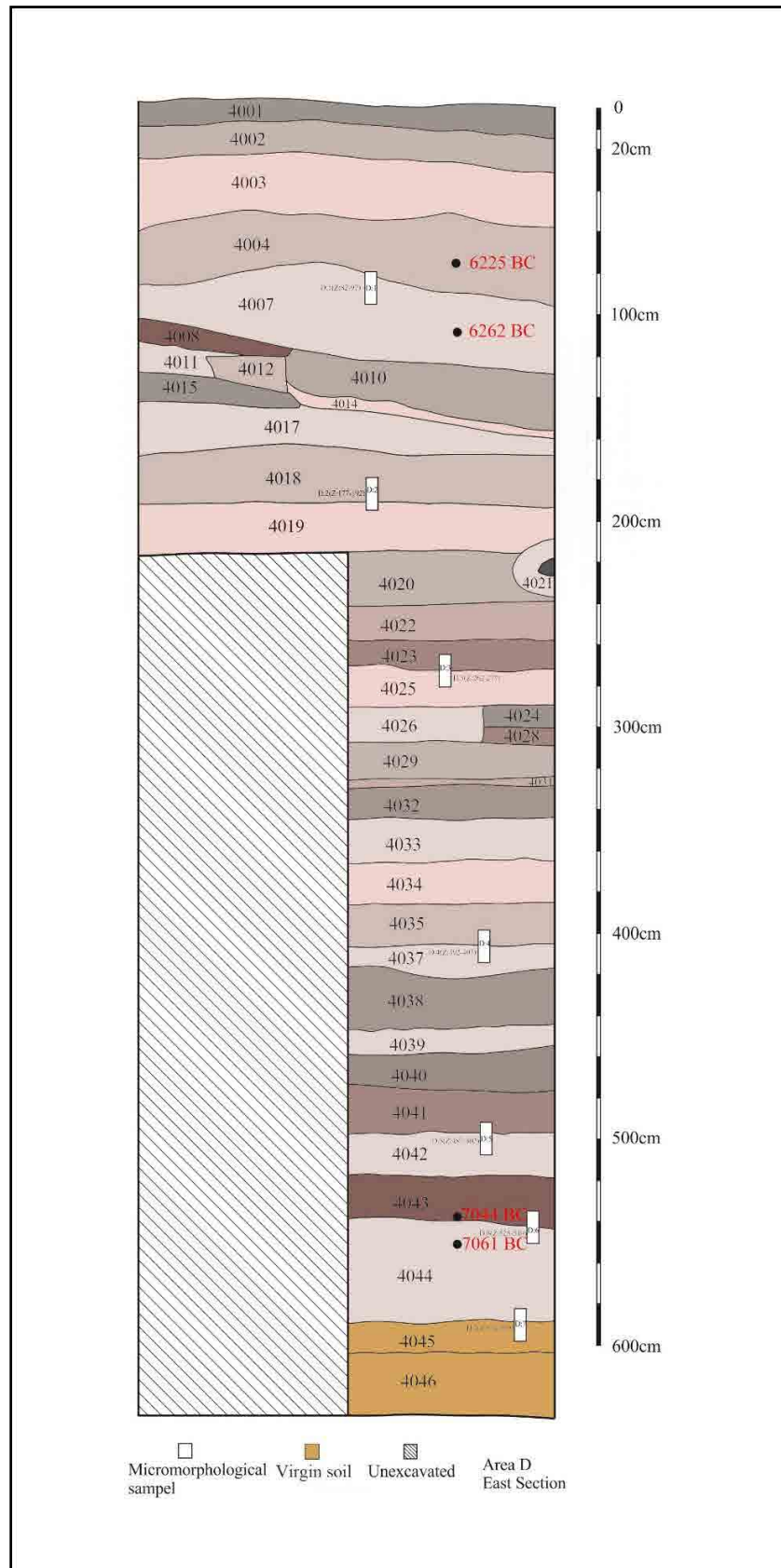


Fig. 15: Stratigraphic profile of Area D in which the obtained AMS dates (2σ) are shown (layers are colored arbitrarily) (Drawing: S. Mostafapour & S. Zeinali). ▶

Hassuna ceramics have previously been recorded in the surface assemblages of some sites in Sarpol-e Zahab (Alibaigi and Salimiyan 2020) and Soumar (Darabi & Mostafapour, 2023). The new finds from Remremeh, however, are considered to be the eastern/southeasternmost and, of course, the richest collection associated with Hassuna to date excavated in the foothills of Iranian Zagros. Hassuna ceramics seem to have incorporated into local late Neolithic entities. Although the deposits containing CMT ceramic style at Remremeh have not yet been radiocarbon dated, we can place them within a general chronological framework recently obtained at Said Ahmadan (see above). Firstly, they are stratigraphically later than the preceding local Neolithic material, as evidenced by excavations at sites in Susiana, Deh Luran and even Iraqi Kurdistan. Secondly, the appearance of the late Samarran finds was dated to 6,200-5,900 BC at Said Ahmadan (Tsuneki et al., 2019; 2016; see also above). This allows us to better clarify chronologically the emergence of the early Mesopotamian elements in the Zagros foothills, where the local Neolithic entities began to end. Explanation of the nature of this cultural replacement is not so straightforward that can be simply explained by the migration of people (for a detailed discussion see Darabi 2020).

The limited stratigraphy at Remremeh shows that during the Late Neolithic there was increasing social interaction at the local and regional/interregional levels. The inhabitants of the Zagros foothills were involved in intense interactions for a long time during the Neolithic. However, while local affinities were maintained for centuries, the incorporation of Hassuna and Samarran elements into the local cultural package made Remeremeh and possibly the entire foothills a 'hotspot' of cultural interactions along the central Zagros at the turn of the 7th to 6th millennia BC. Following the increasing emergence of late Samarran elements, particularly pottery and objects made of clay or stone, local Neolithic cultural features gradually disappeared and merged into a broader and distinct Mesopotamian phenomenon, namely late Samarra. However, it is not yet known how the local late Neolithic communities responded to these newly arrived cultural criteria, although they integrated into a larger socioeconomic network in eastern Fertile Crescent.

Acknowledgements

I would like to express my gratitude to Dr A. Ghasemi, former Governor of Mehran, and also Mr A.M. Shanbehzadeh, former Director General of the CHTH of Ilam Province, for their financial support of sounding at Remremeh. In addition, the CHTH office of Mehran County was helpful

in accommodating the field team. I would also like to thank the Iranian Centre for Archaeological Research (ICAR) for granting permission for the sounding. Undoubtedly, the fieldwork would not have been possible without the admirable efforts of the field members: S. Mostafapour, Ali Yari, S. Zeinali, F. Mohammadi, M. Shahverdi, and I. Fadaeyan. AMS dating was provided by the joint Iranian-Danish project. In this regard, I should be grateful to Dr. T. Richter for his collaboration. Last, the distribution map was kindly prepared by Dr. H. Ghobadizadeh.

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پژوهش‌های باستان‌شناسی ایران

فصلنامه علمی پژوهش‌های باستان‌شناسی ایران
P-ISSN: 2345-5225 & E-ISSN: 2345-5500
نشانی پایگاه نشریه: <https://nbsh.basui.ac.ir>
شماره ۳۷، دوره سیزدهم، تابستان ۱۴۰۲

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حجت دارابی^۱شناسه دیجیتال (DOI): <https://dx.doi.org/10.22084/NB.2023.27811.2591>

تاریخ دریافت: ۱۴۰۱/۰۹/۰۲، تاریخ پذیرش: ۱۴۰۱/۱۲/۲۱

نوع مقاله: پژوهشی

صص: ۳۵-۵۹

چکیده

باستان‌شناسی دوره نوسنگی در زاگرس مرکزی تاکنون متمرکز بر مطالعه شروع اهلی‌سازی و زندگی یکجانشینی بوده است. این درحالی است که توجه به توسعه و تداوم فرهنگی در بعد از آن طی دوره نوسنگی جدید (نوسنگی باسفال) ناکافی بوده و دانش ما عمدتاً همچنان مبتنی بر پژوهش‌هایی است که در سال‌های ۷۰-۱۹۶۰ م.، به ویژه در نواحی کوهپایه‌ای به عنوان «منطقه انتقال» یا حداقل زاگرس و بین‌النهرین صورت گرفته است. در این راستا، ماهیت برهم‌کنش‌های فرهنگی در سطوح محلی و منطقه‌ای از اهمیت ویژه‌ای برخوردار است. هم‌چنین دلایل احتمالی که منجر به اتمام دوره نوسنگی در منطقه شده، هنوز ناشناخته است؛ از این رو، کاوش جدید و البته مختصر در محوطه نوسنگی رمرمه در دشت مهران توانسته است به مطالعه بهتر این مسائل کمک کند. براساس نتایج تاریخ‌گذاری و نیز با توجه به سفال‌های به دست آمده می‌توان گفت که این محوطه حاوی یک توالی کامل از هزاره هفتم پیش از میلاد بوده که تاکنون مورد کاوش لایه‌نگاری قرار گرفته است. شواهد یافت شده نشان می‌دهند که بخش مرکزی محوطه حاوی بقایای نوسنگی جدید مشابه با دشت دهلران است؛ درحالی‌که بخش شرقی آن دارای ترکیبی از سفال‌های اواخر نوسنگی منطقه در کنار سفال‌های سبک حسونا و سامرا است. به نظر می‌رسد سنت‌های فرهنگی محلی دوره نوسنگی تا پایان هزاره هفتم پیش از میلاد حفظ شده تا این‌که عناصر مربوط به حسونا و سامرا به ترتیب و به تدریج وارد منطقه شده‌اند؛ اما بعد از چند قرن هم‌زیستی بین این سنت‌های بومی و غیربومی، مواد فرهنگی موسوم به «سامرای جدید» یا «دوره انتقالی چغامامی»، به ویژه سفال‌های با نقوش سیاه بر زمینه نخودی، در سراسر دشت مهران و دیگر دشت‌های مجاور در جنوب غرب ایران رایج شده‌اند. این رویداد پایان دوره نوسنگی را در منطقه رقم زده است، هرچند ماهیت این گذار یا جابه‌جایی فرهنگی بحث برانگیز است. به هر حال، یافته‌های رمرمه به درک بهتر ما از برهم‌کنش و توسعه فرهنگی طی دوره نوسنگی جدید در مناطق مرزی و بینابینی کوهپایه‌ای کمک خواهد کرد.

کلیدواژگان: نوسنگی جدید، کوهپایه‌های زاگرس مرکزی، رمرمه، بین‌النهرین، برهم‌کنش‌های فرهنگی.

۱. دانشیار گروه باستان‌شناسی، دانشکده ادبیات و علوم انسانی، دانشگاه رازی، کرمانشاه، ایران.
Email: h.darabi@razi.ac.ir

ارجاع به مقاله: دارابی، حجت، (۱۴۰۲). «نوسنگی جدید در کوهپایه‌های زاگرس: مدارک جدید از محوطه رمرمه، دشت مهران». پژوهش‌های باستان‌شناسی ایران، ۳۷(۳۷): ۳۵-۵۹. <https://dx.doi.org/10.22084/NB.2023.27811.2591>

صفحه اصلی مقاله در سامانه نشریه:

https://nbsh.basui.ac.ir/article_5319.htm?lang=fa

فصلنامه علمی گروه باستان‌شناسی دانشکده هنر و معماری، دانشگاه بوعلی سینا، همدان، ایران.

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