

Evidences of the Presence of Hunters and Gatherers in the Middle Paleolithic Period in the Dalpari Highlands of Deh Luran Cunty, Ilam

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To cite this article:

Shaghayegh Hourshid. Evidences of the Presence of Hunters and Gatherers in the Middle Paleolithic Period in the Dalpari Highlands of Deh Luran Cunty, Ilam. *Reports*. Vol. 2, No. 2, 2022, pp. 54-61. doi: 10.11648/j.reports.20220202.13

Received: April 30, 2022; **Accepted:** July 6, 2022; **Published:** July 13, 2022

Abstract: Due to its special geographical location, Deh Luran Plain is always considered one of the populations centers in the southwest of Iran. This plain, as a part of the great plain of Deh Luran, due to having permanent and seasonal rivers, fertile lands, and the Bakhtiari formation, has long been a suitable area for providing basic human needs for hunting wild animals, gathering plants, and making stone tools, as in The investigation of this area in 2014, the distribution of countless stone tools belonging to the Paleolithic period, especially the Middle Paleolithic era, confirms this issue. In this survey, all the highlands and western slopes of Dalperi were intensively surveyed and samples were taken from 129 points, and at the same time the samples were coded and recorded by GPS device. Also, stone shelters were identified on the slopes of Dalpari heights, all of which have been documented. In this way, due to the potential power of the natural environment and also the existence of the Bakhtiari formation in the Dalpari highlands, the access of hunter-gatherers to vital resources (water and food) and rich resources of raw stone for making stone tools has been easily provided. This area, with an area of more than 30 kilometers, includes the range of the Dalpari Zagros highlands overlooking the Deh Luran plain to the Abbas plain, which is completely covered with stone tools, including examples of Mousterian points, blades, radial mother stones, and Levallois flakes. These samples can date the human presence in this region at least to the Middle Paleolithic period. This is important considering the presence of Neolithic settlements until the end of the Islamic era, which is a sign of a long process of human presence in this region.

Keywords: Zagros Heights, Paleolithic, Dalpari, Deh Luran

1. Introduction

In 2016, in order to organize the western border waters of the country, surveying and identification programs in the border areas located in Kermanshah and Ilam provinces were implemented in the form of ten programs to study and identify the Garmsiri plan system, which includes identifying and documenting water transmission routes, dams and networks. It was drainage. The drainage network surveyed by the author was named No. 23 and included the Patak Mousyan Plain (the eastern half of the Great Deh Luran Plain), the water supply program of which was on the government's agenda; Therefore, in 2016, this plain was carefully surveyed with a permit issued by the Center for Archaeological Research [5] to fully document the area in order to prevent possible damage to the canals under construction by the Ministry of Agriculture-Jahad

and Water and Power Resources Development Company to be provided to archaeologists.

During this survey, which included the southernmost point of the Garmsiri plan system in the south of Ilam province, in addition to identifying ancient sites and hills, a large area east of the plain was identified and documented that was covered with artifacts. In fact, this zone continues for kilometers along the heights of the Zagros, which is described in more detail in its geographical location and its characteristics.

2. Geography of the Study Area

The vast Paleolithic area includes the eastern and southern parts of Deh Luran city, Dowiraj dam catchment, Dalpari heights, slopes and plains affected by the canals to the south to the north of Karkheh dam catchment, which is actually based on the country divisions including Deh Luran city in

the south. Ilam province is located on average 10 km from the border between Iran and Iraq (Figure 1). The approximate area of this zone, based on the existence of numerous rock shelters and the dispersion of tens of thousands of stone tools, reaches more than five hundred square kilometers, which is actually part of the Bakhtiari Conglomeration Formation in the Zagros (Figure 2). In fact, the boundaries of this zone are much beyond the range specified in the drainage network No. 23 of the Garmsiri plan system. Because geologically, the entire surface of the Bakhtiari Formation outcrop covers the peripheral area of Deh Luran plain. Although a large part of this formation is located in the northern half of the Patak plain (network 23); It extends from the north to the ridge of the Dalpari heights and probably its northern slope, and extends from the northwest to about 8 km after the Dowiraj River and southeast of the Deh Luran plain.

It should also be noted that the other part of this formation is exposed in the northwest of Deh Luran plain. The outcrop of Bakhtiari Formation can be seen in the western margin of Deh Luran plain and in the eastern slopes of Hamrein heights. Bakhtiari Formation is the youngest formation deposited in the

Zagros and includes alluvial and foothill sediments resulting from elevation erosion and mostly contains conglomerate with layers of limestone sandstone, silty rocks and marl.

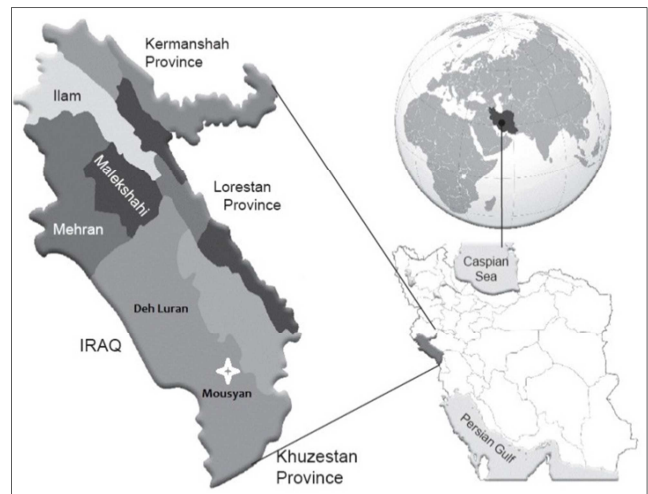


Figure 1. Map showing the sampling regions and the geographical location of Ilam province in Iran.



Figure 2. Location of Paleolithic zone along the east of Deh Luran plain and how the western parts are divided (Drainage network No. 22) and its east (Drainage network No. 23) in Garmsiri plan system (Landsat).

3. Archaeological Research Background of the Region

In general, the studies conducted in Deh Luran date back to 1903 AD, including identification and test trench in the early habitats of Deh Luran plain, such as: Mousyan hills,

Khazineh, small hills of Ali Kush [2, 4]. Following this research, at the suggestion of Robert Braidwood, director of prehistoric design at the University of Chicago, who visited the Deh Luran Plain and Tepe Ali Kosh in 1960, two Braidwood students, Frank Hole and Kent Flannery, came to Deh Luran in 1961. They studied and speculated in the tepees of Mousyan and Ali Kush. This research continued under the name of "Rice University Archaeological Project" in the form

of excavations in Ali Kosh, Mousyan and Sabz Tepes [6]. Then, in the years (1968-69), James Neely and Henry Wright again conducted a scientific and systematic study in the Deh Luran Plain, and other archaeological sites such as Chogha Sefid were identified in this study [9]. In 1977, De Miroschedji of the French Archaeological Board in Iran surveyed the areas between the plains of Susa and Deh Luran to identify the sites of the New Elamite, Achaemenid, Seleucid and Parthian [7].

From the beginning of the Iraq-Iran war in 1980 until the end of the cleansing of the effects of the war in Deh Luran, there were two decades of interruption in the Deh Luran research process. But in (1997) Kamyar Abdi visited it in order to assess the feasibility and situation of areas in Deh Luran [1] and after this visit of a few days in the years (2005-2004) the translator and Mohammadifar studied in Deh Luran plain [8].

In 2006, Noorullahi continued this study [10, 11]. The important point in all these studies and researches that have lasted for a century from (1905) to (2005) is to ignore the eastern areas of Patak-e-Mousyan plain with a lot of evidence related to the Paleolithic period. In the book Archeology of Western Iran, Frank Hole only mentions the existence of these works and writes: "It is clear that the deserted plains and Rocky Mountains of this region have long been occupied by food collectors and hunters of the Paleolithic period. Is" [3]. Thus, observing the research background, it seems that the main focus of researchers is on areas belonging to the Neolithic to historical periods and the study of previous periods has been neglected. The only article related to the concentrated Paleolithic studies is related to the study of

Mohsen Zeynivand in 2015 and during the study of Network No. 22 of the tropical plan, which leads to the identification and introduction of stone tools, including a two-sided piece (Biface). The Acheulean industry and the Paleolithic period are considered [13, 14]. Thus, it can be seen that the eastern part of Patak-e- Mousyan plain has been neglected by the author before the recent survey.

4. Introduction of Identified Cultural Sites and Evidence

4.1. Stone Shelters

In a small part of the Dalpari heights, a large number of small and large cavities were identified as shelters. These cavities and shelters are formed in sedimentary layers and conglomerate of low hills with a not very strong structure (Figure 1). The depth and width of the mouth of these shelters is about 2 to 3 meters and their height reach 1.8 meters.

Due to the loose structure of conglomerate cement and the presence of dense sediment layers of silt and clay and environmental erosion factors such as wind and precipitation, these shelters and cavities seem to have undergone extensive changes over time. Given the considerable number of stone artifacts in and around these spaces, they should probably be considered remnants of older shelters used by humans (at least late) in the Paleolithic period. Today, this place is used by the nomads of the region due to the existence of a water spring (Figures 2-9).

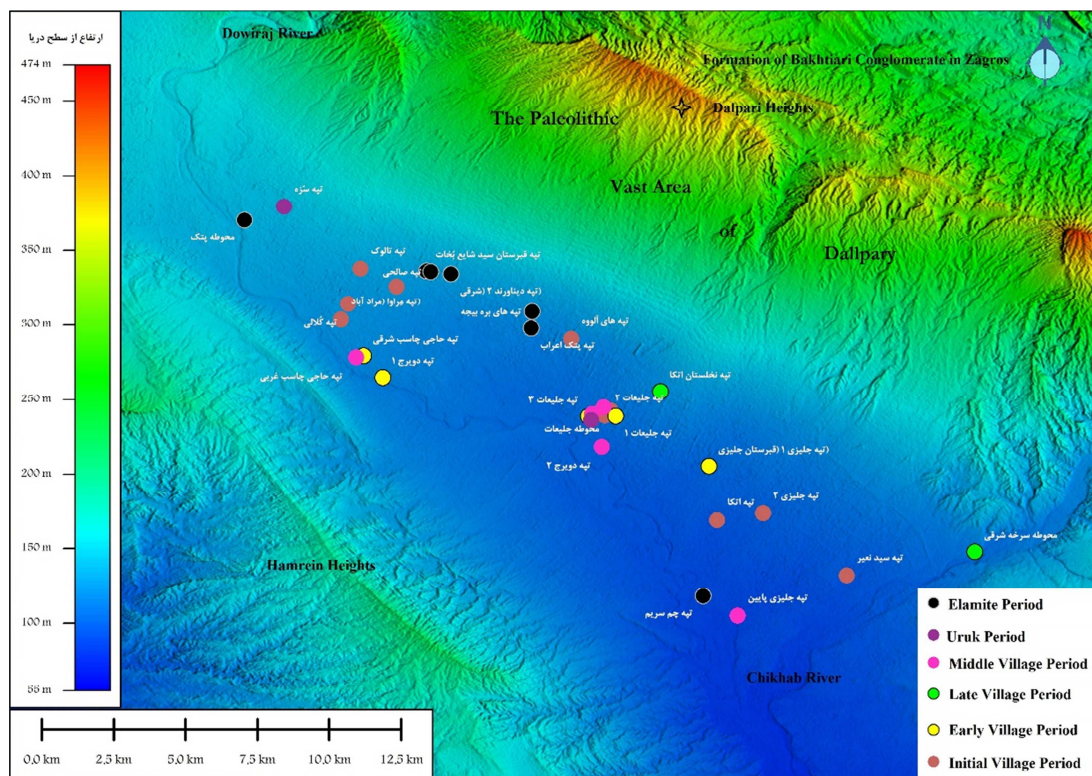


Figure 3. The location of the stone shelters in the foothills of the Dalpari is marked with an asterisk. Marked blue is recognizable (author).



Figure 4. View of Paleolithic area, yellow numbers indicate the GPS codes of the artifact samples (author-Google Earth).



Figure 5. View of the Dalpari heights and stone shelters, view from the west (Author).



Figure 7. Another view of the stone shelters, a view from the southwest (Author).



Figure 6. An example of a rock shelters located in the foothills of Dalpari, view from the south (Author).



Figure 8. View of the stone shelters, view from the southeast (author).



Figure 9. View of one of the stone shelters, view from the north (author).

4.2. Surface Findings

On the surface of this zone, mainly stone artifacts including blades, types of cores, especially radial cores, types of points, scrapers, flakes, blades and micro-blades can be seen. Stone artifacts can be seen with intensity and weakness on its entire surface, and stone artifacts can rarely be seen only along streams or canals. Due to the continuous distribution of stone artifacts on its surface, this whole area is introduced as a zone. During the surface survey, samples were taken from different parts of it. A total of 129 points of the coding area and the distribution status of its findings were recorded. Sampling of some points was done randomly and a selection of these stone artifacts was documented (Figure 10). The density of tools and chips on the ridges and adjacent fields of Dowiraj and Chikhab rivers is more and less along

the roads and along the Deh Luran-Andimeshk road.

The surface of this area is covered with thousands of hands of stone tools, including mother stones, flakes, blades, and small blades. Typical examples of these stone artifacts include radial cores, pointes, and Levallois flakes (Figures 11-13). These specimens, which are similar to the stone artifacts found in the Kunji caves, Margorgelan Sarab and Marrooz, date back at least 40,000 to 16,000 years ago [12]. The variety of stones in terms of color and species plus their number is very significant and they are often of the chert and flint type (Table 1). This diversity and number in fact indicates the access of humans in the Paleolithic period and even the inhabitants of the Neolithic period to the Deh Luran plain to the huge sources of stone suitable for tool making, due to the existence of the Bakhtiari Congo Formation.



Figure 10. View of the hand distribution of stone tools among the piles of rubble on the slopes of the Dalpari Heights (Author).

Table 1. Specifications of Dalpari area stone artifacts.

No	Type of tools	Genus	Color	Considerations
156-2-1	Blade	Sedimental	Green	Retouched on bi side
156-2-2	Flake	Jasper	Red	Retouched on bi side
156-3-1	Core	Jasper	Orange	Radial core- Levallois
156-3-2	Flake	Chert	Red	Retouched on one side and end side - Scraper
156-3-3	Flake	Jasper	Brown	Retouched on one side and end side- Scraper
156-3-4	Blade	Jasper	Dark pink	Retouched on one side
156-4-1	Flake	Sedimental	Cream	Retouched on one side
156-4-2	Blade	Chert	Red	Retouched on one side
156-4-3	Flake	Flint	Cream	Retouched on one side
156-5-1	Core	Sedimental	Gray- Red	Blade and bladelet Core
156-5-2	Blade	Sedimental	White	No retouching
156-5-3	Flake	Sedimental	Orange	Retouch on bi side- Scraper
156-9-1	Core	Flint	Cream	Radial core- Levallois
156-10-1	Flake	Chert	Red	Retouch on bi side- Scraper
156-16-1	Flake	Flint	Orange	Retouch on one side- Scraper
156-21-1	Point	Flint	Orange	Retouch on one side- Mousterian point
156-50-1	Flake	Sedimental	Gray	Retouch on bi side- Scraper
156-54-1	Blade	Flint	Red	Retouch on bi side- Scraper
156-69-1	Point	Flint	Red- Gray	Retouch on bi side- Mousterian point
156-69-2	Flake	Flint	Orange- Gray	Retouch on bi side
156-85-1	Blade	Flint	White- Brown	Retouch on bi side
156-86-1	Point	Sedimental	Brown	Retouch on bi side- Mousterian point
156-86-2	Blade	Flint	Cream- Brown	Retouch on bi side
156-89-1	Blade	Sedimental	Orange- Gray	Retouch on bi side
156-93-1	Blade	Sedimental	White- Gray	Retouch on bi side

No	Type of tools	Genus	Color	Considerations
156-93-2	Flake	Chert	Red	Retouch on one side
156-97-1	Core	Sedimental	Cream	Core
156-97-2	Point	Sedimental	White	Retouch on bi side- Mousterian point
156-97-3	Point	Jasper	Green	Signs of wear on bi side- Mousterian point
156-97-4	Blade	Flint	Brown	Retouch on bi side
156-97-5	Blade	Chert	Brown	Retouched on one side and end side- Scraper
156-97-6	Blade	Flint	White- Gray	Retouch on one side
156-97-7	Blade	Flint	White- Pink	Retouch on bi side
156-99-1	Blade	Flint	Gray	Retouch on bi side
156-99-2	Blade	Flint	Gray	Retouch on one side
156-122-1	Flake	Flint	Gray- Orange	Retouched on one side and end side- Scraper
156-128-1	Blade	Sedimental	Cream	Retouched on one side and end side- Scraper
156-128-2	Blade	Sedimental	Pink	Retouch on bi side- point

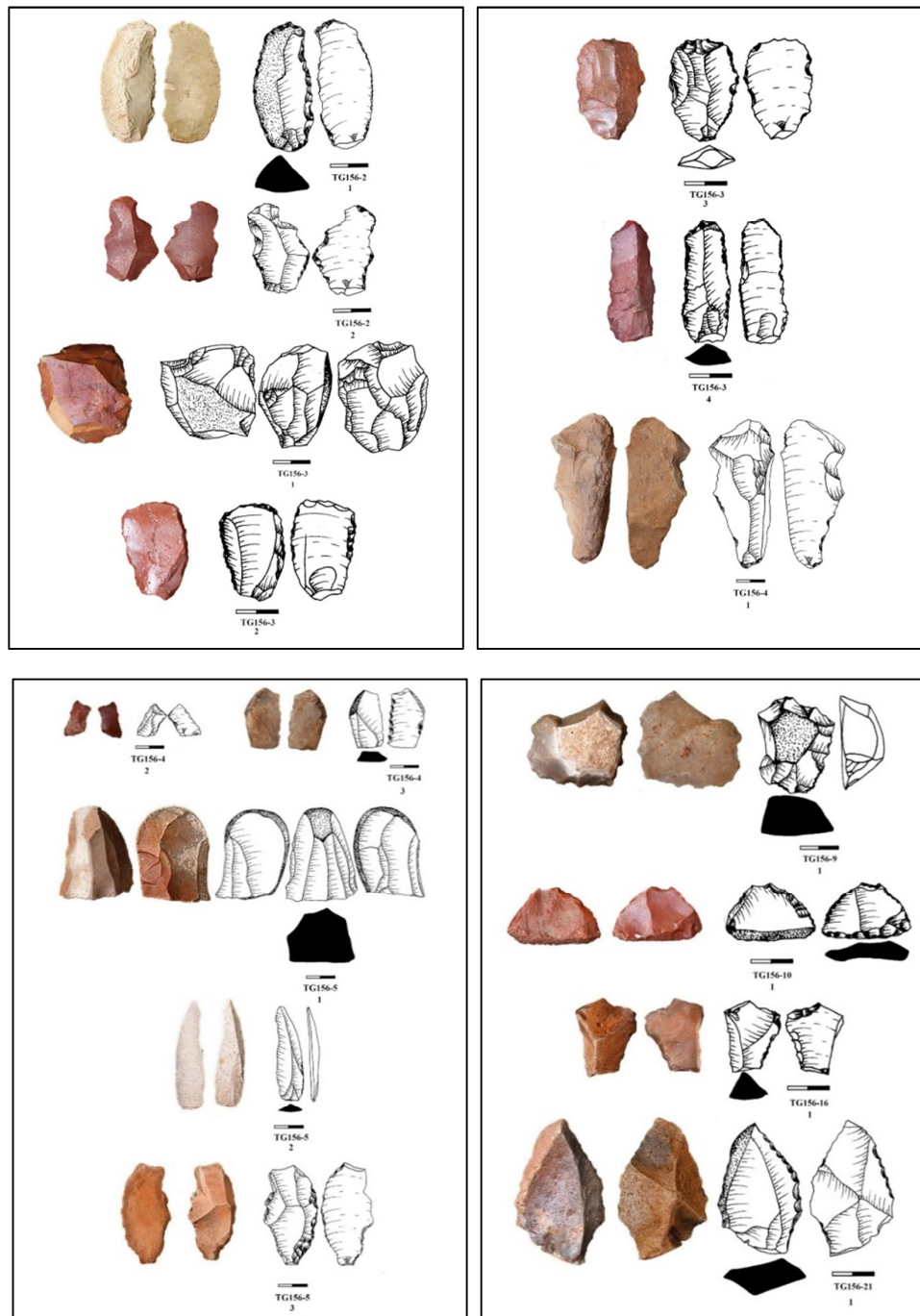
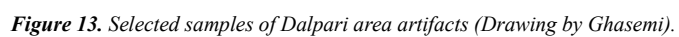
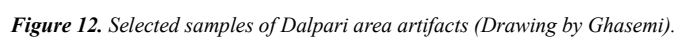


Figure 11. Selected samples of Dalpari area artifacts (Drawing by Ghasemi).



5. Conclusion

The Dalperian Paleolithic area, more than 30 km long and about 10 km wide, is one of the largest sites in Iran and perhaps the Middle East, from which evidence of human presence in the Paleolithic period has been obtained. Due to their morphological and climatic characteristics, water resources are not easily accessible in this area and permanent and seasonal rivers such as Dowiraj and Chikhab have crossed only its margins and few springs and waterways. The numbers on its surface are seasonally active. The lands of this area are also mostly rocky and have been used only as poor pastures. The most important feature of this zone has been the presence of raw materials for making stone artifacts. The rocky nature of the surface of the zone, which is caused by the erosion of the conglomerate layers of the Bakhtiari Formation, has caused the appearance of rock artifacts with intensity and weakness in almost the entire area. Comparing the available evidence, the minimum documented stone artifacts date back to 40,000 to 12,000 years ago.

The morphological structure of the area is such that on most of its surface, except in small areas at high altitudes, there is no evidence of permanent establishment such as caves or shelters. Only a small amount of temporary and seasonal human settlement was identified in a small part of the northern highlands. In this area, outcrops of sedimentary layers and conglomerates can be seen, which due to natural erosion, including wind and rainfall, have caused cavities or shelters in its walls.

These cavities and shelters are clearly severely affected by natural erosion due to the looseness of conglomerate cement and loose sedimentary layers, and look young, but the presence of stone artifacts in and around them is the opposite. Proves. Due to the temporal and spatial constraints of the Tropical Drainage Survey Program No. 23, there was not enough opportunity for case studies in relation to this period and identification of possible locations, and it is hoped that this issue will be addressed in future research.

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