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Research paper

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THE SOUTHERN EXTENT OF THE KURA-ARAXES CULTURE IN IRAN: EVIDENCE FROM GŪNESPĀN TEPE

Abstract. During the 4th millennium BC, the Kura-Arax culture emerged as an important archaeological phenomenon in the Caucasus and the Near East. Over the course of several centuries, the culture spread from Transcaucasia and northwestern Iran to southeastern Anatolia and Levant. The culture has been referred to in Iran by various names, including Yanik, Kura-Arax, and Godin IV. During archaeological excavations at Tepe Gūnespān, Malayer, in 2009, deposits containing Kura-Arax-type pottery were discovered, providing valuable insights into the final phase of this culture in the central Zagros region. Based on archaeological findings from this site, this article examines the characteristics of the Kura-Arax culture at its southernmost limit, as well as the timing and process of its decline. The results of the excavations indicate that Gūnespān was first inhabited during the Kura-Arax period, and that cultural deposits up to 250 cm thick belong to this phase. Although no architectural remains were identified due to excavation limitations, evidence suggests that this was a permanent settlement. The most distinctive feature of this culture is its gray-black burnished pottery, which can be categorized into seven groups at Gūnespān. Most of these ceramics are plain, with incised decorations being rare. The findings indicate that the gray-black burnished pottery tradition of the Kura-Araxes culture was widespread in the central Zagros region during the first half of the third millennium BCE, demonstrating its southernmost extent of influence. By the mid-third millennium BCE, painted buff ware emerged and gradually replaced the Kura-Araxes gray-black burnished pottery tradition.

Keywords: Central Zagros, Bronze Age, Kura-Araxes, gray-black burnished pottery

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ЮЖНАЯ ГРАНИЦА РАСПРОСТРАНЕНИЯ КУРО-АРАКСКОЙ КУЛЬТУРЫ В ИРАНЕ: ПО МАТЕРИАЛАМ ИЗ ГУНЕСПАН-ТЕПЕ

Аннотация. В IV тысячелетии до н.э. в Кавказском регионе и на Ближнем Востоке сформировалась куро-аракская археологическая культура. На протяжении тысячелетий эта культура распространилась из Закавказья и северо-западного Ирана в юго-восточную Анатолию и Левант. В Иране она известна под разными названиями, в том числе Яник, Кура-Аракс и Годин IV. Археологические раскопки на Гунеспан-тепе (округ Мелайер) в 2009 году выявили отложения, содержащие керамику куро-аракской культуры, что дало ценные сведения о заключительной фазе этой культуры в центральной части Загроса. На основе материалов данного памятника в статье рассматриваются особенности куро-аракской культуры на её самом южном рубеже распространения, а также хронология и характер процесса её исчезновения. Результаты раскопок показывают, что Гунеспан-тепе впервые был заселён именно в период куро-аракской культуры; мощность культурных отложений этого времени достигает 250 см. Хотя из-за ограниченного масштаба раскопок архитектурные остатки выявлены не были, имеющиеся данные свидетельствуют о постоянном характере поселения. Наиболее характерной чертой культуры является серая и чёрная лощёная керамика, которая на Гунеспан-тепе подразделяется на семь групп. Большая часть этой керамики гладкая (без декора), орнаментация врезными линиями встречается редко. Материалы указывают, что традиция серо-чёрной лощёной керамики куро-аракской культуры была широко распространена в центральном Загросе в первой половине III тысячелетия до н.э., демонстрируя южную границу её влияния. К середине III тысячелетия до н.э. появляется расписная светло-глиняная керамика, которая постепенно вытесняет традицию серо-чёрной лощёной посуды куро-аракской культуры.

Ключевые слова: Центральный Загрос; бронзовый век; куро-аракская археологическая культура; серо-чёрная лощёная керамика

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Introduction

For the first time in the second half of the 19th century, polished red-black pottery was collected in the South Caucasus region [1: 23-24]. These ceramics later became the subject of archaeological research, leading to the identification of a culture in Transcaucasia associated with this distinctive pottery. This culture was named the Kura-Araxes culture because its sites were discovered between the Kura and Araxes rivers [2: 39-42; 1: 22-23]. The Kura-Araxes culture represents one of the most widespread cultural horizons of the Bronze Age in Southwest Asia [3: 231]. It marks a significant cultural transformation in the prehistoric archaeology of the South Caucasus, northwestern and western Iran, eastern Anatolia, and parts of the Levant, emerging in the fourth millennium BCE. Initially, the core area of this culture was limited, but after its formation in the middle Araxes Valley, it gradually expanded toward the Mediterranean (Levant) and northwestern and western Iran. At its peak, the Kura-Araxes culture covered vast areas of Transcaucasia, the northeastern Caucasus, eastern Anatolia, and Iran [4; 5]. Sagona believes that the Kura-Araxes culture should be regarded as a distinct material culture, or a “package,” which includes rectangular, semi-rectangular, and circular houses made of mudbrick, wattle and daub, and stone; fixed circular hearths and horseshoe-shaped andirons, often crafted in anthropomorphic or zoomorphic styles; burnished red and black pottery, or even entirely black pottery, often decorated with relief, incised, or excised designs; standardized horned animal figurines; and a limited range of metal and bone objects [1: 22].

In recent years, several attempts have been made to explain how the Kura-Araxes culture spread, addressing factors such as population movement, technology transfer, and the dissemination of ideas [6; 7]. Based on the circular architectural plans found at Kura-Araxes sites, Burney argued that its inhabitants were nomadic pastoralists [8: 48]. He believed they transmitted their cultural traditions through pottery, which remained consistent across different regions [9: 52-57]. Mason and Cooper also emphasized the nomadic nature of these communities [10]. In contrast, Kushnareva described their subsistence economy as based on both agriculture and animal husbandry [11: 183]. Some researchers have suggested that the Kura-Araxes culture followed a system of “semi-nomadism” combined with rain-fed agriculture [12: 35].

Contrary to earlier perspectives, recent studies indicate that early Kura-Araxes communities, particularly during the Early Bronze Age I, were more sedentary than previously assumed [13; 14: 42]. While they maintained agricultural and pastoral practices, they may have occasionally engaged in seasonal transhumance. Today, new archaeological discoveries have shifted perspectives on the origins and expansion of the Kura-Araxes culture from a unified model to one emphasizing dynamic cultural interaction between the Caucasus, central and eastern Anatolia, northeastern Iran, Syria-Mesopotamia, and the Levant. Increasingly, this culture is understood as a set of processes shaped over centuries through social, economic, and religious interactions [5: 1-9; 14: 23-25].

Despite extensive research on this culture, debates among archaeologists persist regarding its origins, formation process, expansion mechanisms, and even its nomenclature. One of the southernmost areas of Kura-Araxes expansion in Iran is Gūnespān Tepe in Malayer. Archaeological excavations at this site, conducted by the first author of this paper, have identified cultural deposits associated with the Kura-Araxes culture. These findings contribute to a better understanding of the southernmost extent of Kura-Araxes influence.

This research aims to examine the characteristics of the Kura-Araxes culture in the central Zagros region, as well as the timing and process of its decline, based on archaeological findings from the excavation of Gūnespān Tepe. The main research questions are: What culture was the Malayer plain influenced by during the Early Bronze Age? What are the characteristics of the Early Bronze Age pottery at Gūnespān? When and how did the Kura-Araxes culture disappear in the southernmost area of its expansion? To achieve the research objectives, this study first provides an overview of the Kura-Araxes culture in Iran. Then, the archaeological findings from the excavation of Gūnespān, which was conducted in 2009, are presented. Finally, this study attempts to provide a clearer understanding of the Early Bronze Age in this region through absolute chronology and comparison with data from other sites.

Archaeology of Malayer in the Central Zagros

The Central Zagros, located in western Iran, has always been a focal point of prehistoric archaeological studies [15; 16; 17]. Excavations at the sites of Giyan [18] and Godin [19; 20: 389; 21] have played a significant role in establishing the chronological sequence of the eastern part of this region, particularly during the Bronze Age. Archaeological findings from Godin, dating from the Early to Late Bronze Age, led to the identification of the Godin IV and III cultural phases, which correspond to the Early, Middle, and Late Bronze Age in the Central Zagros [22; 23].

Among these studies, the Malayer Plain is considered a key region for understanding cultural developments of this period. Despite several surveys and excavations in this plain [24; 25; 26; 27; 28], a comprehensive understanding of the Early Bronze Age in this area remains elusive. The results of recent excavations at the site of Gūnespān can contribute to a better understanding of this period in the central part of the Zagros.

Terminology of Black and Grey Burnished Pottery

Over the past few decades, Near Eastern archaeologists have studied black or grey burnished pottery and proposed various names for it across different regions and sites. Baiburtian [29] first introduced this pottery under the name Shengavit Culture. In 1940, Kuftin used the term Kura-Araxes for this culture [30]. William Albright also referred to grey pottery found in the Jordan Valley as Khirbet Kerak Ware [31: 27; 1: 22–23].

Burney [32: 165; 9: 44] classified this period as the Early Bronze Age of Eastern Anatolia, while Winifred Lamb [33] referred to it as the Northeastern Anatolian Culture.

In Anatolia, archaeologists primarily use the term Karaz Culture [34: 359–360], whereas Western scholars classify this pottery under the broader Transcaucasian Culture [35]. Dyson was the first to introduce the term Yanık for this cultural horizon [36: 310]. Young [21: 9] has also used the term Godin IV alongside Yanık to describe this period.

However, Burney, the excavator of Yanık Tepe, argued that applying the name “Yanık” to the entire culture is inaccurate. While Yanık Tepe is significant, he believed it was not the primary center of its formation. Therefore, naming the entire culture after this site is inappropriate [9: 44]. The same argument applies to terms such as Karaz and Khirbet Kerak Ware.

The Distribution of the Kura-Araxes Culture in Iran

Archaeological research conducted in Iran over the last hundred years shows that from the Neolithic period to the Iron Age, diverse cultures have formed in different regions of Iran. Based on ceramic diversity, archaeologists have divided Iran into different cultural zones, each with its own unique sequence. However, in certain periods, a relatively homogeneous culture spread across specific regions. One of the prominent Bronze Age cultures that covered vast areas of Iran is the Grey Ware Culture, known as Yanık, Kura-Araxes, or Godin IV.

The first evidence of this culture in northwestern Iran was discovered during Burton Brown’s excavations in Layer K of Goy Tepe [37: 39]. Subsequent excavations by Charles Burney at Yanık Tepe [38; 39: 139–161; 40] and Haftavan [41: 150; 42; 43; 44] also revealed traces of this period. Extensive surveys conducted by Kleiss and Kroll identified numerous sites associated with the Yanık Culture [45; 46]. Other notable sites of this culture in northwestern Iran include Gijlar Tepe [47], Baruj Tepe [48], Kul Tepe Jolfa [49], Kohneh Pasgah Tepe [50], and Qareh Qozlou Tepe [51].

The presence of this culture in western Iran was confirmed through excavations at Godin Tepe [21: 11, Fig: 11–12]. Additional evidence of this cultural horizon has been found at Pissa [52], Gourab Tepe [53], Shizar Tepe [54], Arastou Tepe, and Kellar Tepe in Kelardasht [55] and Sarsakhti Tepe [56], further extending its distribution into the Central Zagros, the Central Plateau, and northern Iran.

Gūnespān Site

The Gūnespān site is located 3 km southeast of Malayer County, in a village called Patape, near the Kalan River, approximately 1 km south of the Kalan Dam (fig 1). As it flows, it passes by the city of Malayer and the Nushijan Tepe. The site is an oval-shaped mound with a rocky foundation, measuring 160 meters in length and 130 meters in width. Its elevation is 1,936 meters above sea level and 27 meters above the surrounding plains (fig. 2).

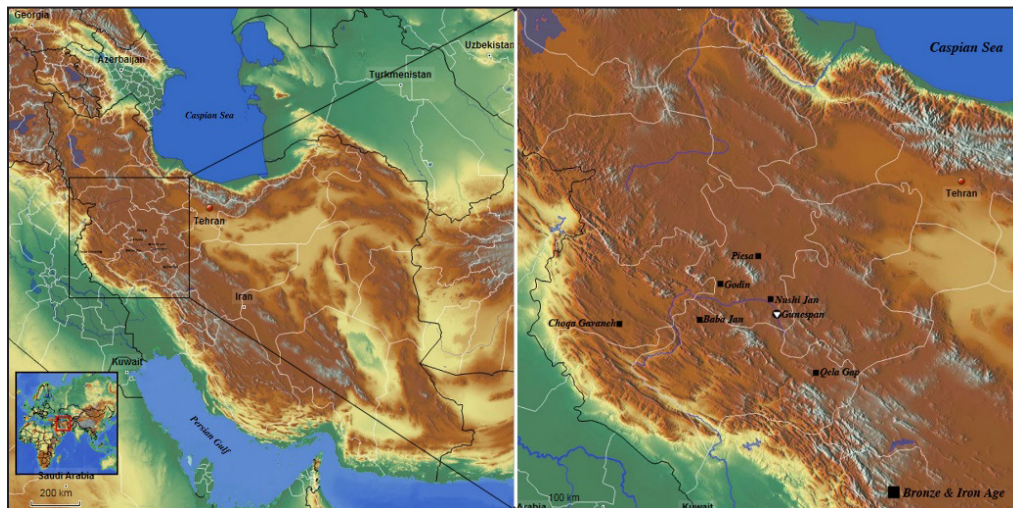


Fig. 1. The location of Gūnespān [69]

Рис. 1. Расположение Гунеспана на карте



Fig. 2. Overview of Gūnespān (photo by Reza Naseri)

Рис. 2. Общий вид Гунеспана (фото Резы Насери)

Excavations at Gūnespān

The site was excavated in six seasons between 2002 and 2010. The first season, led by Ali Khaksar, focused on the Islamic layers. The second season, under Hasan Rezvani, excavated both Islamic and Parthian layers. The third season, directed by Mehrdad Malekzadeh, excavated Parthian layers. The fourth (fig. 3) and fifth seasons, led by Reza Naseri, focused on Parthian, Seleucid, Iron Age III, Godin III, and Godin IV layers [57]. The sixth season, conducted by Hossein Tofiqian, concentrated on Iron Age III deposits [58].

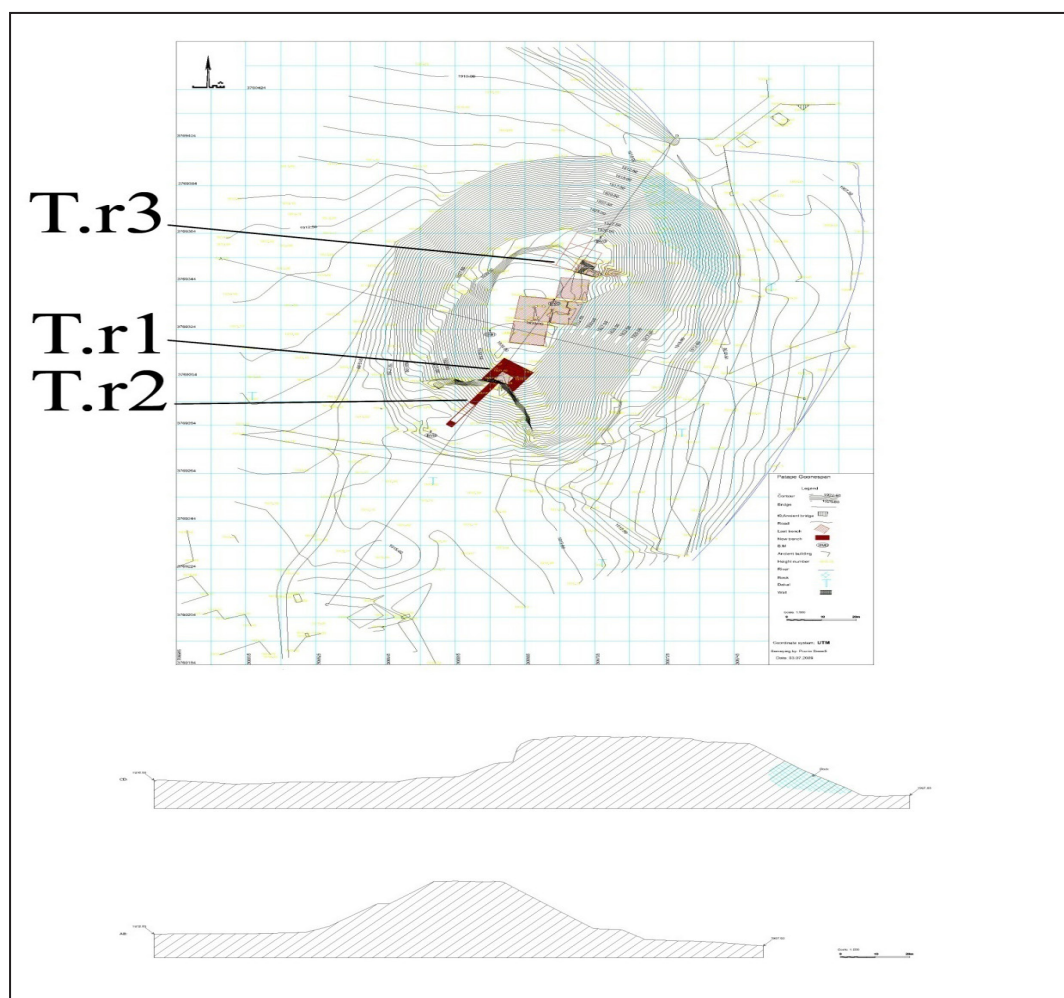


Fig. 3. Topography of Gūnespān and the Location of Trenches in the Fourth Excavation Season (map by Reza Naseri)

Рис. 3. Топографическая карта Гунеспана и расположение раскопов в четвертый сезон раскопок (карта Резы Насери)

Chronological Sequence of Gūnespān

Excavations conducted in 2009 revealed settlement layers from the Early Bronze Age to the Islamic period. Based on archaeological findings, the stratigraphic sequence of Gūnespān can be divided into five main periods:

Gūnespān I (Islamic Period): The upper layers of the site date back to the Islamic period, from which numerous architectural spaces have been discovered. The first two seasons of the excavation, led by Khaksar and Rezvani, excavated remains from this period [59; 60].

Gūnespān II (Parthian Period): Below the Islamic period deposits, there were deposits with pottery from the Parthian period. The presence of pottery from this period, along with a coin attributed to Ardawan V, indicates a Parthian settlement. The presence of glazed and buff-ware pottery, along with a coin attributed to Artabanus, suggests a Parthian occupation [60].

Gūnespān III (Iron Age III): Beneath the Parthian structures, a massive mudbrick fortress was discovered (fig 4). Architectural comparisons with sites such as Nushijan [61: Figure 1.9] and Godin II [23: Figure 2.8], along with ceramic analysis from Central Zagros and the Iranian Plateau as Zarbolagh [62], indicate that this fortress belonged to the Iron Age III [57].



Fig. 4. Architecture discovered from Gūnespān III Phase (photo by Reza Naseri)

Рис. 4. Архитектурные строения, открытые в слое Гунеспан III (фото Резы Насери)

Gūnespān IV (Middle and Late Bronze Age): Below the Iron Age III fortress, deposits containing buff-painted ceramics, characteristic of the Middle and Late Bronze Age in Central Zagros (previously identified at Giyan and Godin), were unearthed (fig. 5). This phase is further subdivided into five subphases: Gūnespān IV1 corresponds to Godin III p2; Gūnespān IV2 corresponds to Godin III:2; Gūnespān IV3 corresponds to Godin III:4; Gūnespān IV4 corresponds to Godin III:5; Gūnespān IV5 corresponds to Godin III:6

Gūnespān V (Early Bronze Age): The deepest layer contained gray-black burnished pottery, characteristic of the Early Bronze Age. These ceramics are identified with the Godin IV, Yanik, or Kura-Araxes cultures in Iran, making Gūnespān V the earliest occupation phase at the site.

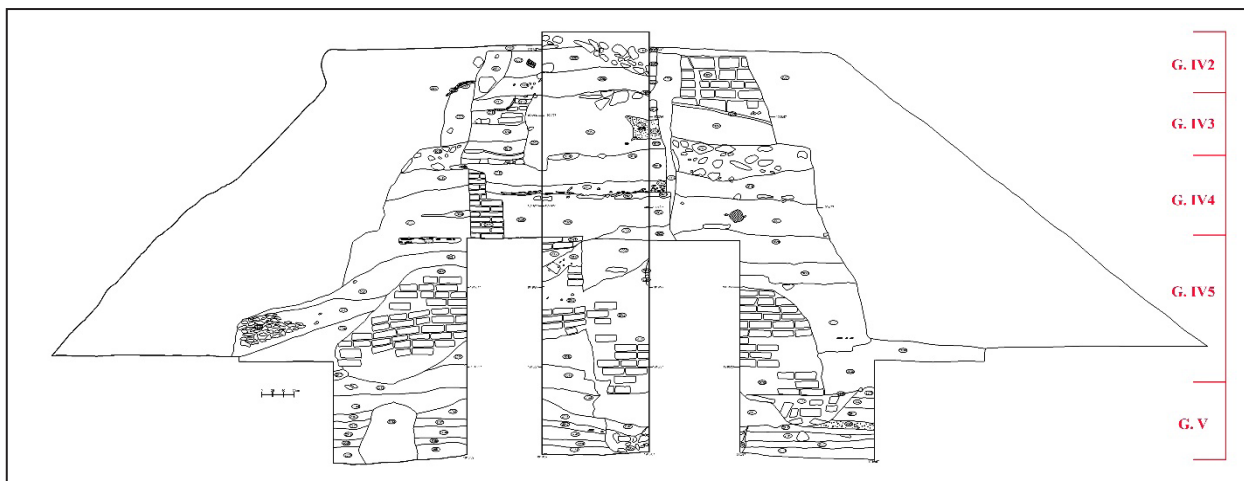


Fig. 5. Section of Trench Two and Its Phases (drawing by Reza Naseri)

Рис. 5. Разрез Раскопа 2 и его хронологические фазы (рисунок Резы Насери)

The Kura-Araxes Culture in Gūnespān

During the excavations at Gūnespān, layers containing gray-black burnished pottery, identified as Kura-Araxes or Godin IV, were discovered in the fourth season in Trench 2. This trench, starting at a depth of

597 cm from the fixed benchmark and extending down to the virgin soil, revealed deposits of this period with a thickness of approximately 255 cm. Based on the findings, it was determined that people associated with the Yanik culture initially settled in this location, representing the earliest occupation of the site in the Early Bronze Age. Due to the limited extent of the excavation and the location of the trench, no architectural remains from this period were identified. The deposits consisted of layers of accumulated soil and ash, which were distinguished during excavation based on their color, structure, density, and soil composition (fig. 6).



Fig. 6. Cultural Deposits Related to the Kura-Araxes Period at Gūnespān (photo by Reza Naseri)

Рис. 6. Культурные слои куро-аракского периода из Гунеспана (фото Резы Насери)

Kura-Araxes pottery from Gūnespān

During the excavation of Trench 2 at Gūnespān, gray-black burnished pottery – along with a limited amount of red pottery – was recovered from the ten lowest contexts of the trench, dating to the Godin IV period (fig. 7). In layers 2041 to 2015, gray-black burnished pottery was also found alongside buff and decorated red pottery (figs. 8–9). The color of the pottery varied from gray to black, and in some cases, color variations were observed on the surface of the sherds. All gray-black burnished ceramics were handmade. The inner and outer surfaces of most pots were burnished, though in some cases, only the outer surface was polished, as it was more exposed. Additionally, burnishing the outer surface of a vessel is easier than burnishing the inner surface. This process enhances the compactness and durability of the pottery.

The use of mineral temper was prevalent in the Yanik ceramics of Gūnespān, as only about 4% of the sherds contained a combination of mineral and organic temper. Notably, chaff temper alone was never used. The temper size was generally fine, with only a small percentage of coarser inclusions. The color of 92% of the sherds ranged from gray to black, while the remaining 8% had a brown or red.

Most of the sherds were plain, with only four sherds found with incised decoration. Excavations suggest that in the third phase of this culture (Kura-Araxes III), incised decoration disappeared and plain pottery became the norm, a trend also observed at sites such as Goy Tepe [37] and Pisa Tepe [63]. The form of vessels and the type of handles are other distinguishing characteristics of Kura-Araxes pottery. Among the Gūnespān ceramics, examples of the so-called Nakhchivan handle type were also found. Seven distinct ceramic types were identified for the Kura-Araxes pottery of Gūnespān:

Group I: This group consists of jars with cylindrical and relatively elongated necks, with convex bodies starting from the shoulder. The height is approximately 1.5 times the rim diameter.

Group II: This group includes open-mouthed bowls with a rim diameter 1.5 to 2 times their height. The rim usually forms a 45-degree angle inward.

Group III: This group consists of open-mouthed bowls with the so-called Nakhchivan handle attached to the rim and shoulder.

Group IV: These vessels have a rim diameter smaller than their height, with the neck and rim curving outward in an S-shape.

Group V: This group consists of large vessels with concave bodies and flat bases.

Group VI: This group features goblets with pronounced shoulders and vertical ring handles at the junction of the body and rim.

Group VII: These open-mouthed bowls have a 45-degree inward angle at the rim-body junction, creating a sharp, central indentation.

The pottery of Gūnespān is comparable to Godin [64: figs. 23, 24] and Gourab [53: figs. 6–7] in the central Zagros, Yanik Tepe [39: pl. LXXII, LXXI, LXX], Goy Tepe [37, figs. 7–10] and [51: figs. 6–7] in northwestern Iran.

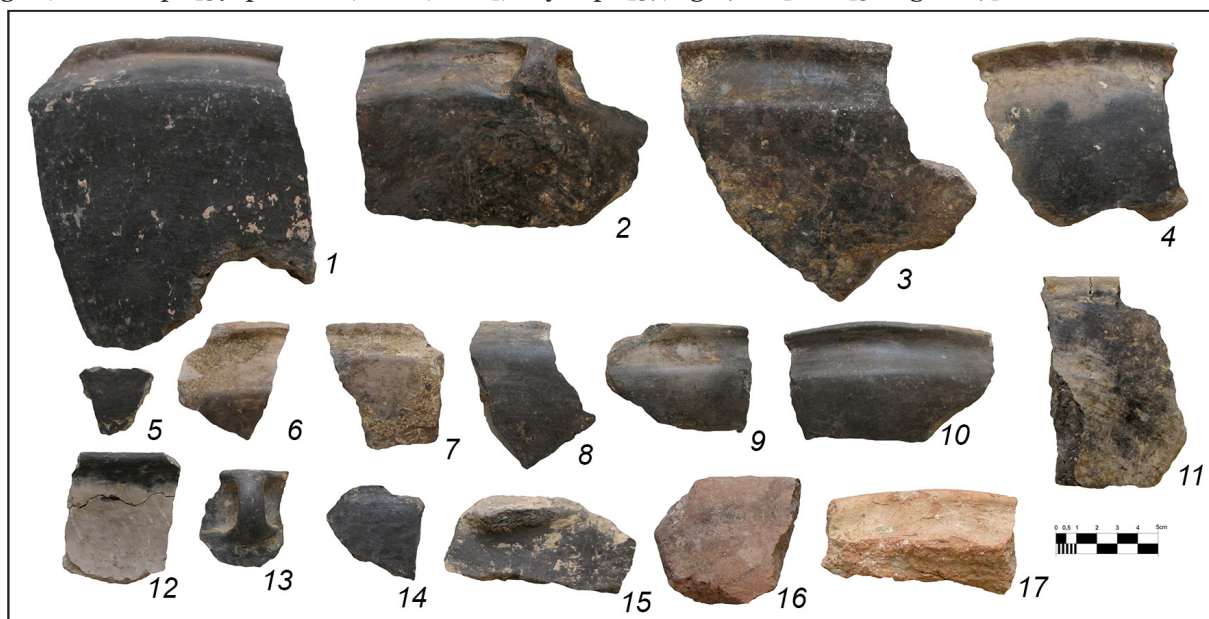


Fig. 7. Gray-black burnished pottery and red pottery from the Kura-Araxes Period at Gūnespān (photo by Reza Naseri)

Рис. 7. Черно-серая лощеная керамика и красная керамика куро-аракского периода из Гунеспана (фото Резы Насери)



Fig. 8: Pottery Recovered from Phase IV5 at Gūnespān (photo by Reza Naseri)

Рис. 8. Керамика Хронологической Фазы IV5 из Гунеспана (фото Резы Насери)



Fig. 9. Pottery Recovered from Phase IV4 at Gūnespān (photo by Reza Naseri)

Рис. 9. Керамика Хронологической Фазы IV4 из Гунеспана (фото Резы Насери)

Small Finds from Gūnespān

Due to the limited scale of excavations, the most abundant cultural finds from the Early Bronze Age were pottery, while small finds included two reused pottery fragments, a stone tool, and a bone tool. The worked pottery consisted of ceramic fragments that appear to have been deliberately selected from broken vessels, shaped into roughly circular forms by breaking their edges. Various interpretations have been proposed



Fig. 10. Bone tool from Gūnespān [69]

Рис. 10. Костяное орудие из Гунеспана [69]

regarding the function of these pottery fragments. Some researchers believe that ground and rounded pottery pieces were used as tools for shaping and finishing ceramic vessels [65]. Schmandt-Besserat suggests that with the development of agriculture around 7500 BCE, the need for counting and accounting emerged to manage surplus production and redistributive economies [66: 162; 67: 147]. The rounded ceramic objects found at such sites are often interpreted as counters used in the administration of these early agricultural economies. It is possible that the ceramic objects from Gūnespān also served an accounting function, as they are more commonly found in layers associated with Godin III.

Additionally, a stone tool was discovered, consisting of a flint blade made from red chert. Both edges of this blade exhibit retouching, indicating continuous use. Further, the presence of sheen along the edges likely resulted from harvesting plants. Among the faunal remains from Gūnespān [68], a worked bone tool was identified – a metatarsal (cannon bone) of a sheep, with a polished shaft end, suggesting its probable use as an awl (fig. 10).

Chronology of the Kura-Araxes Culture in Gūnespān

One of the objectives of this study is to provide a chronological framework for the Kura-Araxes culture in the Central Zagros region. The lack of precise stratigraphy and, more importantly, the scarcity of absolute dates have resulted in the absence of a widely accepted chronology for the Kura-Araxes culture [70; 71; 72; 3]. Burney divided this culture into three phases: Transcaucasian I to III [9: 55], a classification that most researchers have adopted. Kushnareva proposed a four-phase chronology, dating the beginning of the Kura-Araxes culture to 3500 BCE and its end to 2300 BCE [11: 51]. Seyidov, however, argued for a single formative phase of the Kura-Araxes culture [73].

The limited presence of incised pottery and the replacement of gray-black burnished ceramics with buff-painted pottery suggest that the Gūnespān settlement belongs to the late phase of this culture, specifically Kura-Araxes III. Phase III ceramics in Iran have been identified at sites such as Yanik Tepe [38; 40], Haftavan Tepe [43; 44], Goy Tepe [37], Pisa Tepe [62] and Qareh Qozlou Tepe [51]. A radiocarbon sample from the deposits of this period at Gūnespān indicates a date range of approximately 2800–2600 BCE for Kura-Araxes III at the site. The radiocarbon results also show that around 2600 BCE, buff-painted pottery characteristic of the Godin III period began to appear. Consequently, it can be inferred that in the Central Zagros region, the Kura-Araxes culture likely disappeared around 2600 BCE, corresponding to the Early Bronze Age in the regional chronology.

The Fate of the Yanik Culture in the Central Zagros

The gray-black burnished pottery culture of the Early Bronze Age was widespread across a vast region. However, the timing and nature of its decline remain a subject of debate. Some researchers argue for a gradual transition, while others suggest a sudden transformation. This culture gradually disappeared from the Levant, as seen at Khirbet Kerak, around 2400 BCE [74: 89, 103], whereas its pottery continued to be used in eastern Anatolia until approximately 1800 BCE [2: 23, 358, 364; 14: 25].

Young [21] considers Godin III to be a continuation of Godin IV. In this regard, he argues that despite the obvious differences between the material culture of Godin IV and Godin III, the stratigraphic evidence does not indicate any gap between the two periods.

In contrast, Mason and Cooper [10] have assessed the transition from Godin IV to Godin III as abrupt. However, they also acknowledge that some ceramic types, such as the gray-black burnished pottery wares of Godin IV, continued into Godin III. Excavation evidence from Gūnespān indicates that gray-black burnished pottery was prevalent during the same period as Godin IV. However, around 2600 BCE, coinciding with the beginning of Godin III6 (also known as Gūnespān IV5), decorated buff pottery emerged alongside gray-black burnished pottery. This trend continued into the Godin III5 phase (Gūnespān IV4), where gray-black burnished pottery remained common (fig. 11). In the later phases of Gūnespān IV, only a single sherd of gray-black burnished pottery was recovered from each layer, making it unclear whether their presence was accidental or

if the people of this period used gray-black burnished pottery in an extremely limited manner. The absence of a stratigraphic break between Gūnespān IV and V suggests that this change was likely the result of a social transformation rather than population displacement.

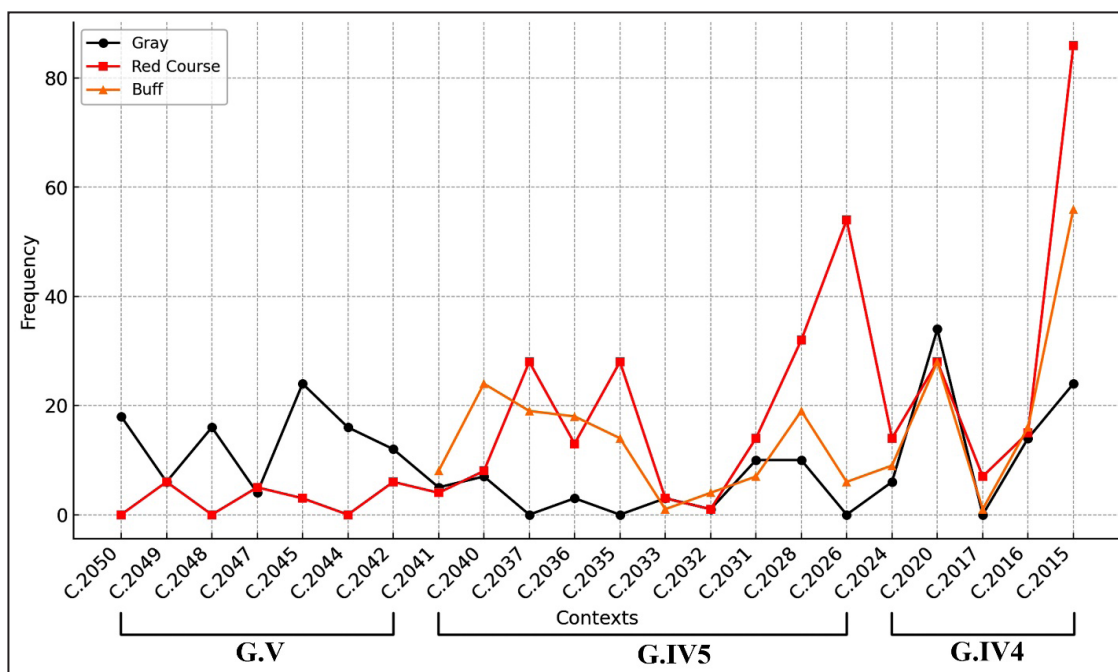


Fig. 11. Chart of Distribution of Grey-Black Burnished Pottery and Other Pottery Types in Phases V and IV of Gūnespān

Рис. 11. Диаграмма распределения серо-чёрной лощёной керамики и других типов керамики в Фазах V и IV Гунеспана

An analysis of data from other regions reveals similar trends. After the period of polished black-gray-black burnished pottery, painted pottery traditions spread across the Zagros, the Urmia Basin, and other regions. However, notable differences in ceramic traditions can be observed between northwest Iran, the central Zagros, and the central Iranian plateau. Burney [43] proposed a migration-based hypothesis, suggesting that the arrival of new groups played a role in these transformations. He points to the approximate contemporaneity of the appearance of painted pottery with the Kassite incursions into Mesopotamia and attributes these changes to this newly arrived group.

At Tepe Pisa, painted pottery (Godin III) has been found alongside polished gray-black burnished potteries in the final phases of the Yanik culture. Archaeobotanical and zooarchaeological evidence from Tepe Pisa indicates that economic and social changes occurred gradually from the late Early Bronze Age into the Middle Bronze Age. This transition included a decline in pastoralism and an increasing emphasis on agriculture and horticulture. Evidence of grape cultivation during this period has also been confirmed. Therefore, changes in ceramic technology and other aspects of material culture appear to have resulted primarily from internal regional transformations rather than large-scale population movements [63].

Christopher Edens [75] observed a similar process in the transition from the Yanik culture (Early Bronze Age) to Middle and Late Bronze Age cultures in the South Caucasus. He emphasizes increasing social stratification, economic shifts, and the expanded use of tin-bronze and trade as the main drivers of this transformation. Based on the available findings, it can be said that the changes observed in Godin IV and the transition to Godin III were mainly regional in nature rather than the result of external influences. However, the possibility of simultaneous changes occurring in several regions cannot be ruled out.

Conclusion

Excavations at Gūnespān have shown that the lowest layer of the site dates back to the Early Bronze Age. During this period, the gray-black burnished pottery culture, known as Godin IV or Kura-Aras, flourished

in the eastern half of the Central Zagros and extended to areas such as Malayer. The geographical features of this region provided favorable conditions for agriculture and animal husbandry in the Bronze Age. These societies were sedentary and semi-sedentary, but the significant amount of Early Bronze Age cultural deposits at Gūnespān indicate that societies of this period were settled in a sedentary manner at this site.

Archaeological excavations show that during the Early Bronze Age, there was a widespread cultural homogeneity in areas such as western and northwestern Iran, the Caucasus, Anatolia, and Levant. Unlike the preceding and subsequent periods, these regions used similar architectural patterns and pottery traditions, which also formed Gūnespān during this period. In the mid-3rd millennium BC, evidence of the appearance of Painted pottery is observed in Gūnespān. Initially, this pottery was used alongside gray pottery, but over time, the tradition of gray-black pottery declined and was completely replaced by painted pottery. Therefore, the transition from Godin IV to Godin III can be attributed to gradual changes in the central Zagros. Archaeological evidence suggests that this transformation was not the result of population migration or invasion, but rather was likely the result of internal regional developments in subsistence strategies and social structures. Factors such as a greater emphasis on agriculture and sedentarism, the emergence of new pottery traditions, and possibly economic and cultural changes played a role in this process.

REFERENCE

1. Sagona A. The Kura-Araxes Culture Complex: A History of Early Research. In *Arkeolojiyle Geçen Bir Yaşam İçin Yazılar. Veli Sevin'e Armağan. Scripta. Essays in Honour of Veli Sevin. A Life Immersed in Archaeology*, A. Özfirat (ed.). Istanbul: Ege Yayınları, 2014:21–32.
2. Yalçın HG. *Die Karaz Keramik von Tepecik in Ostanatolien*. Istanbul: Ege Yayınları, 2012.
3. Smith AT. Prometheus unbound: southern Caucasia in pre-history. *Journal of World Prehistory*. 2005; 19: 229-279.
4. Kushnareva KKh., Chubinishvili TN. The historical position of the southern Caucasus in the third millennium B.C. *Soviet Archaeology*. 1970; 3: 19-24. (In Russ)
5. Batiuk S., Rothman MS. Early Transcaucasian Cultures and Their Neighbors. *Expedition*. 2007; 49(1): 1–9.
6. Rothman M.S. Ripple in the stream: Transcaucasia – Anatolian Interaction in the Murat/Euphrates Basin at the Beginning of the Third Millennium B.C. In *Archaeology in the Borderlands: Investigations in Caucasia and Beyond*, A.T. Smith, K. Rubinson (eds.). Los Angeles: The Cotsen Institute of Archaeology at UCLA, 2003: 167-184.
7. Batiuk S. *Migration Theory and the Distribution of the Early Transcaucasian Culture*. Ph.D. dissertation. University of Toronto, 2005.
8. Burney CA. Contact and conflict in north-western Iran. *Iranica Antiqua*. 1994; 29: 47-62.
9. Burney C., Lang D. *The Peoples of the Hills*. London: Weidenfeld and Nicholson, 1971.
10. Mason RB., Cooper L. Grog petrography & Early Transcaucasian in Godin Tepe. *Iran*. 1999; XXXVII: 25-31.
11. Kushnareva KKh. *The Southern Caucasus in Prehistory: Stages of Cultural and Socioeconomic Development from the 8th to the 2nd Millennium BC*. University Museum Monograph 99. Trans. H.N. Michael. Philadelphia: University Museum, University of Pennsylvania, 1997.
12. Motarjem A., Niknami K. The Early Bronze Age in Eastern Central Zagros, Iran. *Journal of Archaeological Studies*. 2011; 3(2): 35-54.
13. Frangipane M. After Collapse: Continuity and Disruption in the Settlement by Kura-Araxes-linked Pastoral Groups at Arslantepe-Malatya (Turkey). *New Data. Paléorient*. 2014; 40(2): 169-182.
14. Sagona A. Rethinking the Kura-Araxes Genesis. *Paléorient*. 2014; 40(2): 23–46.
15. Stein MA. *Old Routes of Western Iran*. London, 1940.

СПИСОК ЛИТЕРАТУРЫ

1. Sagona A. The Kura-Araxes Culture Complex: A History of Early Research // *Arkeolojiyle Geçen Bir Yaşam İçin Yazılar. Veli Sevin'e Armağan. Scripta. Essays in Honour of Veli Sevin. A Life Immersed in Archaeology*, A. Özfirat (ed.). Istanbul: Ege Yayınları, 2014. Pp. 21–32.
2. Yalçın H.G. *Die Karaz Keramik von Tepecik in Ostanatolien*. Istanbul: Ege Yayınları, 2012.
3. Smith A.T. Prometheus unbound: southern Caucasia in pre-history. *Journal of World Prehistory*. 2005. № 19. Pp. 229–279.
4. Кушнарева Х.Х., Чубинишвили Т.Н. Историческое положение Южного Кавказа в третьем тысячелетии до н. э. // *Советская археология*. 1970. № 3. С. 19–24.
5. Batiuk S., Rothman M.S. Early Transcaucasian Cultures and Their Neighbors // *Expedition*. 2007. № 49(1). Pp. 1–9.
6. Rothman M.S. Ripple in the stream: Transcaucasia – Anatolian Interaction in the Murat/Euphrates Basin at the Beginning of the Third Millennium B.C. // *Archaeology in the Borderlands: Investigations in Caucasia and Beyond*, A.T. Smith, K. Rubinson (eds.). Los Angeles: The Cotsen Institute of Archaeology at UCLA, 2003. Pp. 167–184.
7. Batiuk S. *Migration Theory and the Distribution of the Early Transcaucasian Culture*. Ph.D. dissertation. University of Toronto, 2005.
8. Burney C.A. Contact and conflict in north-western Iran // *Iranica Antiqua*. 1994. № 29. Pp. 47–62.
9. Burney C., Lang D. *The Peoples of the Hills*. London: Weidenfeld and Nicholson, 1971.
10. Mason R.B., Cooper L. Grog petrography & Early Transcaucasian in Godin Tepe // *Iran*. 1999. XXXVII. Pp. 25–31.
11. Kushnareva K.Kh. *The Southern Caucasus in Prehistory: Stages of Cultural and Socioeconomic Development from the 8th to the 2nd Millennium BC*. University Museum Monograph 99. Trans. H.N. Michael. Philadelphia: University Museum, University of Pennsylvania, 1997.
12. Motarjem A., Niknami K. The Early Bronze Age in Eastern Central Zagros, Iran // *Journal of Archaeological Studies*. 2011. № 3(2). Pp. 35–54.
13. Frangipane M. After Collapse: Continuity and Disruption in the Settlement by Kura-Araxes-linked Pastoral Groups at Arslantepe-Malatya (Turkey) // *New Data. Paléorient*. 2014. № 40(2). Pp. 169–182.
14. Sagona A. Rethinking the Kura-Araxes Genesis // *Paléorient*. 2014. № 40(2). Pp. 23–46.

16. Braidwood R.J. The Iranian Prehistoric Project, 1959-1960. *Iranica Antiqua*. 1961; 1: 3-7.
17. Darabi H., Naseri R., Young R., Fazeli Nashli H. The absolute chronology of east Chia Sabz: a pre-pottery neolithic site in western Iran. *Documenta Praehistorica*. 2011; 38: 255-265.
18. Contenau G., Ghirshman R. *Fouilles de Tepe Giyan*. Paris, 1935.
19. Young T.C.Jr., Levine L.D. *Excavations of the Godin Project: Second Progress Report*. Toronto: Royal Ontario Museum, 1974.
20. Young T.C.Jr., Smith P.E.L. Research in the prehistory of central western Iran. *Science*. 1966; 153(3734): 386-391.
21. Young T.C.Jr. The Chronology of the Late Third and Second Millennia in Central Western Iran as Seen from Godin Tepe. *American Journal of Archaeology*. 1969; 73(3): 287-291.
22. Henrickson R.C. The Chronology of Central Western Iran 2600-1400 B.C. *American Journal of Archaeology*. 1985; 89(4): 569-581.
23. Gopnik H., Rothman S.M. *On the High Road, The History of Godin Tepe, Iran*. Mazda Publ. in assoc. with the Royal Ontario Museum, 2011.
24. Herzfeld E. Bericht über archäologische Beobachtungen im südlichen Kurdistan und in Luristan. *AMI*. 1929; 1: 65-75.
25. Herzfeld E. *Archaeological History of Iran*. London: Oxford University Press, 1935.
26. Goff C.L. Luristan Before the Iron Age. *Iran*. 1971; 9: 131-152.
27. Goff C.L. Excavations at Baba Jan: The Bronze Age occupation. *Iran*. 1976; 14: 19-40.
28. Young T.C.Jr. Survey in Western Iran 1961. *Journal of Near Eastern Studies*. 1966; 25: 228-239.
29. Baiburtian E.A. По поводу древней керамики из Шреш-Блур. *Soviet Archeology*. 1937; 3: 209-213.
30. Kuftin B.A. *Arkheologicheskie Raskopki v Trialeti*. Tbilisi: Izdatelstvo Akademii Nauk Gruzinskoi SSR, 1941.
31. Albright W.F. The Jordan Valley in the Bronze Age. *Annual of the American Schools of Oriental Research*. 1926; 6: 13-74.
32. Burney C.A. Eastern Anatolia in the Chalcolithic and Early Bronze Age. *Anatolian Studies*. 1958; 8: 157-209.
33. Lamb W. The culture of North-East Anatolia and its Neighbours. *Anatolian Studies*. 1954; 4: 21-32.
34. Kosay H.Z., Turfan K. Erzurum Karaz Kazısı Raporu. *Belleten*. 1959; 23(91): 349-413.
35. Burney C.A., Lang D.M. *The Peoples of the Hills: Ancient Ararat and Caucasus*. London: Weidenfeld and Nicolson, 1971. (Reprinted or referenced in 1972 editions)
36. Dyson R.H. The Archaeological Evidence of the Second Millennium B.C. on the Persian Plateau. Cambridge: Cambridge University Press, 1968.
37. Brown B.T. *Excavations in Azerbaijan 1948*. London: John Murray, 1951.
38. Burney C.A. Circular Buildings Found at Yanik Tepe, in North-west Iran. *Antiquity*. 1961; 35: 237-240.
39. Burney C.A. Excavation at Yanik Tepe, Azerbaijan. *Iraq*. 1962; 24: 134-152.
40. Burney C.A. The excavation at Yanik Tepe, Azerbaijan. *Iraq*. 1967; 26: 54-61.
41. Burney C.A. Excavation at Haftavan Tepe, 1968, first preliminary report. *Iran*. 1970; 8: 157-171.
42. Burney C.A. Excavations at Haftavan Tepe, 1969: 2nd preliminary report. *Iran*. 1972; 10: 127-142.
43. Burney C.A. Excavations at Haftavan Tepe, 1971: 3rd preliminary report. *Iran*. 1973; 11: 153-172.
44. Burney C.A. Excavations at Haftavan Tepe 1973: 4th preliminary report. *Iran*. 1975; 13: 149-164.
45. Kleiss W., Kroll S. Ravaz und Yakhvali zwei befestigte Plätze des 3. Jahrtausends B.C. Die Oberflächenfunde. *Archäologische Mitteilungen aus Iran, Neue Folge*. 1979; Bd. 12: 34-47.
46. Kroll S. Prehistoric Settlement Patterns in the Maku and Khoy Regions of Iranian Western Azerbaijan. In *Proceedings of the*
15. *Stein M.A.* Old Routes of Western Iran. London, 1940.
16. *Braidwood R.J.* The Iranian Prehistoric Project, 1959-1960 // *Iranica Antiqua*. 1961. № 1. Pp. 3-7.
17. *Darabi H., Naseri R., Young R., Fazeli Nashli H.* The absolute chronology of east Chia Sabz: a pre-pottery neolithic site in western Iran // *Documenta Praehistorica*. 2011. № 38. Pp. 255-265.
18. *Contenau G., Ghirshman R.* Fouilles de Tepe Giyan. Paris, 1935.
19. *Young T.C. Jr., Levine L.D.* Excavations of the Godin Project: Second Progress Report. Toronto: Royal Ontario Museum, 1974.
20. *Young T.C. Jr., Smith P.E.L.* Research in the prehistory of central western Iran // *Science*. 1966. № 153(3734). Pp. 386-391.
21. *Young T.C. Jr.* The Chronology of the Late Third and Second Millennia in Central Western Iran as Seen from Godin Tepe // *American Journal of Archaeology*. 1969. № 73(3). Pp. 287-291.
22. *Henrickson R.C.* The Chronology of Central Western Iran 2600-1400 B.C. // *American Journal of Archaeology*. 1985. № 89(4). Pp. 569-581.
23. *Gopnik H., Rothman S.M.* On the High Road, The History of Godin Tepe, Iran. Mazda Publ. in assoc. with the Royal Ontario Museum, 2011.
24. *Herzfeld E.* Bericht über archäologische Beobachtungen im südlichen Kurdistan und in Luristan // *AMI*. 1929. № 1. Pp. 65-75.
25. *Herzfeld E.* Archaeological History of Iran. London: Oxford University Press, 1935.
26. *Goff C.L.* Luristan Before the Iron Age // *Iran*. 1971. № 9. Pp. 131-152.
27. *Goff C.L.* Excavations at Baba Jan: The Bronze Age occupation // *Iran*. 1976. № 14. Pp. 19-40.
28. *Young T.C. Jr.* Survey in Western Iran 1961 // *Journal of Near Eastern Studies*. 1966. № 25. Pp. 228-239.
29. *Байбуртян Е.А.* По поводу древней керамики из Шреш-Блур // *Советская археология*. 1937. № 3. С. 209-213.
30. *Кuftin Б.А.* Археологические раскопки в Триаleti. Тбилиси: Издательство Академии наук Грузинской ССР, 1941.
31. *Albright W.F.* The Jordan Valley in the Bronze Age // *Annual of the American Schools of Oriental Research*. 1926. № 6. Pp. 13-74.
32. *Burney C.A.* Eastern Anatolia in the Chalcolithic and Early Bronze Age // *Anatolian Studies*. 1958. № 8. Pp. 157-209.
33. *Lamb W.* The culture of North-East Anatolia and its Neighbours // *Anatolian Studies*. 1954. № 4. Pp. 21-32.
34. *Kosay H.Z., Turfan K.* Erzurum Karaz Kazısı Raporu // *Belleten*. 1959. № 23(91). Pp. 349-413.
35. *Burney C.A., Lang D.M.* The Peoples of the Hills: Ancient Ararat and Caucasus. London: Weidenfeld and Nicolson, 1971. (Reprinted or referenced in 1972 editions)
36. *Dyson R.H.* The Archaeological Evidence of the Second Millennium B.C. on the Persian Plateau. Cambridge: Cambridge University Press, 1968.
37. *Brown B.T.* Excavations in Azerbaijan 1948. London: John Murray, 1951.
38. *Burney C.A.* Circular Buildings Found at Yanik Tepe, in North-west Iran // *Antiquity*. 1961. № 35. Pp. 237-240.
39. *Burney C.A.* Excavation at Yanik Tepe, Azerbaijan // *Iraq*. 1962. № 24. Pp. 134-152.
40. *Burney C.A.* The excavation at Yanik Tepe, Azerbaijan // *Iraq*. 1967. № 26. Pp. 54-61.
41. *Burney C.A.* Excavation at Haftavan Tepe, 1968, first preliminary report // *Iran*. 1970. № 8. Pp. 157-171.
42. *Burney C.A.* Excavations at Haftavan Tepe, 1969: 2nd preliminary report // *Iran*. 1972. № 10. Pp. 127-142.
43. *Burney C.A.* Excavations at Haftavan Tepe, 1971: 3rd preliminary report // *Iran*. 1973. № 11. Pp. 153-172.
44. *Burney C.A.* Excavations at Haftavan Tepe 1973: 4th preliminary report // *Iran*. 1975. № 13. Pp. 149-164.

International Symposium on Iranian Archaeology: Northwestern Region, M. Azarnoush (ed.). Urmia, 2004, pp. 45–53.

47. Pecorella P.E., Salvini M. *Tra Zagros e l'Urmia*. Rome, 1984.

48. Alizadeh K., Azarnoush M. Systematic survey of Tepe Barooj. *Journal of Archaeology and History*. 2003; 17: 3–22.

49. Abedi A., Khatib Shahidi H., Chataigner Ch., Niknami K., Eskandari N., Kazempour M., Pirmohammadi A., Hoseinzadeh J., Ebrahimi Gh. Excavation at Kul Tepe of (Jolfa), North-Western Iran, 2010: First Preliminary Report. *Ancient Near Eastern Studies*. 2014; 51: 33–167.

50. Maziar S. Excavations at Kohne Pasgah Tepesi, the Araxes Valley, Northwest Iran: First Preliminary Report. *Ancient Near Eastern Studies*. 2010; 47: 165–193.

51. Kharazi E., Khanipour M., Joulaei V. New evidence from Kura-Araxes Cultural in the southern of Lake Urmia. *Journal of Bazhouheshhayeh Bastanshenasi Modares*. 2015; 10–11: 162–171.

52. Mohamadifar, Y. and Motarjem, A. and Torabzadeh Khorasani, H. 2009. Tepe Pissa: new investigations at a Kura-Araxes site in central western Iran. *Antiquity* 83: 320.

53. Khaksar A., Hemati Azandaryani E., Norozi A. The Analysis of Yaniq Culture at Tappeh Gourab of Malayer, Based on Stratigraphical Excavation. *Pazhoheshha-ye Bastan shenasi Iran*. 2015; 4(7): 47–66 (in Persian).

54. Mostafapour E. Typology and relative chronology of Bronze Age pottery at Tepe Shizar, Takestan. Master's thesis. University of Tehran, 2011.

55. Mousavi S.M., Abbasnejad R., Heidarian M. Preliminary report on the archaeological excavations at Tepe Kelar, Kelardasht (First Season, 2006). *Proceedings of the Ninth Annual Archaeology Symposium of Iran*. Tehran: Cultural Heritage and Archaeology Research Institute, 2007: 473–509.

56. Abedi A., Khatib Shahidi H., Sharahi I., Eskandari N., Shirzadeh Gh. New Evidence from Dalma and Kura-Araxes Culture at Tappeh Qaley-e Sarsakhti: Special Importance of Prehistoric Findings in East Central Zagros. *Iran and the Caucasus*. 2014; 8: 101–114.

57. Naseri R., Malekzadeh M., Naseri A. Günespân: A Late Iron Age Site in the Median Heartland. *Iranica Antiqua*. 2016; 51: 103–139.

58. Tofghian H., Sadeghirad M. The Sixth Chapter of Archaeological Excavation of Patpeh Site (Malayer – Dam Catchment of Kalan Dam). *Journal of Iran's Pre-Islamic Archaeological Essays*. 2017; 2(1): 51–74.

59. Khaksar A. *First Season of Surveys and Soundings in the Historical Site of Pâtappeh-ye Günespân-e Malâyer, Hamadan: Iranian Cultural Heritage Organization Local Office, Unpublished Archive Report*, 2002 (in Persian).

60. Rezvani H., Rashidi Arzande M. Islamic Architectural Remains in Pâtappeh-ye Malâyer. *Islamic Archaeology of Iran, Essays in honor of Professor Dr. Mohammad Yousef Kiani, M.E. Zarei* (ed.). Hamadan: Bu-Ali Sina University Publishers, 2011: 251–285 (in Persian).

61. Stronach D., Roaf M. *Nush-i Jan: The Major Buildings of the Median Settlement*. London: British Institute of Persian Studies, 2007.

62. Malekzadeh M., Saeedyan S., Naseri R. Zarbolagh: A Late Iron Age Site in Central Iran. *Iranica Antiqua*. 2014; XLIX: 159–191.

63. Motarjem A. *Settlement pattern analysis of the Early Bronze Age in the plains surrounding the Alvand Mountains, Hamedan. PhD dissertation*. University of Tehran, 2008.

64. Levine LD., Young TCJr. A summary of the ceramic assemblages of the Central Western Zagros from the Middle Neolithic to the late third millennium B.C. In *Préhistoire de Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du Djebel Hamrin*. Paris: Editions de la Centre National de la Recherche Scientifique, 1986, pp. 15–53.

45. Kleiss W., Kroll S. Ravaz und Yakhvali zwei befestigte Plätze des 3. Jahrtausends B.C. Die Oberflächenfunde // *Archäologische Mitteilungen aus Iran, Neue Folge*. 1979; Bd. 12. Pp. 34–47.

46. Kroll S. Prehistoric Settlement Patterns in the Maku and Khoy Regions of Iranian Western Azerbaijan // *Proceedings of the International Symposium on Iranian Archaeology: Northwestern Region*, M. Azarnoush (ed.). Urmia, 2004. Pp. 45–53.

47. Pecorella P.E., Salvini M. *Tra Zagros e l'Urmia*. Rome, 1984.

48. Alizadeh K., Azarnoush M. Systematic survey of Tepe Barooj // *Journal of Archaeology and History*. 2003. № 17. Pp. 3–22.

49. Abedi A., Khatib Shahidi H., Chataigner Ch., Niknami K., Eskandari N., Kazempour M., Pirmohammadi A., Hoseinzadeh J., Ebrahimi Gh. Excavation at Kul Tepe of (Jolfa), North-Western Iran, 2010: First Preliminary Report // *Ancient Near Eastern Studies*. 2014. № 51. Pp. 33–167.

50. Maziar S. Excavations at Kohne Pasgah Tepesi, the Araxes Valley, Northwest Iran: First Preliminary Report // *Ancient Near Eastern Studies*. 2010. №47. Pp. 165–193.

51. Kharazi E., Khanipour M., Joulaei V. New evidence from Kura-Araxes Cultural in the southern of Lake Urmia // *Journal of Bazhouheshhayeh Bastanshenasi Modares*. 2015. № 10–11. Pp. 162–171.

52. Mohamadifar, Y. and Motarjem, A. and Torabzadeh Khorasani, H. Tepe Pissa: new investigations at a Kura-Araxes site in central western Iran // *Antiquity*. 2009. № 83. P. 320.

53. Khaksar A., Hemati Azandaryani E., Norozi A. The Analysis of Yaniq Culture at Tappeh Gourab of Malayer, Based on Stratigraphical Excavation // *Pazhoheshha-ye Bastan shenasi Iran*. 2015. № 4(7). Pp. 47–66 (in Persian).

54. Mostafapour E. Typology and relative chronology of Bronze Age pottery at Tepe Shizar, Takestan. Master's thesis. University of Tehran, 2011.

55. Mousavi S.M., Abbasnejad R., Heidarian M. Preliminary report on the archaeological excavations at Tepe Kelar, Kelardasht (First Season, 2006) // *Proceedings of the Ninth Annual Archaeology Symposium of Iran*. Tehran: Cultural Heritage and Archaeology Research Institute, 2007. Pp. 473–509.

56. Abedi A., Khatib Shahidi H., Sharahi I., Eskandari N., Shirzadeh Gh. New Evidence from Dalma and Kura-Araxes Culture at Tappeh Qaley-e Sarsakhti: Special Importance of Prehistoric Findings in East Central Zagros // *Iran and the Caucasus*. 2014. №8. Pp. 101–114.

57. Naseri R., Malekzadeh M., Naseri A. Günespân: A Late Iron Age Site in the Median Heartland // *Iranica Antiqua*. 2016. №51. Pp. 103–139.

58. Tofghian H., Sadeghirad M. The Sixth Chapter of Archaeological Excavation of Patpeh Site (Malayer – Dam Catchment of Kalan Dam) // *Journal of Iran's Pre-Islamic Archaeological Essays*. 2017. № 2(1). Pp. 51–74.

59. Khaksar A. *First Season of Surveys and Soundings in the Historical Site of Pâtappeh-ye Günespân-e Malâyer, Hamadan: Iranian Cultural Heritage Organization Local Office, Unpublished Archive Report*. 2002. (in Persian).

60. Rezvani H., Rashidi Arzande M. Islamic Architectural Remains in Pâtappeh-ye Malâyer // *Islamic Archaeology of Iran, Essays in honor of Professor Dr. Mohammad Yousef Kiani, M.E. Zarei* (ed.). Hamadan: Bu-Ali Sina University Publishers. 2011. Pp. 251–285 (in Persian).

61. Stronach D., Roaf M. *Nush-i Jan: The Major Buildings of the Median Settlement*. London: British Institute of Persian Studies, 2007.

62. Malekzadeh M., Saeedyan S., Naseri R. Zarbolagh: A Late Iron Age Site in Central Iran // *Iranica Antiqua*. 2014. XLIX. Pp. 159–191.

63. Motarjem A. *Settlement pattern analysis of the Early Bronze Age in the plains surrounding the Alvand Mountains, Hamedan. PhD dissertation*. University of Tehran, 2008.

65. López Varela S.L., Van Gijn A., Jacobs L. De-Mystifying Pottery Production In: The Maya Lowlands: Detection Of Traces Of Use-Wear On Pottery Sherds Through Microscopic Analysis And Experimental Replication. *Journal of Archaeological Science*. 2002; 29: 1133-1147.
66. Schmandt-Besserat D. From Tokens to Writing: The Pursuit of Abstraction. *Bulletin of the Georgian National Academy of Sciences*. 2007; 175(3): 162-167.
67. Schmandt-Besserat D. Tokens and Writing: The Cognitive Development. *Scripta*. 2009; 1: 145-154.
68. Amiri, S., Mashkour, M., Mohaseb, A. F and Naseri, R. 2021. The Subsistence Economy of a Highland Settlement in the Zagros during the Bronze and Iron Ages: The Case of Gūnespān (Hamadan, Iran). In J. Daujat, A. Hadjikoumis, R. Berthon, J. Chahoud, V. Kassianidou, & J.-D. Vigne (Eds.), *Archaeozoology of Southwest Asia and Adjacent Areas XIII: Proceedings of the Thirtieth International Symposium, University of Cyprus, Nicosia, Cyprus, June 7-10, 2017*; 3: 199-220.
69. Amiri S., Mashkour M., Mohaseb A.F., Naseri R. A glance into the subsistence economy of Ganespan (Hamedan, Iran) during the Bronze Age and Median Periods. In *Proceedings of the International Congress of Young Archaeologists*, M.H. Azizi Kharanaghi, M. Khanipour, R. Naseri (eds.). Tehran: Iranology Foundation, 2018: 270-284.
70. Kuftin B.A. K voprosu o rannyykh stadiiakh bronzovoi kultury na territorii Kavkaza. *Kratkie Soobshcheniia o Dokladakh i Polevykh Issledovaniyakh Instituta Istorii*. 1940; 8: 5-35.
71. Iessen A. Kavkaz I Drevniy Vostok v IV–III Tysyacheletiyax Do Nashei Ery. *Kratkie Soobshcheniya o Dokladakh i Polevykh Issledovaniyakh Instituta Arkheologii AN SSSR*. 1963; 93: 3-14.
72. Abibullaev A. Nekotorye Itogi Izucheniya Kholma Kyul-tepe V Azarbaidzhane. *Sovetskaya Arkheologiya*. 1963; 3: 157-168.
73. Seyidov A. *Nakhichevan Ulk Tunj Dovra Abideleri ve Onlarin Dvrleshdirilmesi*. Baku: Chashioglu metbeesi, 2000 (In Azer)
74. Greenberg R., Paz S., Wengrow D., Iserlis M. Tel Beth Yerah: Hub of the Early Bronze Age Levant. *Near Eastern Archaeology*. 2012; 75(2): 88-107.
75. Edens Ch. Transcaucasia at the End of the Early Bronze Age. *Bulletin of the American Schools of Oriental Research*. 1995; 299-300: 53-64.
64. Levine L.D., Young T.C. Jr. A summary of the ceramic assemblages of the Central Western Zagros from the Middle Neolithic to the late third millennium B.C. In *Préhistoire de Mésopotamie: La Mésopotamie préhistorique et l'exploration récente du Djebel Hamrin*. Paris: Editions de la Centre National de la Recherche Scientifique, 1986, pp. 15–53.
65. López Varela S.L., Van Gijn A., Jacobs L. De-Mystifying Pottery Production In: The Maya Lowlands: Detection Of Traces Of Use-Wear On Pottery Sherds Through Microscopic Analysis And Experimental Replication. *Journal of Archaeological Science*. 2002; 29: 1133-1147.
66. Schmandt-Besserat D. From Tokens to Writing: The Pursuit of Abstraction. *Bulletin of the Georgian National Academy of Sciences*. 2007; 175(3): 162-167.
67. Schmandt-Besserat D. Tokens and Writing: The Cognitive Development. *Scripta*. 2009; 1: 145-154.
68. Amiri, S., Mashkour, M., Mohaseb, A. F and Naseri, R. 2021. The Subsistence Economy of a Highland Settlement in the Zagros during the Bronze and Iron Ages: The Case of Gūnespān (Hamadan, Iran). In J. Daujat, A. Hadjikoumis, R. Berthon, J. Chahoud, V. Kassianidou, & J.-D. Vigne (Eds.), *Archaeozoology of Southwest Asia and Adjacent Areas XIII: Proceedings of the Thirtieth International Symposium, University of Cyprus, Nicosia, Cyprus, June 7-10, 2017*, Vol. 3. 199–220. Lockwood Press.
69. Amiri S., Mashkour M., Mohaseb A.F., Naseri R. A glance into the subsistence economy of Ganespan (Hamedan, Iran) during the Bronze Age and Median Periods. In *Proceedings of the International Congress of Young Archaeologists*, M.H. Azizi Kharanaghi, M. Khanipour, R. Naseri (eds.). Tehran: Iranology Foundation, 2018, pp. 270–284.
70. Куфтин Б.А. К вопросу о ранних стадионах бронзовой культуры на территории Кавказа // Краткие сообщения о докладах и полевых исследованиях Института истории. 1940. №8. С. 5–35.
71. Иессен А. Кавказ и Древний Восток в IV-III тысячелетиях до нашей Эры // Краткие сообщения о документах и полевых исследованиях Института Археологии АН СССР. 1963. №93. С. 3-14.
72. Абибуллаев О.А. Некоторые итоги изучения холма Кюль-тепе в Азербайджане // Советская археология. 1963. № 3. С. 157–168.
73. Сейидов А. *Nakhichevan Ulk Tunj Dovra Abideleri ve Onlarin Dvrleshdirilmesi*. Baku: Chashioglu metbeesi, 2000.
74. Greenberg R., Paz S., Wengrow D., Iserlis M. Tel Beth Yerah: Hub of the Early Bronze Age Levant // Near Eastern Archaeology. 2012. № 75(2). Pp. 88–107.
75. Edens Ch. Transcaucasia at the End of the Early Bronze Age // Bulletin of the American Schools of Oriental Research. 1995. № 299-300. Pp. 53–64.

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