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Gird-i Ashoan during the Late Chalcolithic, Based on the Second Season of Excavation in Northwestern Iran

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(87-110)

Abstract

Excavations at Gird-i Ashoan, an archaeological mound in Piranshahr County in the Lower Zab Basin, have provided remarkable insights into the cultural traditions of the region during the Late Chalcolithic. Whilst reflecting some indigenous peculiarities, its material culture exhibits broad affinities with Northwestern Iran, the Caucasus, and Anatolia. This evinces the spread of the Late Chalcolithic (LC) cultures, especially LC2–3, over vast territories, which could imply either population movements or the spread of a certain pastoralist subsistence system. The central stimulus was favorable climatic conditions, presumably a significant reduction in cold that fostered a climate almost similar to present conditions. Building on the finds from Gird-i Ashoan, the present paper addresses the reasons for the chaff-faced pottery's extension over a wide geographic area from the Caucasus to Mesopotamia, northern Syria and northwestern Iran. Excavations at the site brought to light a Late Chalcolithic settlement of an unprecedentedly substantial range, consisting of about 8 m of continuous deposits. The pottery assemblages from the site include chaff-faced ware and Painted Pisdeli ware, suggesting that the site's strongest interactions were with the Caucasus, Anatolia, and Mesopotamia.

Keywords: Northwestern Iran, Lower Zab Basin, Late Chalcolithic, Chaff-faced Ware, Painted Pisdeli ware.

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Introduction

The Chalcolithic period is characterized by several transformations. The most notable is an increase in the frequency of settlements compared to the Neolithic, resulting in a pattern hinging on environmental conditions and potentials. Archaeological investigations evince the growth of settlements in both extent and number in most parts of Iran, especially the western slopes of the Zagros and the northwest. Such cultural realms as Dalma and Pisdeli in the northwest would have gradually spread over more areas, and the pertinent communities mainly relied on agriculture and pastoralism. In this period the role of hunting and gathering in local subsistence systems reached its lowest level.

Among the known cultures of northwestern and western Iran in the early Chalcolithic is what is represented by the so-called Dalma pottery tradition. Our rather limited understanding of the culture primarily derives from the excavations of Dalma Tepe (Hamlin 1975), the second earliest known culture across the Lake Urmia basin (Hamlin 1975; Henrickson and Vitali 1987), with the first being Hajji Firuz (Voigt 1983). In effect, Dalma formed part of a larger culture that extended, with slight regional discrepancies, over vast territories, among them being Mesopotamia (Hall and Woolley 1927; Jasim 1985), the Caucasus (Chataigner 2010), and Anatolia (Yildirim and Gates 2007, 283; Garrard 1996; Halil Tekin 2005). The Dalma horizon is supplanted by the mid/late Chalcolithic traditions of Pisdeli (LC1) and the Chaff-Faced Ware (CFW) traditions (LCII-LCIII). Chronologically, the latter succeed the Ubain period in northern Mesopotamia.

In the South Caucasus, the western Zagros and northwestern Iran, the systematic use of chaff, and hence the CFW effect, is attested at least from the very beginning of the 5th millennium BCE with the development of the Dalma culture. In spite of its heavy chaff temper, however, Dalma ware can hardly be considered as marking the beginning of the “Chaff-Faced Ware” era *stricto sensu* (Marro 2022). The period is marked by the spread of the technological horizon of the Chaff-Faced ware, which represents a widespread cultural phenomenon covering vast territories (Palumbi 2011:211; Helwing 2012: 204), which display a fairly consistent set of cultural attributes (Helwing 2012: 207).

In addition to the Urmia Lake Basin, the Chaff-Faced Ware cultural realm comprises several expanses extending from the Caucasus and North and East Mesopotamia to large parts of Anatolia as well as to northwestern and limited parts of western Iran (Marro 2012, 2022; Lyonnet 2017 ; Museybli 2016 ; Gerritsen et al. 2010; Balossi, Restelli 2012; Nannucci 2016). In the Early Chalcolithic, the so-called Dalma culture represents a distinct pottery tradition associated with simple mudbrick/packed clay architecture that was for the first time reported from northwest Iran (Fazeli Nashli & Matthews 2022; Hamlin 1975; Marro 2022) and later in the excavations of Se Gabi in eastern Central Zagros (Young 1969) and the Early/Mid and Late Chalcolithic contexts at Tepe Qeshlaq (Sharifi 2020; Sharifi & Motarjem 2018). The Late Chalcolithic marked the arrival of the Pisdeli Ware and Chaff-Faced Ware types. In northwestern Iran, the Zab Basin, thanks to its geographic proximity, exhibits widespread indications of interfaces with South Caucasia and East Anatolia, so that it shares close cultural affinities with the Anatolian sites (Gerritsen et al. 2010; Balossi and Restelli 2012; Nannucci 2016), Caucasia (Museybli 2016; Gerritsen et al. 2010) and Syria

(Brustolon and Rova 2006; Kelly and Buccellati 2019).

The presence of the CFW across vast regions was initially linked to the migrations of Mesopotamian groups to Transcaucasia (Marro 2010: 52). Yet, thorough comparison of CFW assemblages excavated from the Caucasus down to the Fertile Crescent, it is now argued that this widespread occurrence does not result, contrary to a frequent opinion, from the migrations of Mesopotamian groups into Transcaucasia; rather, it developed from a local evolution dating back at least to 4500 BCE. The territory spanned by CFW thus constitutes some kind of oikoumene, whose center of gravity is probably located in the Highlands, between the Euphrates and the Kura Basins but not in the Fertile Crescent (Marro 2010). The bearers of the CFW culture appear to have lived side by side with the bearers of the Kura-Araxes culture for a certain while, before the latter supplanted the CFW culture.

At Gird-i Ashoan, the surface layers represented ephemeral Iron II-III occupations, the Mannaean period (Sharifi 2021c), totally lacking in architecture. Directly below these later contexts emerged the cultural material characteristic of the Late Chalcolithic, thus marking the presence of a protracted hiatus of several millennia. The Late Chalcolithic is represented by a thick deposit comprised of 24 layers and 4 architectural phases. A contemporary deposit of such depth, 8 meters, is as yet unreported from northwestern Iran.

Gird-i Ashoan and the significant of Late Chalcolithic period in northwestern Iran

Since Gird-i Ashoan is a key site in the Zab Basin and the chaff-faced pottery occurs throughout the site's sequence, a major question addressed here is the reasons behind its spread over such a vast range extending from Caucasia to Mesopotamia, northern Syria and northwest Iran. The pottery analysis sheds light on Gird-i Ashoan's interactions with neighboring regions through relative chronology. The culture seems to have extended up to the slopes of the East Taurus and the Zagros. The second question considered is whether the Zab Basin was involved in any contacts and trade.

A major objective is to study cultural transformations of the Hasanlu VIII Period in the Lower Zab Basin drawing on the most recent archaeological findings and cultural interactions of the local inhabitants with nearby regions based on the finds from Gird-i Ashoan. The paper offers a detailed description of the regional material culture of the Late Chalcolithic, the advent of which was associated with tremendous cultural transformations. Our data comes from both fieldwork and comparative studies. Thus, the information obtained from excavations are juxtaposed with those gathered from all pertinent publications on northwest Iran, Caucasia, Anatolia and Mesopotamia in the fourth and fifth millennia BC to set up a relative chronology. The merit of the study lies in the fact that the region in question formed a part of the chaff-faced pottery horizon.

History of Research

In the archaeological literature, northwestern Iran is primarily famed for the plains of the Lake Urmia Basin. The sphere of influence of the region's culture, however, spreads over a much vaster zone. In regards to the history of scholarship, the basin was among the regions of the most interest for domestic and foreign scholars at the dawn of professional archaeology in Iran. In the northern

basin, excavations at the Neolithic site of Tepe Hajji Firuz have yielded ceramics paralleling the material from the Early Hassuna sites (Voigt 1983: 101). Dalma-type pottery has occurred at Tepe Sivan (Solecki 1973), Hajji Firuz (Voigt 1983: 80) and Pisdeli (Dyson 1960). The University of Pennsylvania Museum's long-lasting Hasanlu Project, started in 1956 under the general direction of Robert H. Dyson, is the most significant work in this basin (Dyson 1968).

Very little is known about the region in the Chalcolithic period notwithstanding extensive scholarship, notable among them being the excavations of Dalma, Pisdeli , Lavin and Dava Göz (Hamlin 1975; Dyson 1960; Nobari & Binandeh 2012; Abedi etal.2018). As the Late Chalcolithic presently remains unattested at any other site in the Zab basin, Gird-i Ashoan with its thick deposits can be regarded as the key site of this basin. The period is separated by a long hiatus from the immensely different Early Bronze traditions that supplanted the Chaff-Faced horizon. Later excavations by Sharifi at Barveh and Bard-e Zard Tepe brought to light further aspects of the Bronze Age cultures (Sharifi 2021b).

Geographic Location of Gird-i Ashoan

Gird-i Ashoan is a mound in the western side of a namesake village, 10 km away from Piranshahr city of West Azerbaijan province (Figure 1). With its 60 m diameter, the mound reaches a maximal height of 10 m from the surrounding lands. Its location amid the village houses has brought about partial disturbance of both its core and buffer zones (Figure 2). Excavations were completed in two seasons. The single 5 × 10 m trench opened in the first season would be taken down to the sterile soil in the subsequent season (Figure 3).

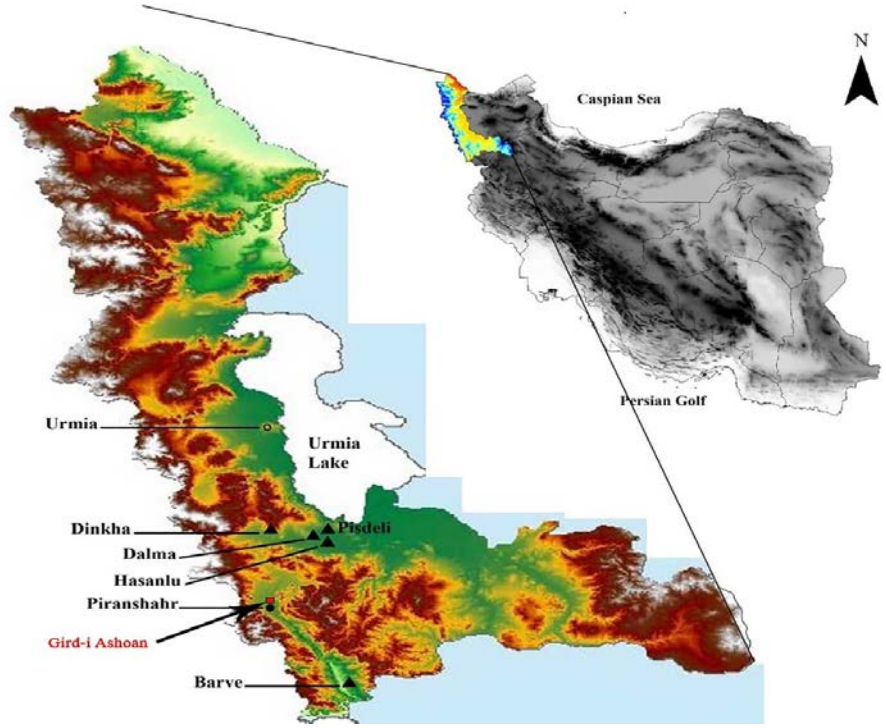


Fig 1: the position of Tepe Gird-i Ashoan in the map.

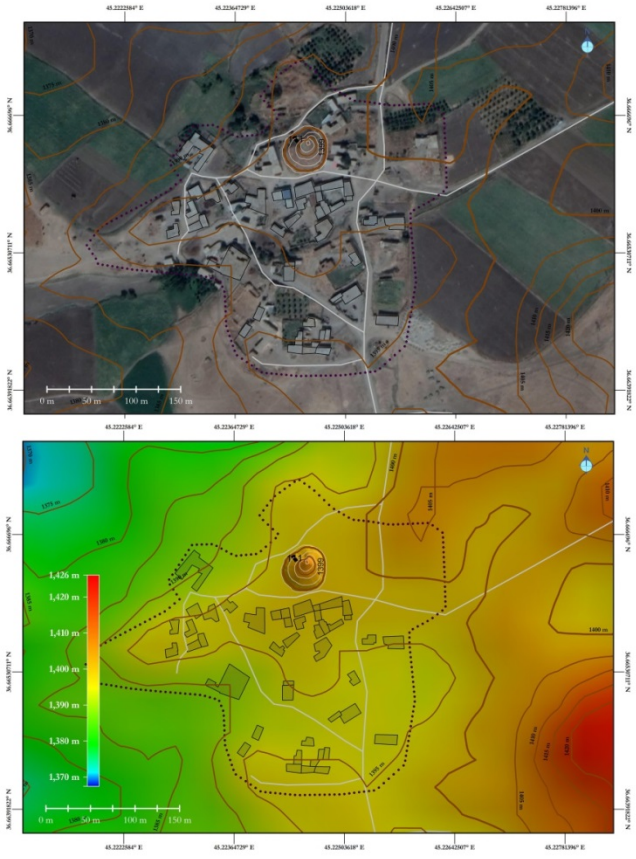


Fig 2: Profile and Satellite image of Gird-i Ashoan Tepe..

Fig 3: General view of Gird-i Ashoan

An Outline of the Fieldwork

The mound lies at UTM 520062E 4057880N at an altitude of 1415 m, at the eastern fringes of the Piranshahr plain, on the east bank of the Lavin River. The northern and western flanks of the mound are about 330m and 450m off the riverbed, respectively. The site is situated within the boundaries of the modern village, flanked by its buildings. It is a mound with a circular base of about 55 m in diameter. Measuring about 55m north-south and 50m east-west, it occupies a total area of *ca.*

2750 sq. m. The east and south slopes gently descend against the walls of the villagers' houses.

In the first season of excavation at the site, Trench T.G.A was opened in the western side of the mound, as the cut already made in this vertical slope had exposed the cultural layers and related materials, thus excluding the need for much excavation. The surface layers in this 5 x 10 m trench belonged to an Islamic cemetery, and Iron Age II-III potter was attested in the first layer (Sharifi 2011). Chalcolithic material was reached at the depth of 1.70 m and continued down the depth of -9.65m**.** Of the total of four architectural phases presently known from the Chalcolithic deposits of Gird-i Ashoan, the two upper phases were recorded in the first season (Sharifi 2022). Phase 1 consisted of dry-laid stone walls in the northern quadrant of the trench, extending from -2.31m down to -2.65m, while Phase 2 was represented by perpendicular mudbrick walls beginning from -3.43m and ending at -3.62m. The recovered mudbricks measured 40 × 60 cm (Figure 4).

The meaning two phases would be recorded in the second season that resumed the work from the lowest level reached in the previous season, which had recorded eleven locus and reached a depth of 6.4 m below datum that marked Locus 113. Digging in the second season continued until encountering the virgin soil at the depth of 9.65m, designated as Layer 125. As with the previous season, architectural structures and material culture connected with the everyday life of the Late Chalcolithic inhabitants were encountered.

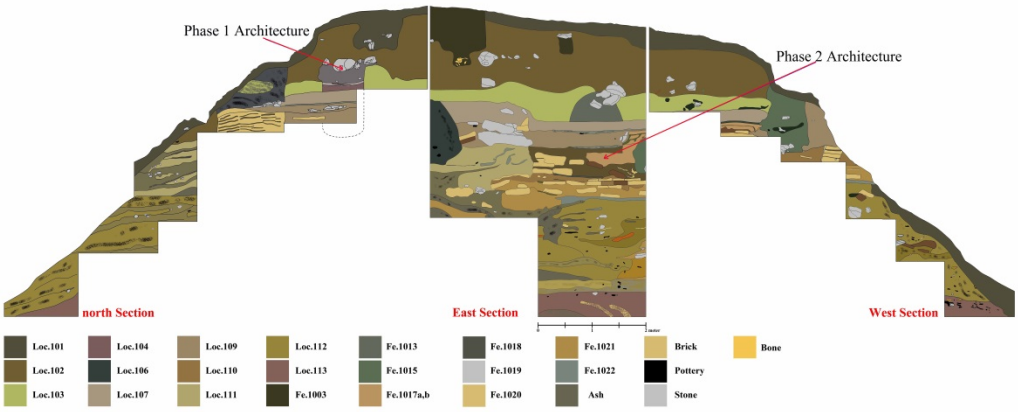


Fig 4: Sections of the trench, Loci 101-113 (Sharifi, 2022:63)

A profusion of ash and charcoal fragments was attested in Locus 116 at the depth of 6.55 m, which continued to -7.55 m. A point of interest about this deposit is the high frequency of burned animal bones, mainly of ovid and caprine species, and canine jaws and skulls. Also recovered were coarse sherds in chaff-faced ware, sometimes with smoke-blackened surfaces evincing exposure to fire. Designated as Locus 118, the deposit is 40 cm thick, extending from 7.5 m to 8.3 m below the datum. This black deposit comes from fires that presumably served cooking and heating purposes as evidenced by the presence of burnt faunal remains (Figure 5). Lithic and obsidian tools and a bone nail also occurred not to mention pottery. As already stated, the second season of fieldwork added two further levels to those already identified in the first season. An outline of these new levels designated as

Phases 3 and 4 at Gird-i Ashoan, which was a permanent settlement, follows.

Phase 3

A partially missing north-south oriented mudbrick wall (see Figure 5) appeared in the northern half of Trench T.G.A (Feature 1023), from -6.6 m to -6.8 cm. Built from two rows of mudbricks measuring 9 × 40 × 60 cm, the wall was 0.6 m long and 0.4 m wide, with the greatest extant height of 20 cm. Occupying the northeast quadrant, the next layer (Locus 117) extended from -7.15 m to -7.7 m, and was a light brown deposit containing very fine clay, sand, and silt.

Fig 5: The mudbrick wall (Phase 3) in T.G.A.

Phase 4

A north to south oriented structure of mudbrick (Feature 1024) emerged. Measuring 2.9 m long, 1 m thick, and 1 m high in the highest part, it exhibited mudbricks of similar size as the aforementioned structure (Feature 1023). Yet, to achieve the highest possible strength and a harmonious arrangement, mudbricks of smaller dimensions were also used in this latter wall. The extant wall consists of eleven superimposed courses. Several parts of its eastern face were distributed, presumably to create fire pits. Another point of interest is the use of mudbricks of different colors in alternative courses, creating a color contrast. This could hardly be inadvertent or accidental. Two plausible stimuli present themselves. The first is to achieve a certain aesthetic, i.e., a spectacular façade. The second is of practical character, i.e., a moisture controlling measure, whereby the ultimate improved structural strength was intended. It is noteworthy that the discovery of thick

substantial wall, which extended from -7.5 m to - 8.6 m and occupied above two thirds of the whole trench, somehow impeded further work in the trench, which had to be continued down as a small sounding to sterile soil (Figure 6).

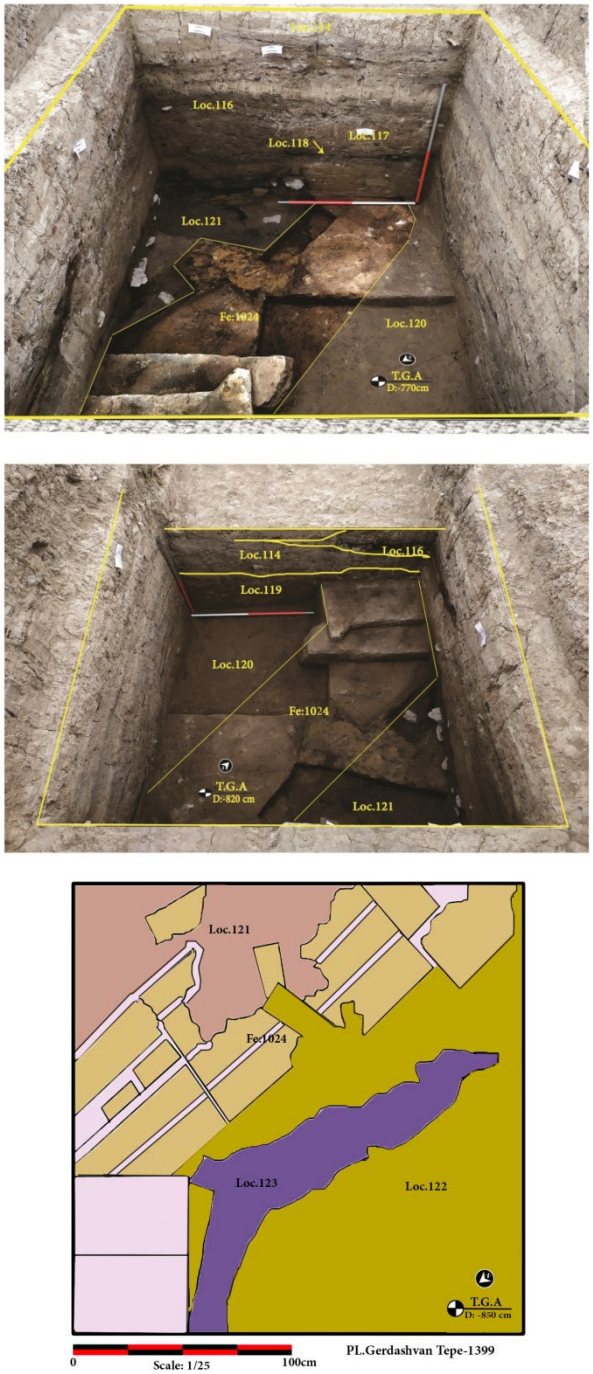


Fig 6: Thick mudbrick wall (F.1024) in T.G.A . Fig 7 Plan of the remains architecture.

Lower Strata

The first attestations of Pisdeli Ware occurred in Locus 122, a deposit containing silt, lime and occasionally gravel. It was characterized by fragments of chaff-faced ware and painted red-slipped pottery, associated with lithic and obsidian blades as

well as two pieces of river shells. With a maximal thickness of 60 cm, it began from 8.2 m below datum. Locus 123 was a dark brown deposit with heavy contents of ash and charcoal (Figure 8−9).

As a gray and brown accumulation, Locus 124 similarly contained large amounts of ash and charcoal along with fine clay and sand particles. An intriguing point is the presence of veins of ash, charcoal as well as chaff-faced ware. At the base of this deposit appeared the first indications of virgin soil. Locus 125, marking the lowest layer probed at the site, was a highly compacted, moist layer containing white particles of lime. Its character coupled with the total absence of finds of cultural nature and evidence of human activities leaves no doubt that it represented virgin soil.

The deposit was tested down to the depth of 9.65 m below datum to verify virgin soil was not far deeper, before the excavation was closed. The lower levels of Gird-i Ashoan are typified by the association of painted ceramics with the chaff-faced material. Thus, the Pisdeli type painted pottery prevailed at the site at the same time with the chaff-faced tradition.

Fig 8: Position of Layers 121-123 and F.1024 (architectural Phase 4)

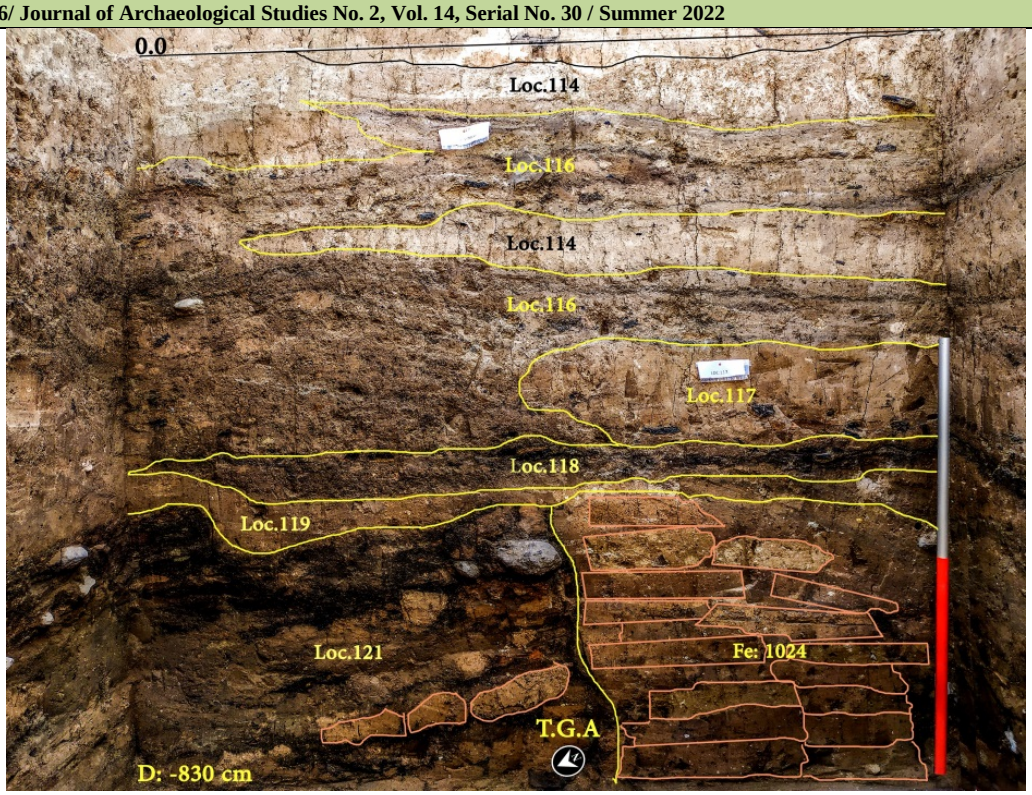


Fig 9: Stratigraphy picture of the part of the south east wall, Tranche T.G.A.

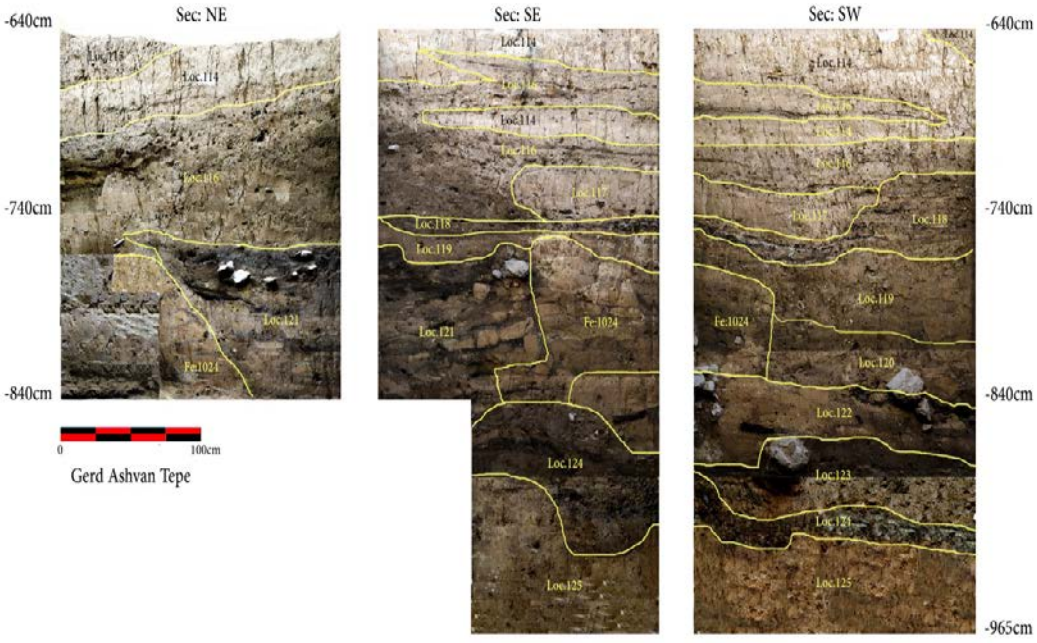


Fig 10: Stratigraphy picture of the South west, south east and north east walls

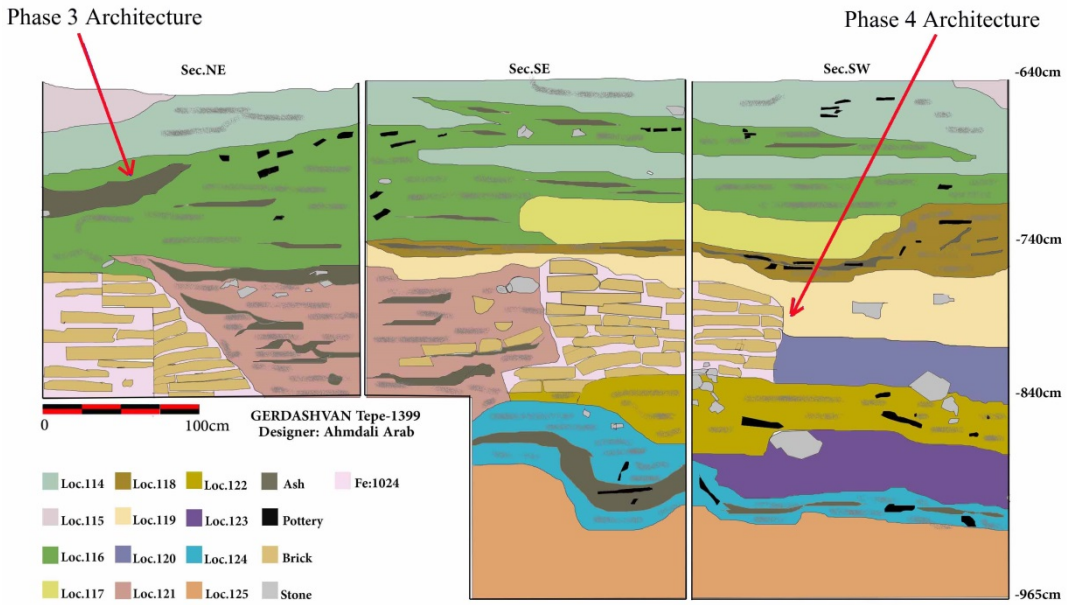


Fig 11: Section drawing of South west, south east and north east walls.

Pottery and relative Chronology

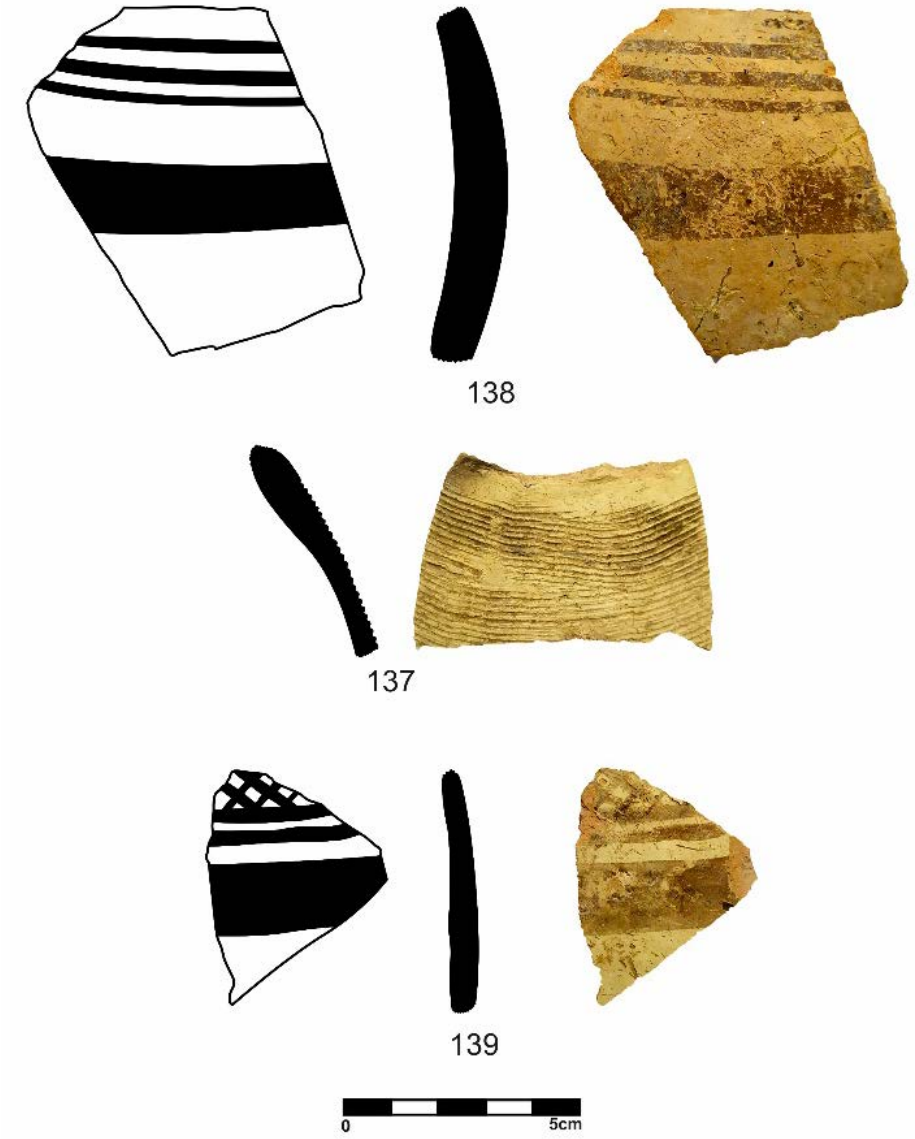
The ceramic material from Gird-i Ashoan belong to the Late Chalcolithic and consists of the Pisdeli (LC1) and the CFW pottery types. The assemblage falls under two plain and painted categories. The original handmade vessels were fired in a range of colors: orange, red, brown, and grey. The pieces in chaff-faced ware are coated in a thick slip. The painted pieces split into two grooved and bichrome subcategories. Painted pottery (of Pisdeli type) occurred in the lower levels characterized by painted motifs in black on buff or brown ground (Figure 12). Documented patterns include horizontal bands, parallel lines, triangles, and small squares. The painted material contains find grit and chaff inclusions in its fabric, bears a thin slip, and is adequately fired, with a brown exterior color.

A striking point about the pottery production at Gird-i Ashoan is the broad popularity of grooved pottery, to the extent that the related pieces occur across the documented sequence. Decorations come in the form of deeply incised horizontal patterns. As regards morphology, several forms are distinguishable: 1) wide-mouthed jars with everted rims and with the highest frequency; 2) open bowls; 3) pedestal bowls with elongated bodies; 4) jars with narrow openings; and 5) shallow trays (Figure 13-14).

The pottery from the site shares broad similarities with the neighboring regions. In terms of shapes, wide-mouthed jars and open bowls are almost identical with those from Mesopotamia (Stein 2012: 134, fig. 5), and Tell Zeidan in northern (Fisher 2017: 474) and Mozan/Urkesh in northeastern Syria (Buccellati 2019). These forms were also particularly prevalent at Ovçular Tepesi in western Nakhchivan (Marro et al. 2011: 93), Uçan Ağıl in the South Caucasus (Marro 2020, fig. 4) and are found at several sites in Anatolia, including Kenan Tepe (Parker 2006: 127; 2008: 165–167), Hirbemerdon Tepe (Nannucci 2016: pl. III), Arsalan Tepe VII (Balossi-Restelli 2012: fig 5.7), the Leylan region (Rova 2006; Brustolon 2007), and Barcın Höyük (Gerristen 2016: 223). Gird-i Ashoan's

shallow trays occur at the Caucasian site of Mentesh Tepe (Lyonnet et al. 2012: 148, nos. 1–2). And, narrow-mouthed spherical jars were in use in the Helawa region of Iraqi Kurdistan (Peyronel and Vacca 2015: 110, fig. 12,).

The painted pottery from the lower levels (Late Chalcolithic I) were quite popular in northern Mesopotamia (Fisher 2017: 478). In the mid-Chalcolithic period of western Turkmenistan related painted material prevailed (Bonora and Vidale 2013). The painted assemblage (from Locus 24) finds strong parallels in Helawa (Peyronel and Vacca 2015: 110, fig. 11). Grooved pottery is common at Tel Zeidan and Nuzi (Fisher 2017: 479), Çadır Höyük (Steadman et al. 2007: 398, fig. 8), Başur Höyük (Saglamtimur and Kalkan 2015: 81), Leylan (Brustolon and Rova 2007: 19, fig. 5, no. 6), Ovçular Tepesi (Kuliyeva and Baxşeliyev 2018: 44; Marro et al. 2011: 93), Beyuk Kesik, Poylu II, and Galayeri (Museyibli 2016), and Ovçular Tepesi (Marro 2010).



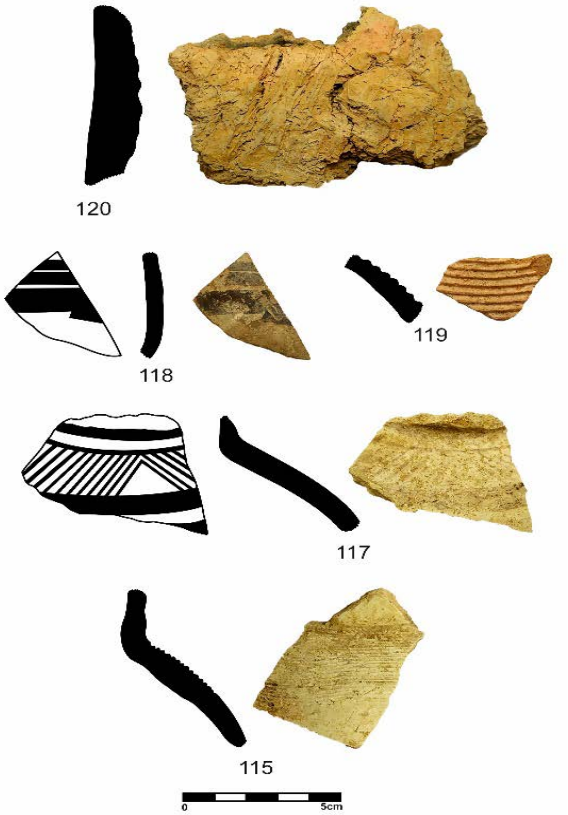
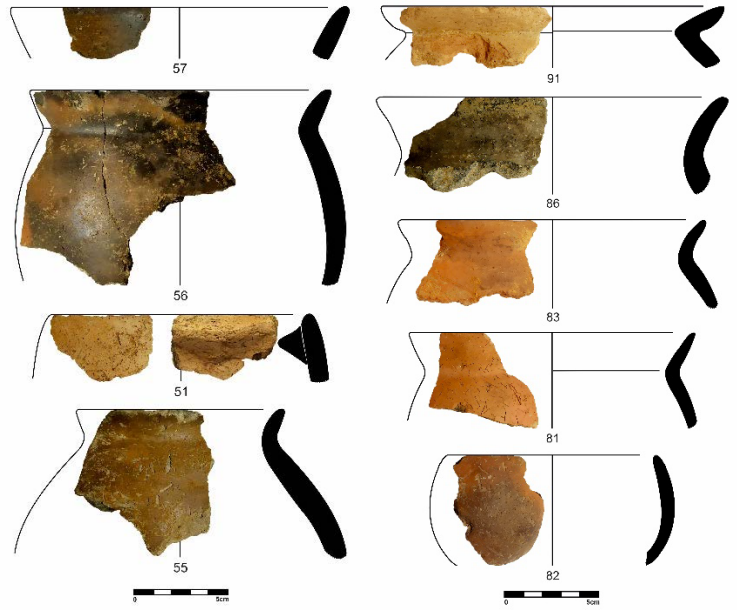


Fig 12: Painted-ware, Pisdeli sherds ;LC1, The Lower layers in Gird-i Ashoan



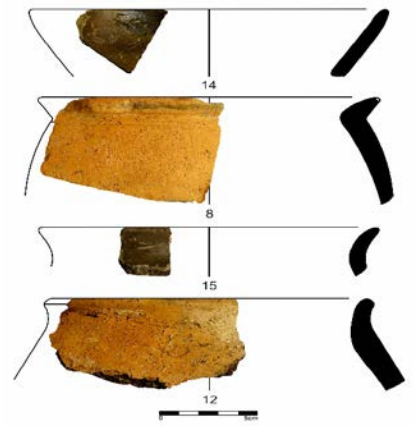


Fig 13: Late Chalcolithic CFW Piieces (LC2-3)

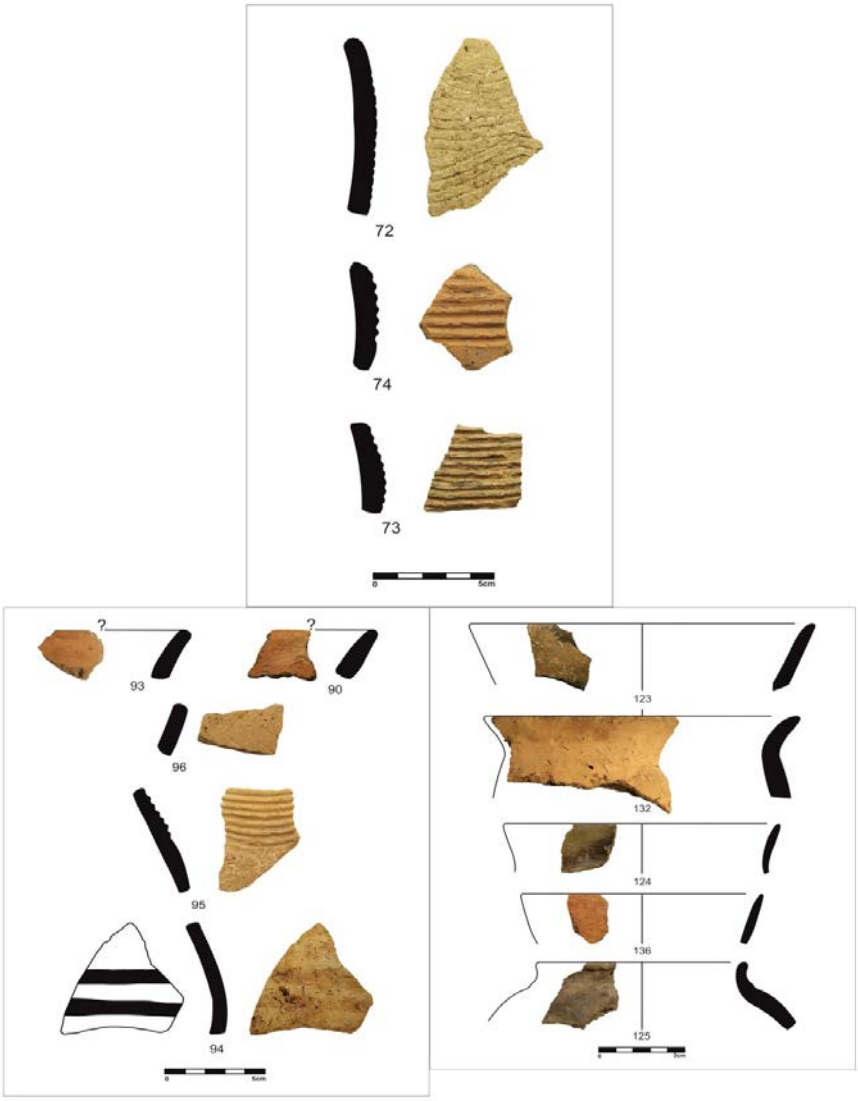


Fig 14: Late Chalcolithic simple, Painted and Streaky pieces.

Small Finds

Trench T.G.A produced a small assemblage of small finds including spindle whorls, tokens, obsidian, a bone awl, and a handful of lithic tools.

Spindle Whorl

Representing indirect evidence of textile production at Gird-i Ashoan, the recorded spindle whorls are simple and plain, and served practical, spinning, purposes (Figure 15). They were made of terracotta in a conical shape. The rather higher relative frequency of spindle whorls in the artifactual assemblage from such a limited excavated area, and the abundance of faunal skeletal remains of goats and sheep might point to a popular practice of spinning and textile production from wool and goat's hair fabrics at the site.

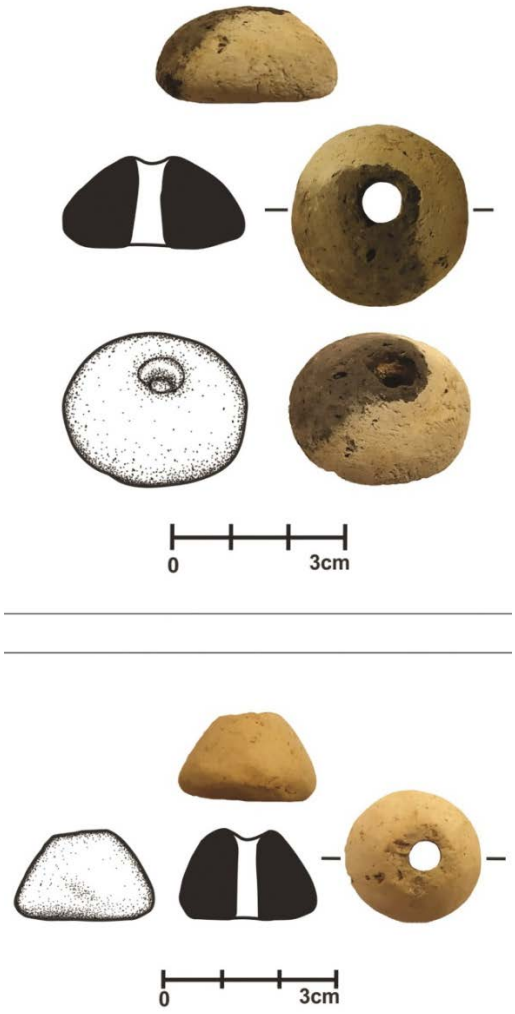


Fig. 15: Terracotta spindle whorls. L:118/121

Tokens

A single piece of conical token was excavated (Figure 16). The use of clay tokens for accounting and storing purposes is known from Qeshlaq in Chalcolithic period (Sharifi 2015:27) and outside the borders of Iran in the Balkans, which mainly lay within the Anatolian sphere of influence (Mihal Budja 2003).

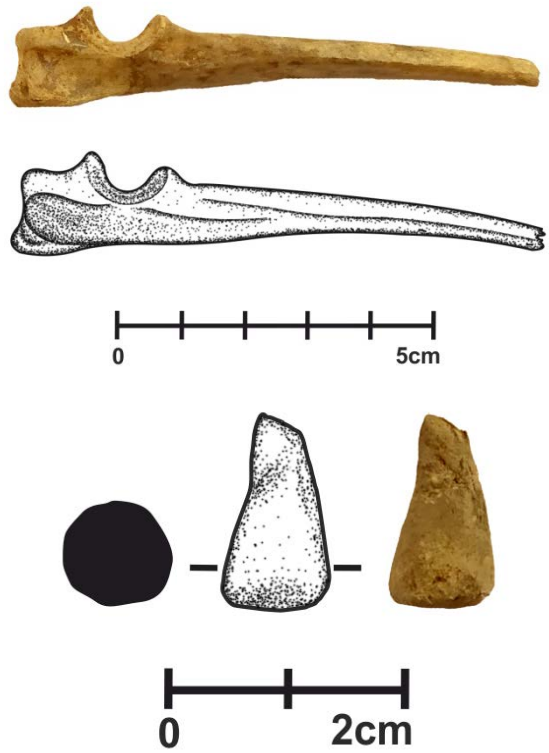


Fig 16: bone tool and token

Obsidian

A total of 13 obsidian pieces are divided between 7 flakes and 6 blades (Figure 17). The latest example was found in Locus 121 at the depth of 8 m below datum, while the earliest occurred in Locus 112 at -5.87m. The demonstrated provenance for the obsidians coming from such localities as Dava Göz and the Bostan Abad region (Abedi et al. 2018) bears testimony to the spread of Syunik obsidian to the southern Lake Urmia basin. Thus, the related material at Gird-i Ashoan may also have their origin in Caucasia (Orange et al. 2021).

Stone Tools

The stone tools (Figure 18-19) exhibit a limited variety. Noteworthy points include: 1) the blades were formed with an uncommon percussion and the known pressure technique; 2) the tools are made of flint or chert, thus the low potential for the production of longer blades with parallel edges; 3) some fragmentary blades were once longer, but were broken off during application or replacement; 4) the pieces tend to show indications that evince their use in composite sickles; this production technique and the use of sickle blades continued into the Bronze Age; and 5) apart from the blades, the rest are simply chips reduced from cores. Generally speaking, Gird-i Ashoan's stone tool assemblage reflects very rudimentary and localized production techniques. Cores were presumably river stones collected from different terraces.

Fig 17: Stone Scraper, L:119; Sample of Obsidians: L:118

Fig 18. Image and sketch of stone tools.

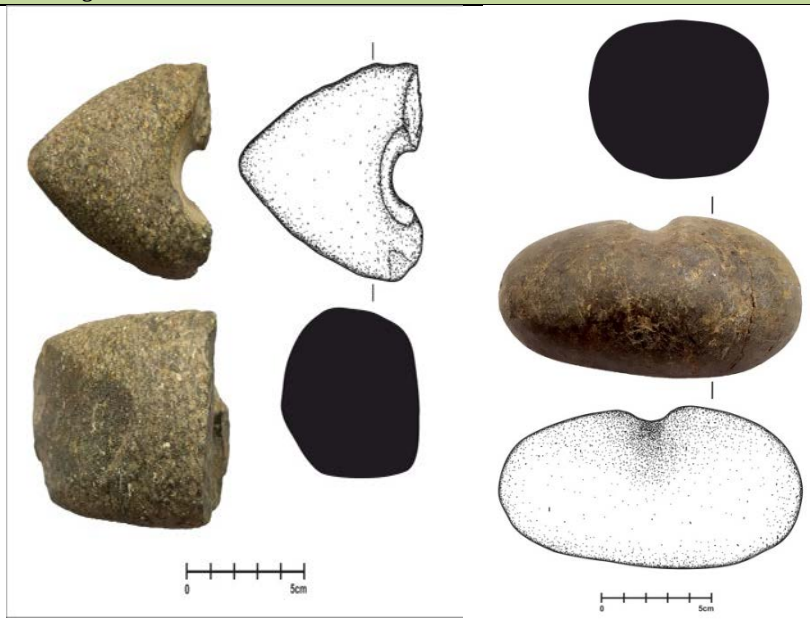


Fig 19: Image and sketch of stone tools.

Radiocarbon Absolute Dating of Gird-i Ashoan

Excavations were followed up by radiocarbon determination of a charcoal sample from Layer 112, carried out at the University of Copenhagen, Denmark (see Table 1). The calibrated date of about 4449 to 4361 BCE indicates that Chalcolithic levels of Gird-i Ashoan dating to the Pisdeli period (LC1) tallies with the corresponding deposits at Kul Tepe (Hadishahr), Arsalan Tepe, and Hasanlu (see Table 2).

Table. 1. Calibrated radiocarbon dates for Gird-i Ashoan.

AAR	SID	Name	Material	Description	Yield	14C Age-14C yr. BP	Calibration Program	Calibration Options	Calibrated Age (1 σ)	Calibrated Age (2 σ)
33861	41557	Gerdi Ashoan Tepe	Charcoal	Sampl 6 (Locus 112)	48.60842422	5584 - 46	OxCal v4.4.2 Bronk Ramsey (2020) ; r:5	IntCal20	4449BC (68.3%) 4361BC	4531BC (0.6%) 4526BC 4501BC (94.8%) 4342BC

Tab 2: Chronology of Late Chalcolithic sites in Caucasia, Anatolia and Iran. Marro et al., 2011, Marro 2022, Balossi-Restelli 2012:250, Abedi et al. ,2014: 37

Sites	Period	Dating
Ovçular Tepesi (Caucase)	Late Chalcolithic	4340/4255 -4230/4140
Arslan Tepe VIII (Anatolia)	Late Chalcolithic	4464/4339- 4542/4247 4451/4010- 4334/3961
Ucan Agil(Caucase)	Late Chalcolithic	4831/4587-4783/4540 4600/4350- 4687/4484
Kul Tepe VII(North West Iran	LC1: Pisdeli/Hasanlu VIII, Ubaid Period	4500/4400-4300/4200
Hasanlu VIII(North West Iran)	Pisdeli	4688/4337
Kul Tepe VIB(North West Iran	LC2,Chaff ,faced /chaff tempered	4300/4200-4000/3900
Kul Tepe VIA(North West Iran	LC3,Chaff tempered	4000/3900-3700/3600
Gird-i Ashoan(North West Iran	Late Chalcolithic LC1: Pisdeli	4531 BC / 4526 BC

The lower layers of the Late Chalcolithic period (LCI) include black-on-buff so-called Pisdeli type painted pottery. According to ^{14}C dating, a date around 4531 BC / 4526 BCE for Gird-i Ashoan is suggested. The upper and middle layers at the site appear to belong to the CFW horizon (LC2/LC3), dating around 4200-4000 BCE.

Discussion

Over the course of the Late Chalcolithic, a multitude of socio-economic transformations and cultural adaptations to the environment introduced variations into a number of cultural domains. Notable among these are the similarities shared among the material cultures of the Southern Lake Urmia Basin, the Caucasus and eastern Anatolia. Such ecological factors as the relative rise in annual precipitation and a shortened dry cycle effectively contributed to this situation.

Archeologically, the Chaff-Faced Ware culture characterizes eastern and northern Mesopotamia, eastern Anatolia, southern Caucasia, and northwestern Iran, including the Zab Basin. In each of these individual regions, the culture displays evident local idiosyncrasies in conjunction with its universal characteristics. The Late Chalcolithic Period is divided into three sub-periods, and in this tripartite system where the Pisdeli phase (LCh I) antedates (Helwing 2012: 204) the ensuing LCh III–II dominated by Chaff-Faced Ware (Helwing 2005; Marro 2022; Abedi 2014:39). The distinguishing attribute of this latter ware, *viz.* coarse chaff fragments on the surfaces, is related to firing process. The pottery tradition has a tremendously wide geographic distribution, though the process may be well related to a higher standardization of vessel functions (Palumbi 2011:

214). The culture is attested at Kul Tepe (Abedi 2014) and Baneh (Saed-Moucheshi 2017) in Iran, and farther afield in Anatolia (at Çadır Höyük, Kenan Tepe, Arsalan Tepe, Barcın Höyük), and Caucasia (at Leyla Tepe, Beyuk Kesik, Mentesh Tepe; Baxşeliyev 2010).

In northwestern Iran, the Late Chalcolithic sites cluster along riversides, as is the case with Tepe Lavin and Gird-i Ashoan. Human occupation of the Zab Basin had to wait until the Late Chalcolithic period to truly take root, when the first settlements emerged thanks to its natural features coupled with permanent water sources—the Lavin River running next to the mound and other tributaries of the Zab nearby. This very late occupation, a pattern also typical of the high plains of the eastern Zagros slopes, may be related to a rather cold and dry climate that hindered farming, and which, according to McDonald, was the main reason for the absence of earlier settlements in these regions (Levine and Young 1984: 17). The so-called 8.2k event was presumably the main factor behind this pattern (Croucher 2012: 19)

The precise dynamics responsible for the spread of the Chaff-faced Ware over this vast geographic remains as an unresolved question to be addressed in future research. Was this prompted by migration and population movement? Indeed, the bearers of the chaff-faced ware culture often selected fertile regions for settlement. Advancing several hypotheses in this regard, C. Marro (2010) suggests widespread migrations as the foremost dynamic. At any rate, these third millennium BCE migrations might have had their roots in the preceding millennium, prior to the Early Bronze Age, and are likely due to the interaction of several different forces, among them being climatic change and the search for better pastures.

Conclusions

Excavations at Gird-i Ashoan, a representative Middle and Late Chalcolithic site, have shed remarkable light on the Zab Basin's cultures. The earliest settlement at the site is marked by the LC1 painted pottery that preceded the Chaff-faced and Pisdeli wares of the LC2/3. Remarkably, the site contains four phases of mudbrick architecture. It reveals close affinities with the Late Chalcolithic Anatolian cultures, alongside strong influences from the Caucasus and Mesopotamia. Based on archaeological finds, one can then speak of regional and interregional contacts of the site's inhabitants. Since its natural geography made the region a route and a crossroads between northwestern Iran and the Caucasian and Anatolian highlands, ascertaining the site's potential significance for inquiries into the extent of transformations and reciprocal influences of the coeval cultures was a main objective of the paper. In terms of landscape and terrain, the Zab Basin is one of the natural corridors that links parts of northwestern Iran to regions in the Tigris Basin and northeastern Mesopotamia more generally.

Gird-i Ashoan is an extensive and high mound in the Zab basin, with a thick Chalcolithic deposit. Consequently, it is a key site in the northwest of Iran. Its material culture reflects a close link to other contemporaneous sites in the Lake Urmia region, on the one hand, and cultural ties with the Caucasus and Anatolia, on the other, as well as with centers in Syria and Mesopotamia. While the Lake Urmia region has provided a line of communication throughout history, as is suggested *inter alia* by the discovery of obsidian, the particular merit of Gird-i

Ashoan lies in its eight meter thick deposit dating to the Middle and Late Chalcolithic, which is as yet unmatched by any other regional center.

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گردآشوان در عصر مس و سنگ جدید،براساس فصل دوم کاوش‌های باستان شناسی شمال غرب ایران

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تپه گردآشوان در حوزه رودخانه زاب کوچک شهرستان پیرانشهر قرار گرفته که انجام کاوش‌های باستان-شناسی آن طی دو فصل انجام یافت. نتایج کاوش اطلاعات درخور توجه‌ای در خصوص سنت‌های فرهنگی دوران مس وسنگ جدید بدست داد. این مقاله، با مطالعه مواد فرهنگی محوطه به این پرسش می‌پردازد که علت پراکنش سفال‌های کاهرو از قفقاز تا بین‌النهرین، شمال سوریه و شمال غرب ایران چیست؟ مطالعه مواد فرهنگی، در مقایسه با سنت‌های مشابه دیگر در حوزه فرهنگی شمال غرب، قفقاز و آناتولی، نوعی تاثیرات بومی محلی را نشان می‌دهد. نتایج کاوش‌های باستان‌شناسی منجر به شناسایی استقراری طولانی مدت از عصر مس و سنگ جدید بود، بطوریکه شامل انباشت ضخیم (حدود ۸ متر) را شامل می‌شد و شامل بیست وچ لایه فرهنگی و چهار فاز معماری است که در محوطه‌های همزمان دیگر چنین استقرار طولانی مدتی گزارش نشده است. نتایج مطالعه مواد فرهنگی گردآشوان نشانگر حضور سنت سفالین کاهرو و سنت پیزدلی بوده و نشانگر این امر است که بیشترین مناسبات فرهنگی و برهمکنش‌ها با مناطق قفقاز ،آناتولی و بین‌النهرین بوده است. مقاله حاضر با تکیه بر یافته‌های گردآشوان به دلایل گسترش سفال‌های سفالی در گستره جغرافیایی وسیعی از قفقاز تا بین‌النهرین، شمال سوریه و شمال غربی ایران می‌پردازد. لازم به ذکر است در عصر مس و سنگ شاهد تحولاتی هستیم که مهمترین آنها افزایش نسبی محوطه‌های استقراری نسبت به دوره نوسنگی است و عمدتا الگوی خاصی به تبعیت از شرایط و پتانسیل‌های زیست محیطی شکل گرفته است. بررسی‌های باستان‌شناسی نشان می‌دهد که تعدد و وسعت استقرارهای این دوره در اغلب مناطق ایران خصوصا شمال غرب و دامنه‌های غرب ایران افزایش یافته است.شکل‌گیری پهن‌های فرهنگی مانند دالما و پیزدلی در شمال غرب ایران عملا در نواحی بیشتری رواج یافته که مبتنی بر کشاورزی و دامداری بوده و در این دوره اتکا معیشتی به شکار و گردآوری از منابع بومی به کمترین حد خود رسید. به نظر می‌رسد مواد فرهنگی گردآشوان به گسترش فرهنگ‌های دوره مس وسنگ جدید و خصوصا مرحله II و III در مناطق وسیعی از قفقاز تا شمال بین‌النهرین می‌پردازد که می‌توانسته نشان از نوعی حرکت جمعیتی یا رواج شیوه‌ای خاص از یک سیستم معیشتی متکی بر دامداری باشد. البته مساعد شدن شرایط اقلیمی به صورت کاهش محسوس سرما و پدیدار شدن شرایط اقلیمی مشابه امروز در شکل‌گیری این پدیده موثر بوده است. این فرهنگ تا مدتی با اقوام کوراارس همزیسیتی داشته‌اند سپس پدیده کوراارس در مناطق مرتفع جایگزین فرهنگ سفال کاهروشده است.

واژه‌های کلیدی: شمال غرب، مس و سنگ میانی/جدید،سفال پیزدلی،سفال کاهرو.

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