JSBS Journal of Sistan and Baluchistan Studies
Volume 6, Issue 1 (2026) 53-62
Doi: 10.22034/jsbs.2025.553325.1112

NEW EVIDENCE FROM THE NEOLITHIC PERIOD IN THE NURATA HIGHLANDS, UZBEKISTAN

Morteza KHANIPOUR [1]✉, Bakhtiyor Kurbanovich SAYFULLAEV [2], Odil Tursunovich ERGASHEV [3], Laziz UNGALOV [4], Dilfuza Mavlonovna DJURAKULOVA [5], Saltanat ALISHER KYZY [6], Xinying ZHOU [7], Shakhlo Jahonovna SHOMURODOVA [8], Shokir Safarovich G`AFFOROV [9], Alisher Yusupovich RADJABOV [10]

[1] Associate Professor, Silk Road International University of Tourism and Cultural Heritage, Samarkand, Uzbekistan / Samarkand State University, Samarkand, Uzbekistan, (khanipoor73@yahoo.com)
[2] DsC, Leading Researcher at the Samarkand Institute of Archaeology of the Cultural Heritage Agency of the Republic of Uzbekistan, Samarkand, Uzbekistan.
[3] Assistant Professor, Head of the Department of Archaeology, Samarkand State University, Samarkand, Uzbekistan.
[4] PhD student, Samarkand State University, Samarkand, Uzbekistan.
[5] DsC, Professor of Samarkand State University, Samarkand, Uzbekistan.
[6] Associate Professor, Department of History of Kyrgyzstan and Archaeology, Ethnology, Osh State University, Osh, Kyrgyzstan.
[7] Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences: Beijing, Beijing, China.
[8] Professor, Samarkand State Institute of Foreign Languages, Samarkand, Uzbekistan.
[9] DsC, Professor, Samarkand State University, Samarkand, Uzbekistan.
[10] Research fellow at the Samarkand Institute of Archaeology named after Yu. Samarkand, Uzbekistan.

Received: 14 September 2025 Accepted: 13 November 2025 Available online: 20 June 2026

Abstract: During the Neolithic period, major changes and innovations occurred in human lifestyle, subsistence strategies, and social organization. However, the timing and nature of these developments varied across different regions of the world; it appears that each region followed a distinct path shaped by its unique environmental conditions and cultural background. Although extensive archaeological research has been conducted on the Neolithization and Neolithic period in Western Asia, studies on the Neolithic period in Central Asia are relatively limited, and available data from this vast region are not yet well-documented. Archaeological field activities conducted in recent years in the Nurata Mountains of Uzbekistan have revealed new data on Neolithic sites. Among these sites, the Zardali site is one of the most important discoveries, which was excavated over three seasons by the archaeological team from the Samarkand State University. The purpose of this research is to analyze the Neolithic period of Uzbekistan based on archaeological findings from this site. Based on the findings obtained from excavations, this paper provides a detailed description of the cultural layers and materials. The results indicate that the site was established on the slopes of Mount Nurata, near a natural spring, and was most likely occupied on a temporary or seasonal basis. The flaked stone assemblages of Zardali indicate an industry based on a combination of bladelet and flake production. The blade/let production process used pressure. Based on lithics and absolute dating, this site can be dated to the Neolithic period.
Keywords: Central Asia, Uzbekistan, Neolithic, seasonal settlement.

چکیده: در دوران نوسنگی، دگرگونی‌ها و نوآوری‌های چشمگیری در شیوه زندگی، راهبردهای معیشتی و سازمان اجتماعی جوامع انسانی روی داد. با این حال، زمان‌بندی و ماهیت این تحولات در مناطق مختلف جهان یکسان نبوده و به‌نظر می‌رسد هر منطقه مسیر ویژه‌ای را دنبال کرده که تحت تأثیر شرایط محیطی و پیشینه فرهنگی آن شکل گرفته بود. با وجود پژوهش‌های گسترده‌ای که درباره نوسنگی‌شدن و دوره نوسنگی در غرب آسیا انجام شده، مطالعات مربوط به نوسنگی در آسیای مرکزی محدود بوده و داده‌های موجود از این پهنه وسیع پراکنده و ناکافی است. در سال‌های اخیر، فعالیت‌های میدانی باستان‌شناسی در کوه‌های نوراتای ازبکستان، یافته‌های جدیدی از محوطه‌های نوسنگی آشکار کرده است. در میان این محوطه‌ها، محوطه زردآلی از مهم‌ترین یافته‌ها به‌شمار می‌آید که طی سه فصل توسط تیم باستان‌شناسی دانشگاه دولتی سمرقند کاوش شده است. هدف این پژوهش، تحلیل دوره نوسنگی ازبکستان بر پایه یافته‌های باستان‌شناختی به‌دست‌آمده از این محوطه است. بر اساس یافته‌های حاصل از کاوش، در این مقاله توصیفی دقیق از لایه‌های فرهنگی و مواد فرهنگی ارائه می‌شود. نتایج نشان می‌دهد که این محوطه بر دامنه‌های کوه نوراتا و در نزدیکی چشمه شکل گرفته و به احتمال زیاد به‌طور موقت یا فصلی مورد استفاده بوده است. مجموعه دست‌تراش‌های سنگی زردآلی نشان‌دهنده صنعتی است که بر ترکیبی از تولید تیغه/ریزتیغه و تراشه مبتنی بود که با روش فشاری ساخته می‌شده‌اند. با توجه به دست‌تراش‌های سنگی و تاریخ‌گذاری مطلق، این محوطه را می‌توان به دوره نوسنگی تاریخ‌گذاری کرد.
کلیدواژه: آسیای مرکزی، ازبکستان، نوسنگی، استقرار فصلی.

I. Introduction

During the Neolithic period, many changes and developments occurred in human lifestyle, economy, social structures, and culture (Bar-Yosef and Belfer-Cohen 1991). Neolithic communities shifted from a lifestyle based on hunting and gathering to agriculture and animal husbandry in western Asia (Cauvin, 2000; Kuijt and Goring-Morris, 2002; Zeder, 2011; Asouti and Fuller, 2013; Matthews et al., 2013; Darabi, 2015; Özdoğan, 2019; Hole, 2024). This transition led to the emergence of sedentary settlements and villages (Byrd, 1994; 2005; Flannery, 2002; Darabi et al., 2011), the creation of specialized tools (Wright, 2014), the invention of pottery (Campbell, 2017; Tsuneki, 2017; Khanipour and Nishiaki, 2024), and changed social structures (Byrd, 2000; Bar-Yosef, 2002). Archaeological findings show that this transformation did not happen uniformly across regions but developed at different times and in different ways depending on local conditions (Kozlowski and Aurenche, 2005; Balossi Restelli, 2006; Khanipour, 2023; Özdoğan, 2024).

The Fertile Crescent in western Asia is widely recognized as one of the main centers of Neolithization (Braidwood, 1973; Byrd, 2005; Zeder, 2011; Riehl et al., 2012, 2013; Darabi, 2015). Archaeological evidence from this area suggests that, after the end of the Younger Dryas (Bar-Yosef, 2009), Neolithic settlements emerged in the Fertile Crescent and gradually spread east and west. While processes such as the domestication of animals and plants, the formation of early villages, early pottery production, and social organization are relatively well understood in Southwest Asia, our knowledge of these developments in Central Asia is still scarce. Archaeological excavations in the region have been few, and laboratory analyses such as absolute dating, archaeobotany, and zooarchaeology have rarely been conducted. As a result, a clear and detailed picture of Neolithization and early farming in Central Asia has not yet been obtained. However, the limited evidence available points to the existence of several distinct Neolithic cultures across the region, which could help to clarify the origins, pathways, and mechanisms of the spread of Neolithic lifestyles. Uzbekistan's location, environment, and landscape in the center of Central Asia have made this region of interest to Neolithic societies, making it very important for understanding the Neolithic period. While the southern parts of Central Asia, such as Turkmenistan and Tajikistan, have been studied more intensively through sites like Jeitun (Masson, 1957; Masson and Sarianidi, 1972; Harris, 2010) and Hissar (Ranov, 1982, 1984), the central and northern regions of Uzbekistan, including the Nurata Mountains, remain less studied. Research in these areas can fill important gaps in our understanding of how Neolithic cultures spread across Central Asia and how technologies such as lithic production and new subsistence strategies were transmitted. Recent surveys in the Nurata Mountains identified the Zardali site, which was subsequently excavated to study the Neolithic period in the region. Archeological findings from these excavations provide valuable information about cultural developments, subsistence strategies, lithic productions, and daily life during the Neolithic. This research examines the stratigraphic sequence of Zardali, investigates the reasons for its occupation, and analyzes subsistence strategies. Evaluating Neolithic sites like Zardali is therefore essential to understanding the process of Neolithization, knowing cultural changes, and clarifying human interaction in Central Asia.

II. Prehistoric Human Activities in the Nurata Region

Central Uzbekistan features a unique landscape that has attracted human communities since the Paleolithic (Kadirova & Abduvakhidova, 2025). The combination of mountains, major rivers such as the Amu Darya, Syr Darya, and Zaravshan, and fertile plains provided favorable conditions for a variety of subsistence strategies, including hunting, pastoralism, and agriculture. Stretching across the Samarkand, Navoi, and Jizzakh regions, the Nurata Mountains encompass alluvial valleys, fertile oases, and numerous small settlements. On the northern slopes, which face the vast Kyzylkum Desert, streams and springs offered essential water sources that supported villages where people engaged in hunting, farming, and animal husbandry.

One of the earliest archaeological investigations in this area was carried out by Y. Ghulomov in the present-day Nurata and Kushrabad regions. In 1958, Qosimov discovered flint workshops and primary flint quarries on the slopes of the Qorateg Mountains in the Nurata range. Archaeological research resumed in 2013, when R. Suleymanov, together with a team from the University of Tokyo, identified the site of Puchshut, which dates to the Paleolithic. In the same year, researchers from the Institute of Archaeology of Uzbekistan and Samarkand State University excavated several sites in the Forish district of Jizzakh, including Gurdara, whose lithic assemblages were attributed to the Late Paleolithic.

Since 2018, the Samarkand State University archaeological team has conducted surveys and excavations in the Kushrabad region, identifying multiple Paleolithic and Neolithic sites (Avanesova et al., 2020; Sayfullaev et al., 2023). Surveys in villages such as Pangat, Oboy, Minishkor, Qomolaqli, Kukqovuqe, Tobali, and Mullaolim revealed limited but valuable evidence. Recovered stone tools from both the Paleolithic and Neolithic periods indicate that humans inhabited this region during these epochs. Ongoing

research is expected to provide new insights into Stone Age archaeology in the Zaravshan Basin (Sayfullaev & Ungalov, 2023; Ongalov, 2023).

III. The Zardali Site

Archaeological investigations on the southern slopes of the Nurata Mountains have shown that this region was almost continuously occupied by humans throughout the Paleolithic and Neolithic periods. The area's favorable natural environment provided ideal conditions for long-term settlement. During surveys in this region, the Zardali site was identified and, based on the recovered artifacts, attributed mainly to the Neolithic period, although some lithic materials may date back to the Paleolithic. A few pottery sherds collected from the surface also suggest that the site was occasionally reoccupied in later times.

Zardali is located in a small valley within the Nurata mountain range (Fig. 1), close to a natural spring, and covers an area of approximately 100 × 40 meters (Figs. 2 & 3). The site lies about 3 kilometers northeast of the village of Minishkor and roughly 86 kilometers northwest of Samarkand.

Given its importance for understanding prehistoric cultures, the Zardali excavations were designed with both scientific and educational goals. From a scientific perspective, the project aims to establish the site's stratigraphic sequence and to clarify its cultural and social characteristics during the Neolithic period. At the same time, the excavations serve an educational purpose, providing field training opportunities for archaeology students from Samarkand State University, who take part each year as part of their practical coursework. The first excavation season took place in 2023, followed by the second in 2024 and the third in 2025, during which two trenches were opened (Fig. 4).

III.1. Trench 1

In the central part of the site, a 3 × 4 m trench was opened during the first field season in 2023. Excavation revealed several cultural layers as well as a human burial. During the second season in 2024, the trench was expanded to 4 × 5 m (Fig. 5) to explore the stratigraphy in greater detail and to expose the full extent of the burial area. This stage of work was carried out in collaboration with an anthropological team from China. Both the stratigraphy and the human remains were carefully studied using non-invasive scientific methods to prevent damage to the fragile bones.

In the third season, the trench was subdivided into two sections. The eastern part, measuring 2 meters in width, was excavated down to the sterile layer. Stratigraphic observations revealed a surface layer approximately 10–15 cm thick, consisting of soil mixed with plant roots. Beneath this, a sequence of Neolithic deposits was documented, comprising eight distinct layers that differed in soil composition and evidence of human activity.

In the southern part of the trench, a broad patch of burnt soil was uncovered, possibly representing the remains of a hearth or occupation surface. This burnt layer extended across much of the excavated area and appears to have been partially disturbed in later periods, perhaps during the construction of the burial. Traces of burning were found throughout the layer, likely indicating domestic activities such as cooking or short-term habitation.

No architectural remains, such as walls or foundations, were identified in this trench. The absence of built structures suggests that occupation in this area was temporary, most likely linked to seasonal or brief episodes of use. However, the presence of multiple cultural layers and traces of controlled burning indicates that the area was revisited and used repeatedly during the Neolithic period.

III.2. Trench 2

Trench 2 was excavated in the northern part of the site, initially measuring 3 × 1 meters. It was later extended southward by an additional 2 × 1 meters from the northwest corner, forming an L-shaped layout. For accurate documentation, the trench was subdivided into squares labeled A1, A2, A3, B1, and C1. Excavation was carried out evenly down to a depth of 160 cm, after which it proceeded in a stepped manner. The deepest areas, located in squares B1 and C1, reached a depth of 380 cm, where the final 40 cm of deposits were sterile and contained no cultural material.

Stratigraphic analysis revealed eight distinct cultural layers, each differentiated by variations in soil color and texture. No architectural remains were identified in this trench. From the uppermost layer, a few sherds of medieval-period pottery, along with animal bones and stone tools, were recovered. The lower layers contained only lithic artifacts, with the highest concentration of stone tools found in layers 3, 4, 5, and 8.

III.3. Lithic

The inventory of the flaked stone assemblages (Table 1) indicates an industry based on a combination of blade/let and flake production. The blade/let production process utilized pressure (Fig. 6). The cores were presented in conical and prismatic forms, and in the assemblage, there were two flake cores. Therefore, the cores were probably brought to the rock shelter in a pre-prepared form. The bladelets (Fig. 6) and the occasional blades seem to have been utilized mostly as unretouched. Scrapers, burins, and tools with retouched edges were the main products of bladelets. These blade/let tools were almost exclusively manufactured with siliceous rocks, such as flint, chalcedony, and quartz. However, flake tools were produced mainly

from less fine-grained local limestone using direct percussion. Scrapers and rather amorphous notches/denticulates are representative flake tools. The techno-typological characteristics of these flaked stone artifacts display temporal changes. Although pressure debitage was employed throughout the sequence, the core technology may have changed.

The so-called conical (bullet-shaped) bladelet core with circumferential blank removals was identified in layers 1 and 2 only (Fig. 6), while the cores from the lower layers exhibit blank removals from flake cores. This suggests a change in the core reduction concept.

Figure 1: Location of the Zardali site and some Neolithic sites in Central Asia (After Nishiaki et al. 2022, fig 1).

Figure 2: Location of the Zardali site in the Zaravshan Basin and satellite image of the site.

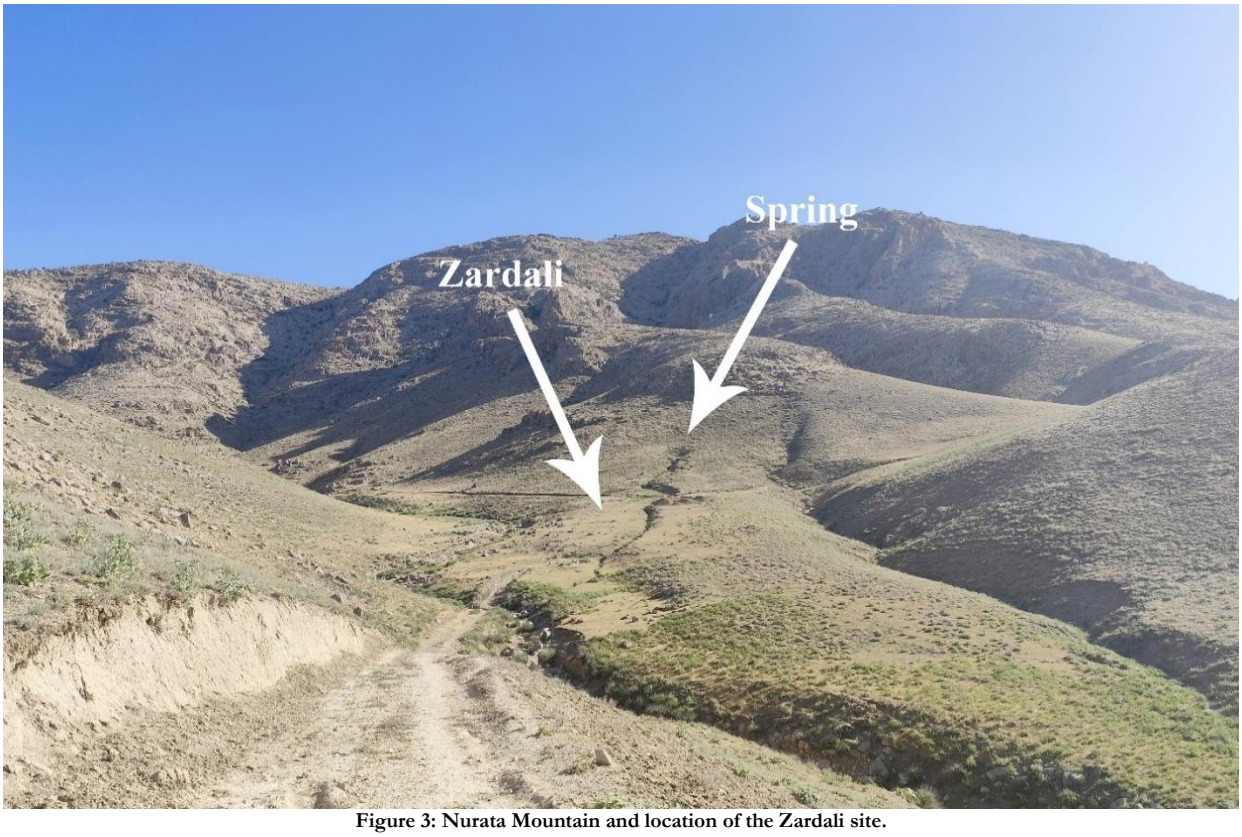

Figure 3: Nurata Mountain and location of the Zardali site.

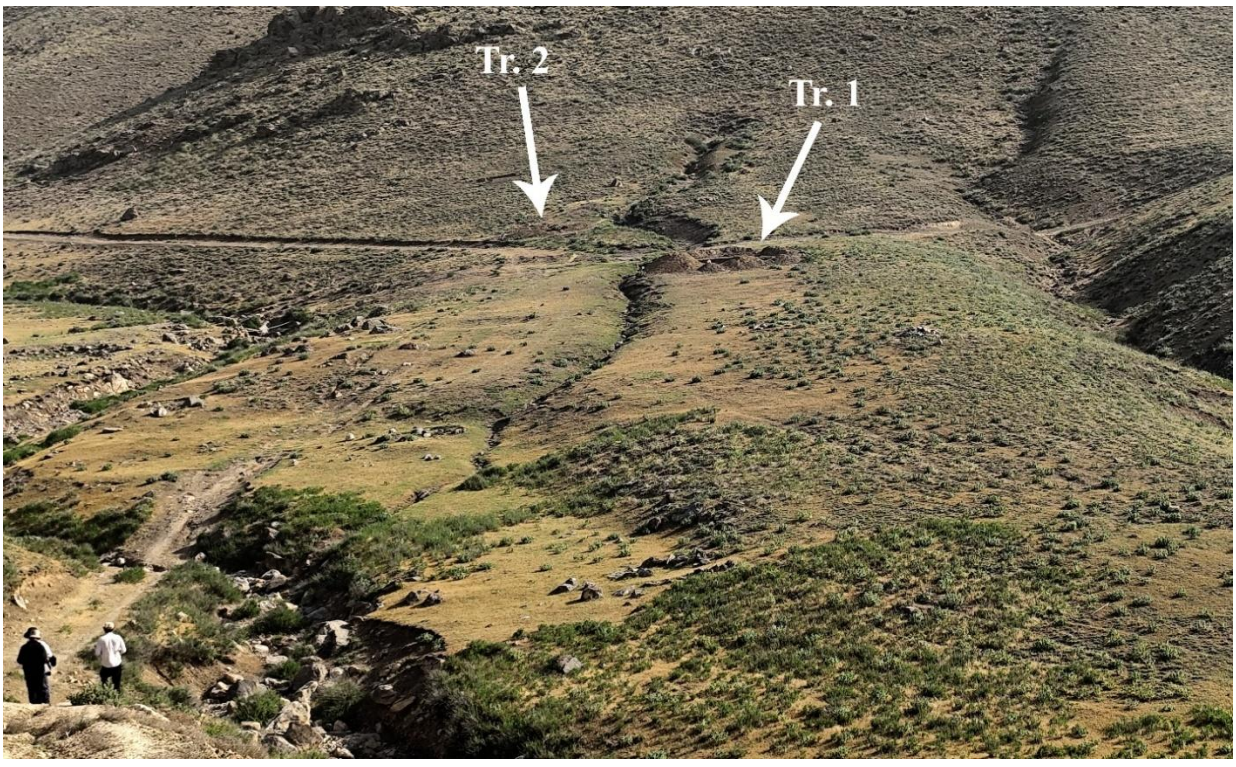

Figure 4: Location of Trenches 1 and 2 at the Zardali site.

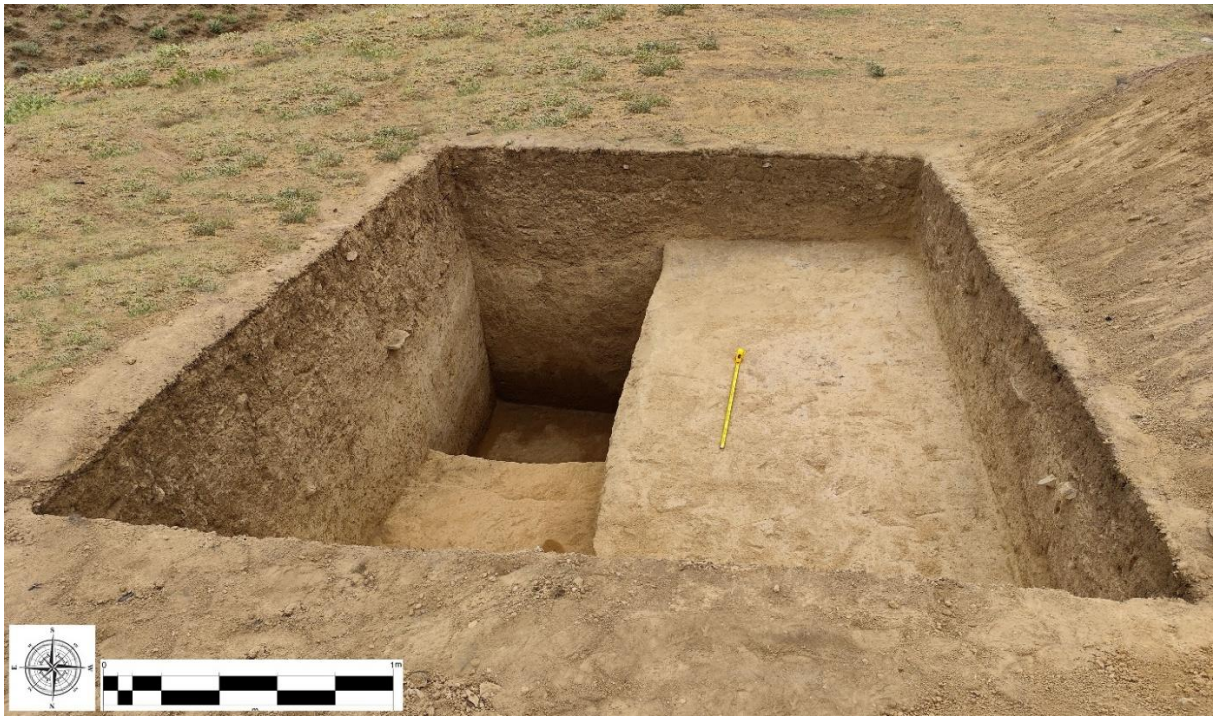

Figure 5: General view of Trench 1.

Table 1: Chipped stone assemblages from Zardali site

Chipped stone assemblages	L 1	L 2	L 3	L 4	L 5	L 6
Cores						
Conical	2	3	-	-	-	-
Prismatic	-	1	-	-	-	-
Flake cores	-	-	-	-	4	-
Core fragments	4	-	-	2	6	2
Debitage						
Flakes	39	89	33	53	56	14
Blades/lets	17	19	4	10	4	9
Microblades	4	10	1	5	1	1
Chips		4	2			
Core treatment pieces						2
Tools						
Scrapers		6	1	4	2	5
Knifes		6	1		4	
Retouched pieces		8	2	6	2	1
Composite tools				1		1

Figure 6: Lithics discovered from the Zardali site.

III.4. Neolithic Mortuary Practices

Burials provide one of the most valuable sources of evidence for understanding both the material and spiritual aspects of past societies. They reflect people's beliefs, rituals, and social organization. The way in which the dead were treated often expresses a community's worldview and ritual behavior; therefore, the archaeological study of mortuary practices is essential for reconstructing the ideological, social, and symbolic dimensions of ancient life (Khanipour & Molaie Kordshooli, 2023). In addition, laboratory analyses of human remains can yield important information about ancestry, genetics, and ancient diseases (Najafi et al., 2018; Naseri et al., 2019; 2020).

Archaeological evidence from Uzbekistan suggests that burial traditions first emerged in the Middle Paleolithic and continued into later periods. The well-known burial from Teshik-Tash Cave (Okladnikov, 1949; Gunz and Bulygina, 2012) stands as a notable example of early ritual behavior associated with the Neanderthals.

During the Neolithic period, a major transformation occurred in funerary customs. Archaeological findings from various regions across Western Asia reveal a considerable diversity in burial traditions. For example, plastered skulls have been recovered from several Neolithic sites in the Levant (Garfinkel, 2014); at Ali Kosh in western Iran, burials were covered with ochre (Sołtysiak and Darabi, 2017); and at Sialk, evidence for cremation has been reported (Ghirshman, 1938). A common practice in many of these sites was to bury the dead under the floor of the house, symbolizing the enduring connection between the living and the dead. In contrast, evidence for Neolithic mortuary customs in Central Asia remains limited, underscoring the need for further study. During excavations at the Zardali site, a human burial was found in Trench 1, approximately 80 cm below the surface. This burial holds particular significance for understanding Neolithic burial traditions. The burial was first discovered during the 2023 season; however, to ensure accurate documentation and to prevent destruction, it was partially re-covered and left in situ for detailed discovery and study during the following season. The skeleton was found in a crouched position, lying on its left side with the face turned to the right and both hands placed on the chest (Fig. 7). The legs were tightly flexed toward the abdomen, and the body was placed in a simple pit without any constructed features or grave lining. Although many of the smaller and more fragile bones had decayed, the larger elements, including the skull, teeth, humerus, forearm, and femur, were well preserved. The size and morphology of the bones suggest that the individual was an adult.

Radiocarbon dating places the burial in the first half of the 4th millennium BCE. Although this is the only burial recovered from Zardali so far, it provides

valuable insight into regional mortuary behavior. The tightly flexed position appears to have been among the common burial practices of the Neolithic period. The absence of grave goods or any built structures suggests a simple interment ritual, perhaps reflecting moderate social differentiation or early symbolic concepts of death and the afterlife among societies of Central Asia in the fourth millennium BCE.

Figure 7: Human burial discovered at the Zardali site.

IV. Discussion: Zardali Site and the Neolithic of Central Asia

Compared to Southwest Asia, the study of the Neolithic in Central Asia is still in its early stages, with only a handful of excavations carried out to date (e.g., Masson, 1957; Ranov, 1982; Pollock et al., 2019; Taylor et al., 2021; Nishiaki et al., 2022). As a result, focused excavations and interdisciplinary research across the region are crucial to better understand the process of Neolithization, the origins and spread of food production, its chronology, and the interactions among Neolithic communities both within and across regions.

Over the past few decades, however, limited studies have shown that Neolithization did not occur uniformly across Central Asia, allowing several distinct cultural zones to be recognized. Among the major Neolithic cultures are Jeitun, Kaltaminar, Hissar, Sazagan, and Central Fergana. Some scholars suggest that Central Asia's Neolithization was influenced by contact with Southwest Asia, while others argue for local developments or influences from the north (Brunet, 2005, 2012; Harris, 2010; Taylor et al., 2021; Nishiaki et al., 2022). Nevertheless, Central Asia likely served as an important corridor for the eastward spread of Neolithic lifeways and food-producing economies from Southwest Asia (Bellwood, 2005). Archaeological evidence points to the early farming communities of Iran influencing the spread of agriculture into southwestern Central Asia, particularly in the Kopet Dag region of Turkmenistan. This cultural phenomenon is known as the Jeitun culture (Masson, 1957, 1971), which, according to recent studies, developed in the late seventh and early sixth millennia BCE (Harris, 2010; Pollock et al., 2019). Jeitun pottery represents some of the earliest ceramic production in western Central Asia.

In contrast, the Hissar culture (Ranov, 1982) is linked to mountain communities in Tajikistan that relied largely on hunting. In Uzbekistan, several Neolithic cultures have been documented, including Kaltaminar, whose communities depended mainly on hunting and fishing. The origins of Kaltaminar remain debated, and its chronological range may extend from the Neolithic into the Bronze Age (Brunet, 1998, 2005).

Along the middle Zaravshan River, Sazagan sites such as Sazagan 1, Sazagan 2, and Tepakol 3 have yielded a variety of stone tools and animal remains, indicating that their inhabitants lived in mountainous regions and relied heavily on hunting. Further east, in the deserts of Fergana, a group of early Neolithic sites collectively known as the "Central Fergana culture" has been identified.

Among these regions, the Nurata Mountains - located north of the Zaravshan River, between the Kaltaminar and Sazagan zones- are of particular importance. Excavations at Zardali suggest a Neolithic occupation, with evidence pointing to seasonal settlement in the area The absence of pottery in the cultural layers suggests that Zardali belongs to a Pre-Pottery Neolithic phase. Stone tools at the site were primarily produced using the pressure flaking technique on local materials such as quartz and flint. The location and character of the lithic assemblage suggest that agriculture had not yet become a dominant subsistence strategy and that the site was likely used seasonally by hunter-gatherer groups.

Together, the evidence from Zardali and other Neolithic sites in Central Asia presents a nuanced picture of the transition from foraging to food production. Unlike some regions in Southwest Asia, this process in Central Asia followed varied, region-specific trajectories, with hunting remaining a major subsistence activity during the Neolithic period.

V. Conclusion

The spread of agriculture in southwestern Central Asia in the late seventh millennium BCE, and its eastward expansion by the third millennium BCE, highlights the importance of central regions -including

the Nurata mountain and Zaravshan river basin- for understanding the timing and mechanisms of the spread of food-producing economies. Excavations at Zardali have offered valuable insights into the Neolithic of Central Asia. Based on the technological characteristics of the lithic assemblages, particularly the use of pressure flaking and their typological similarities with other Neolithic sites, the deposits from these excavations can be confidently attributed to the Neolithic.

The absence of architectural remains, along with limited faunal material and the exclusive presence of lithics, suggests that Zardali was likely occupied temporarily, most probably on a seasonal basis, and used primarily for hunting activities. One of the most notable discoveries at the site is a human burial. The individual was buried in a crouched position. The burial likely reflects specific beliefs and burial practices regarding death and the afterlife among societies in the region during the fourth millennium BCE.

Located between the Sazgan and Kaltaminar cultural zones, Zardali provides important data to fill gaps in our understanding of how Neolithic lifestyles spread across Central Asia. Although excavations have been limited so far, ongoing fieldwork and research are essential to develop an understanding of Neolithic subsistence strategies and the emergence of agriculture in the region. The Zardali findings not only expand knowledge of the Neolithic in Central Asia but also highlight the key role of Uzbekistan in tracing cultural dynamics and the chronology of Neolithization across the region.

References

Asouti, E., & Fuller, D. Q. (2013). A Contextual Approach to the Emergence of Agriculture in Southwest Asia: Reconstructing Early Neolithic Plant-Food Production, *Current Anthropology, 54* (3), 299-345. https://doi.org/10.1086/670679

Avanesova, N., Luno, E., Ergashev, O., & Kholmatov, A. (2020). *Research conducted in Khoshrabad district in 2018–2019. Archaeological Research in Uzbekistan, 12*, 12–20.

Balossi Restelli, F. (2006). *The Development of Cultural Regions in the Neolithic of the Near East*, *The Dark Faced Burnished Ware Horizon*, Oxford: BAR International Series 1482.

Bar-Yosef, O. & Belfer-Cohen, A. (1991). From Sedentary Hunter-Gatherers to Territorial Farmers in the Levant. In Gregg, S. A. (ed.), *Between Bands and States*, (pp. 181-202), Carbondale: Center for Archaeological Investigations.

Bar-Yosef, O. (2002). The Natufian Culture and the Early Neolithic: Social and Economic Trends in Southwestern Asia. In P. Bellwood and C. Renfrew (eds.), *Examining the Farming/Language Dispersal Hypothesis*, (pp.113-26), McDonald Institute Monographs, Cambridge: University of Cambridge.

Bar-Yosef, O. (2009). Social Changes Triggered by the Younger Dryas and the Early Holocene Climatic Fluctuation in the Near East. In C.T. Fisher, J.B. Hill, and G.M. Feinman (eds.), *The Archaeology of Environmental Change*, (pp.193-208), Tucson: The University of Arizona Press.

Bellwood, P. (2005). First Farmers: The Origins of Agricultural Societies. Blackwell, Oxford.

Braidwood, R. J. (1973). The Early Village in Southwestern Asia. *Journal of Near Eastern Studies, 32*, 34-9.

Brunet, F. (1998). La Néolithisation en Asie centrale : Un état de la question. Paléorient, *24*(2), 27–48.

Brunet, F. (2005). Pour une nouvelle ´etude de la culture N´eolithique de Kel'teminar, Ouzb´ekistan. Pal´eorient, *31*(2), 87–105.

Byrd, B. F. (1994). Public and Private, Domestic and Corporate: The Emergence of the Southwestern Asian Village. *American Antiquity, 59*, 639-666. https://doi.org/10.2307/282338

Byrd, B. F. (2000). Households in Transition: Neolithic Social Organization within Southwest Asia. I. Kuijt (ed.), *Life in Neolithic Farming Communities: Social Organization, Identity, and Differentiation,* (pp. 63-98), New York: Kluwer Academic/Plenum Publishers.

Byrd, B. F. (2005). Reassessing the Emergence of Village Life in the Near East. *Journal of Archaeological Research, 13*(3), 231-290. https://doi.org/10.1007/s10814-005-3107-2

Campbell S. 2017. Absolute dating and the early pottery of south-west Asia. In Tsuneki, A., Nieuwenhuyse, O., and Campbell, S. (Eds.), *The emergence of pottery in the west*, (pp. 133–154), Oxford: Oxbow Books.

Cauvin, J. (2000). *The Birth of the Gods and the Origins of Agriculture*, Translated into English by T. Watkins, Cambridge: Cambridge University Press.

Darabi, H. (2015). *An Introduction to the Neolithic Revolution of the Central Zagros, Iran*, Oxford: BAR International Series 2746.

Darabi, H., Naseri, R., Young, R., & Fazeli, H. (2011). Absolute Chronology of East Chia Sabz: A Pre-Pottery Neolithic site in Western Iran. *Documenta Praehistorica, 39*, 255-65. https://doi.org/10.4312/dp.38.20

Flannery, K. V. (2002). The Origins of the Village Revisited: From Nuclear to Extended Households. *American Antiquity, 67*(3), 417-433. https://doi.org/10.2307/1593820

Garfinkel, Y. (2014). The Life Cycle of Pre-Pottery Neolithic B Plastered Skulls from the southern Levant. In B. Finlayson and C. Makarewicz (eds.), *Settlement, Survey and Stone. Essays on Near Eastern Prehistory in Honour of Gary Rollefson*, (pp. 145–158). Berlin: ex oriente.

Ghirshman, R. (1938). *Fouilles de Sialk*, vol. 1. Paris: Paul Geuthner.

Gunz, Ph. & Bulygina, E. (2012). The Mousterian child from Teshik-Tash is a Neanderthal: A geometric morphometric study of the frontal bone. *American Journal of Physical Anthropology*, *149*(3), 365-79. https://doi.org/10.1002/ajpa.22133

Harris, D. R. (2010). *Origins of Agriculture in Western Central Asia.* Philadelphia: University of Pennsylvania.

Hole, F. (2024). Human Dimensions of the Transition from Hunting-Gathering to Agro-Pastoralism. In Richter, T., and Darabi, H. (Eds.). *The Epipalaeolithic and Neolithic in the eastern Fertile Crescent: Revisiting the Hilly Flanks*, (pp. 65-86), Routledge.

Kadirova, I. & Abduvakhidova, N. (2025). Tourism Competitiveness in Uzbekistan: Archaeological Tourism at Shah-i-Zinda and Sustainable Development. *Journal of Sistan and Baluchistan Studies*, *5*(1), 59-72. https://doi.org/10.22034/jsbs.2025.515575.1080

Khanipour, M. & Nishiaki, M. (2024). Dating the beginning of the Pottery Neolithic in South Iran: Radiocarbon dates from Tol-e Sangi, the Fars. *Radiocarbon, 66*, 637–649. https://doi.org/10.1017/RDC.2024.92

Khanipour, M. (2023). Bizdan Pottery: New Evidence from The Neolithic Period at Forg, Southeast Fars, Iran. *Journal of Sistan and Baluchistan Studies, 3*(1), 65-75. https://doi.org/10.22034/JSBS.2022.347327.1035

Khanipour, M., & Molaie Kordshooli, H. (2023). Cairn burial of the historical period in Khansaar Dam, Toujerdi district of Fars province, Iran. *Historia i Świat*, *12*, 59–72. https://doi.org/10.34739/his.2023.12.04

Kozlowski, S. K. & Aurenche, O. (2005). *Territories, Boundaries and Cultures in the Neolithic Near East*, Oxford: BAR International Series 1362.

Kuijt, I. & Goring-Morris, N. (2002). Foraging, Farming, and Social Complexity in the Pre-Pottery Neolithic of the Southern Levant: A Review and Synthesis. *Journal of World Prehistory, 16*(4), 361-440. https://doi.org/10.1023/A:1022973114090

Masson, V. M. (1957). Jeitun and Kara-tepe. *Sovetskaya Arkheol, 1*, 143–160.

Masson, V.M. (1971). *Posseleniye Dzheytun*. Nauka, Leningrad.

Masson. M. V. & Sarianidi, I. V. (1972). *Central Asia: Turkmenia before the Achaemenids*. London: Thames & Hudson.

Matthews, R., Matthews, W. & Mohammadifar, Y. (2013). *The Earliest Neolithic of Iran: 2008 Excavations at Tappeh Sheikh-e Abad and Tappeh Jani: Central Zagros Archaeological Project,* Oxbow Books, Oxford, UK.

Najafi, M., Niknami, K., Gholamzade, S., Khanipour, M. & Soltysiak, A. (2018). Human remains from Kan-Gohar cave, Iran, 2010-2015, *Bioarchaeology of the Near East, 12*, 95–102.

Naseri, R., Khanipour, M., Arimatsu, Y., Kavosh, H. & Soltysiak, A. (2019). Human remains from Menjaq Tepe 2. *Bioarchaeology of the Near East, 13*, 147–150.

Naseri, R., Najafi, M., Mahjoub, Z., Tavakoli Mehr, D., Kavosh, H. A. & Miri, S. M. (2020). Human remains from Lahsavareh, Iran. *Bioarchaeology of the Near East, 14*, 159-166.

Nishiaki, Y., Aripdjanov, O., Arai, S., Akashi, Ch., Nakata, H., Sayfullayev, B., Ergashev, O., & Suleimanov, R. (2022). Neolithization during the 6th millennium BCE in western Central Asia: New evidence from Kaynar Kamar Rockshelter, Hissar Mountains, Southeast Uzbekistan. *Archaeological Research in Asia, 30*, 100352.

https://doi.org/doi.org/10.1016/j.ara.2022.100352

Okladnikov, A.P. (1949). Investigations of the Mousterian site and the Neanderthal burial at the Tteshik-Tash Grotto, South Uzbekistan (Central Asia). In Gremiatsky, M.A., Nesturkh, M.F. (Eds.), *Teshik Tash: Paleolithic Man*, (pp. 7–85). Moscow, Moscow State University.

Ongalov L. A. (2023). History of Study of Stone Age Archeology of Nurota Mountain Range. *Problems of Social and Humanitarian Sciences, 12*, 48-53.

Özdoğan, M. (2019). Early farmers in northwestern Turkey: What is new? In Marciniak, A. (ed.), *Concluding the Neolithic. The Near East in the Second Half of the Seventh Millennium BC*, (pp. 307–327), Columbus: Lockwood Press.

Özdoğan, M. (2024). Emergence and Dispersal of Neolithic Lifeways: From Core to Peripheries. In Richter, T., and Darabi, H., (Eds.). The Epipalaeolithic and Neolithic in the eastern Fertile Crescent: Revisiting the Hilly Flanks, (pp. 35-56), Routledge.

Pollock, S., Bernbeck, R. & Ogüt, B. (2019). *Looking Closely: Excavations at Monjukli Depe, Turkmenistan, 2010–2014*. Leiden: Sidestone Press.

Ranov, V. A. (1982). The Hissar Neolithic culture of soviet Central Asia. Man Environ, *6*, 63–70.

Ranov, V.A. (1984). Douze ann´ees de recherches sur la pr´ehistoire au Tadjikistan m´eridional et au Pamir (1971-1982). Paleorient 10 (2): 5–22.

Riehl, S., Benz, M., Conard, N., Darabi, H., Deckers, K., Fazeli, H., & Zeidi, M. (2012). Plant use in three Pre-Pottery Neolithic Sites of the Northern and Eastern Fertile Crescent: A Preliminary Report. *Vegetation History and Archaeobotany, 21*(2), 95-106. https://doi.org/10.1007/s00334-011-0318-y

Riehl, S., Zeidi, M., & Conard, N. (2013). Emergence of Agriculture in the Foothills of the Zagros Mountains of Iran. *Science, 341*, 65-67. https://doi.org/10.1126/science.1236743

Sayfullaev, B., & Ungalov, L. (2023). Stone Age finds identified in the northern part of the Nurata mountain range. In *Proceedings of the Scientific and Practical Conference "Stone Age Cultures in Central Asia,* (pp. 62–67), Samarkand.

Sayfullaev, B., Ergashev, O., Radjabov, A., Ungalov, L., & Imomov, A. (2023). New Stone Age finds from the northern part of the Nurota mountain range. In *Socio-economic and political history, material and spiritual culture of the peoples of Central Asia: Proceedings of the Republican scientific-practical conference dedicated to the 65th anniversary of M. Kh. Pardaev* (pp. 15–18), Samarkand.

Soltysiak, A. & Darabi, H. (2017). Human remains from Ali Kosh, Iran. Bioarchaeology of the Near East, *11*, 76–83.

Taylor, W.T., Pruvost, M., Posth, C., Rendu, W., Krajcarz, M.T., Abdykanova, A., Brancaleoni, G., Spengler, R., Hermes, T., Schiavinato, S., Hodgins, G., Stahl, R., Min, J., Alisher Kyzy, S., Fedorowicz, S., Orlando, L., Douka, K., Krivoshapkin, A., Jeong, C., Warinner, C., & Shnaider, S. (2021). Evidence for early dispersal of domestic sheep into Central Asia. Natural Human Behaviour, *5*, 1169–1179.

https://doi.org/10.1038/s41562-021-01083-y

Tsuneki, A. 2017. The significance of research on the emergence of pottery in West Asia. In: Tsuneki A, Nieuwenhuyse O, Campbell S, (Eds.), *The emergence of pottery in West Asia.* (pp. 1–8). Oxford: Oxbow Books

Wright, K. I. (2014). Domestication and Inequality? Households, Corporate Groups, and Food Processing Tools at Neolithic Çatalhöyük. *Journal of Anthropological Archaeology*, *33*, 1-33. https://doi.org/10.1016/j.jaa.2013.09.007

Zeder, M.A. (2011). The Origins of Agriculture in the Near East. *Current Anthropology, 52(*4), 221–236. https://doi.org/10.1086/659307