

Paleolithic Archaeology in Iran

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Abstract

Although the Iranian plateau has witnessed Paleolithic researches since the early twenty century, still little is known about the Paleolithic of Iran. There are several reasons for this situation and lack of scholarly enthusiasm on the part of Iranian archaeologists seems to be the most imperative one. Concerning the history of Paleolithic surveys and excavations conducted in Iran, three distinct phases are recognizable. First, from the beginning of the twenty century to the 1980 when numerous field missions were executed in this region all by western institutes, second phase observes a twenty years gap in the Paleolithic studies hence; only few surveys could be performed in this period, and the third phase starts with the reopening of the Iranian fields to the non-Iranian researchers, which led to the survey and excavation of handful of new Paleolithic sites. This article reviews Paleolithic researches conducted in Iran since the beginning of twenty century to the present time.

Keywords: Paleolithic, Iran, Zagros, Alborz

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Introduction

Iran is surrounded by some of the most significant Paleolithic sites in the world. To its western boundaries, there lies Shanidar and its large Neanderthal collection (Solecki 1954, Trinkaus, 1983). To the northwest, some major Paleolithic sites in Turkey (Kuhn 2002), and the famous Dmanisi in Georgia (Abesalom et al. 2002), and to the northeast, numerous Paleolithic caves and rock shelters in Uzbekistan and Turkmenistan, which the most distinguished one is Teshik-Tash in Uzbekistan (Weidenreich, 1945). The mentioned sites are just those that provide hominid remains belonging to the Pleistocene, needless to say that there are many Paleolithic sites (based on the artifact typology) within political boundaries of Iran as well (Figure 1).

The most peculiar point about the Iranian Paleolithic is the absence of any hominid remains with just few exceptions (e.g. Bisitun, Kobeh, Wazmeh, and Eshkafte Gavi). There could be several reasons for such situation; however, lack of Paleolithic excavations is the most important ones.

Geography of Iran

Iran with an area of 1,648,000 square kilometers (636,000 sq mi) is located in southwest Asia and borders the Gulf of Oman, Persian Gulf, and the Caspian Sea. Iran consists of rugged, mountainous rims surrounding high interior basins. The main mountain chains are Zagros and Alborz (Figure 1). Zagros is a series of parallel ridges interspersed with plains that bisect the country from northwest to southeast.

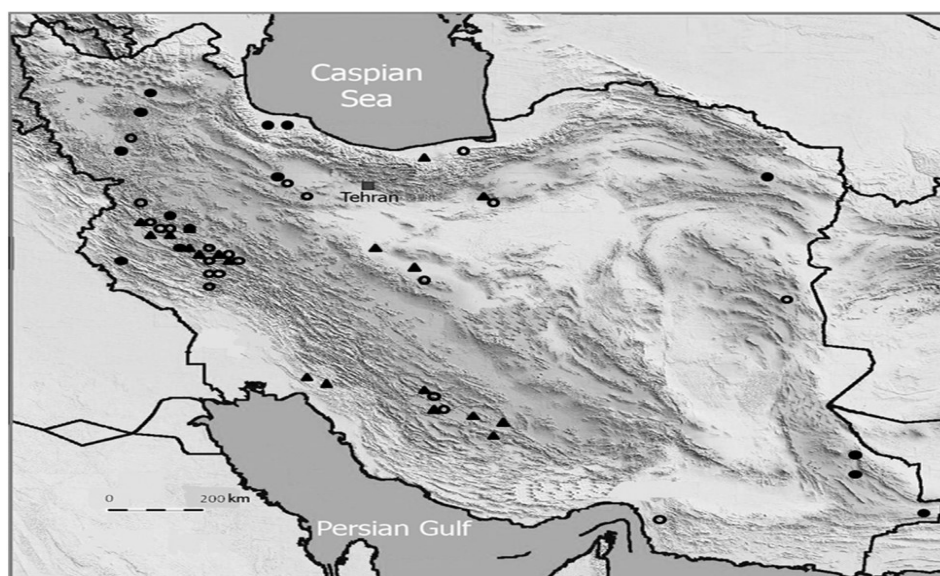


Figure 1. Dispersion of Paleolithic sites in Iran, ●: Lower Paleolithic, ⊙: Middle Paleolithic, ▲: Upper Paleolithic.

Volcanic Mount Damavand, 5,610 meters (18,400 ft), located in the center of the Alborz (Kiani Haftlang 2001:1-3). The center of Iran Rimming the Caspian Sea littoral is another chain of mountains, the narrow but high Alborz Mountains.

consists of several closed basins that collectively are referred to as the Central Plateau. The average elevation of this plateau is about 900 meters (3,000 ft), but several of the mountains that tower over the plateau exceed 3,000 meters (9,800 ft). The eastern part of the plateau is covered by two deserts, the Dasht-e Kavir and the Dasht-e Lut. Except for some scattered oases, these deserts are uninhabited. In general, Iran has an arid climate in which most of the relatively scant annual precipitation falls from October through April. In most of the country, yearly precipitation averages 25 centimeters (9.8 in) or less. The major exceptions are the higher mountain valleys of the Zagros and the Caspian coastal plain, where precipitation averages at least 50 centimeters (20 in) annually (Nafisi Fard 2007:138).

History of Paleolithic Researches in Iran

The Iranian plateau is located right at the migratory corridor to the access of central and eastern Asia. Archaeological data indicate that this corridor has been used frequently by Humian populations during the prehistoric and historic times. Almost a century has been

passed from the time when the first Paleolithic surveys initiated in Iran. Hitherto, numerous Paleolithic sites have been recorded and some were nominated for more comprehensive studies. Absolute and relative chronological results in association with techno-typological analyses of lithic industries recovered from Paleolithic sites in Iran leave no room for any doubt that the Paleolithic period of Iran must be treated such as the Near East; therefore, the four major Paleolithic periods of the Lower, Middle, Upper and Epipaleolithic are recognizable with almost the same chronological frame as the Near East and Europe. An important point is that in case of absolute dating; most of the Paleolithic sites in Iran suffer from the lack of reliable dating techniques (e.g., some of the dates obtained by C14 techniques prior to the 1970 could be drastically changed because of absence of reliable calibration at the time).

The Paleolithic archaeology in Iran could be divided to three major phases: from the beginning of the twenty century to 1980, 1980-2000, and 2000 to the present time.

Early 20th Century to 1980

This phase starts by limited surveys conducted by Jacques de Morgan alongside the river terraces of Pardameh in Mazandaran province in the early 20th century, which led to the discovery of some lithic scatters; assigned by him to the Paleolithic period (de Morgan,

1907). The close examination of the discovered artifacts, which are currently being kept in the Saint Germain En-Laye Museum in Paris indicates that the possibility of all being natural rocks must be considered as well (Vahdati Nasab, personal observation).

Later, during the 1930s, Henry Field reported his Paleolithic surveys in Fars province in south-central Iran. He also dug a small test trench in Kunji cave at the outskirts of Khorramabad city in Loristan province in central Zagros (Field 1939). Perhaps, Carlton S. Coon could be considered by most authorities as the founder of Paleolithic archaeology in Iran. During the summer of 1949 Coon started his expeditions starting from Iraqi Kurdistan looking for hominin remains and soon entered to Iran. He excavated rock shelters of Bisitun, Tam Tama (Kermanshah and Azerbaijan), and Khunik (located in Khorasan province in the very east of Iran, nearby Iran-Afghanistan border), assigned to the Middle and Upper Paleolithic (Coon 1951), and two caves of Kamarband and Huto at the eastern shore of the Caspian Sea assigned to the Epipaleolithic period (Coon 1952, 1957).

With the beginning of 1960 and due to political unrest in Iraq, the Oriental Institute of the University of Chicago decided to shift its focus from Iraq to Iran and consequently Late Robert Braidwood and his colleagues started their field expeditions in the west of Iran in the

Zagros Mountains (Braidwood 1960). Warwasi and Kobeh rock shelters are among the major Paleolithic sites excavated by them. Warwasi is a very important locality, which could demonstrate evidences of occupations from Middle to the Epipaleolithic periods (Braidwood et al. 1961).

Later two of the Braidwood students named as Frank Hole and Kent Flannery continued this mission in the Luristan province in the central Zagros and managed to survey 15 valleys, which among them Khorramabad was the most important one having numerous solution caves. Hole and Flannery tested five caves and rock shelters in the vicinity of Khorramabad city including Ghamari (Middle Paleolithic), Kunji (Middle Paleolithic/historic), Gar Arjeneh (Middle and Upper Paleolithic), Yafteh (Upper Paleolithic), and Pasangar (Upper and Epipaleolithic), (Hole and Flannery 1967). Recently their work has been reassessed and some of their claims such as absence of Levallois technique in the Zagros highlands have been corrected (Vahdati Nasab, 2010; Roustaei, 2010).

In 1963, Charles McBurney excavated at the Middle Paleolithic layers of Kiarām I cave in the northeastern of Albroz Mountains in Golestan province and reported the existence of some Mousterian flint knapping traditions with no signs of Levallois technique (McBurney 1964); however, soon he shifted his research

area to the central Zagros and continued the earlier field missions in this region. He tested three rock shelters (Humian 1, 2, and Barde-Spid) in Kuhdasht region in western of Luristan, which among them Humian1 contained Mousterian layers (McBurney 1969, 1970). Humian 1 is an important site holding the oldest dated archeological layer in Iran. The result of Th/U dating suggests the date of 148000 ± 35000 BP for Humian 1 Mousterian occupations (Bewley 1980, 1984: 35-38), which is consistent with the Middle Paleolithic chronologies of the Near East (Mercier and Valladas 1994).

During the years of 1964-5 Philip Smith and Cuyler Young surveyed some areas in Luristan and Azerbaijan in central and northern Zagros and reported some Paleolithic sites, which among them the cave of Markharley (also named as Ghar-e Khar) was nominated for small size excavation. Based on Smith and Young report, this cave contains Middle to Epipaleolithic layers comparable with that of Shanidar (Young and Smith, 1966). Recent surveys of Ghar-e Khar have revealed that this site is in great danger by pot hunting activities, and in the near future any systematic archaeological excavation could no longer be applied to it (Vahdati Nasab, Personal examination).

Although Zagros Mountains and its exceptional geomorphology has attracted lots of

archaeologists to conduct surveys and excavations, other parts of Iranian plateau has been chosen by researchers for different reasons, such as Ladiz in the southeastern Iran. During the years 1966-67, Gary Hume from university of Minnesota initiated Paleolithic surveys in the river terraces of Simish and Moshkid located close to Iran-Pakistan border to track the possible migratory path for early hominids that could have used the northern shore of the Persian Gulf to migrate from east to west and vice-versa. Hume inferred the term Ladizan (some type of local Lower Paleolithic industry) to describe the lithic materials that he recovered from several Paleolithic localities and based on glacial sediment comparison between the surveyed regions and that of the central Europe, he proposed the age of mid Würm for the river terraces (Hume 1976: 58). The re-examination of the artifacts has reconfirmed Hume's criteria for assigning them to some Lower Paleolithic industries Vahdati Nasab et al., 2010a); however, the similarities of such industry with the Soanian industries from Pakistan imply early Middle Paleolithic age as well (Lycett, 2007).

On the other hand, comparing glacial sediments of southeastern Iran with that of Europe does not seem right since this part of the Iranian plateau has never witnessed the extension of ice sheets and therefore sediments in there could not be contemporaneous with

those from central Europe (Vahdati Nasab et al., 2010a).

At the summer of 1969, John Speth as a part of his PhD dissertation, conducted excavations in Kunji cave at the suburb of Khorramabad, which had already been tested by Field (1939), Hole, and Flannery (1967). His report concluded that the Mousterian layers were severely disturbed by porcupine activities (Speth, 1971). Later he managed to analyze and study the recovered artifacts and assigned them to the Zagros Mousterian group (Baumler and Speth, 1993).

1970s seems to be the golden era for the Paleolithic archaeology in Iran. During the 70s, numerous surveys and excavations were conducted in Iran, which almost in all of them some western universities and research institutes were in charge. In 1972, Marcello Piperno studied artifacts that had been collected by Sumner in 1969 field mission in Jahrom (Sumner 1974), (central Iran), and assigned them to the Middle Paleolithic period (Piperno, 1972). Later he carried out some surveys nearby Maharlu Lake, the place that had already been visited and mentioned by Henry Field in the Fars province in central Iran (Field, 1939) and based on the artifact typology assigned one of the caves named as Eshgaf e Ghadi Barmishur to the Middle Paleolithic period (Piperno, 1974). That same year Keraudren and Thibault surveys in North of Iran right at the Caspian

Sea coastal area led to the discovery of some valleys with Pleistocene sedimentary layers and Paleolithic artifacts (Keraudren and Thibault, 1973). The results of Keraudren and Thibault's field missions were later led French and Iranian scientists to conduct intensive Paleolithic surveys in Amol region, which eventually ended in discovery and excavation of Garm Rud 2 (Berillon et al., 2007).

In 1973, Peder Mortensen started his archaeological surveys in Hulailan valley in Loristan to reconstruct the settlement patterns during the prehistoric periods, and as a result of that he reported twenty four Paleolithic sites, which encompassed from Lower to the Epipaleolithic periods (Mortensen 1993). Between the years of 1974 and 1975 archaeological and geological surveys by Ariai and Thibault on the terraces of Kashafud River located on the northeast of Iran revealed the area's significance as a possible locality for early hominids that might have used that area sometime in the Pleistocene (Ariai and Thibault, 1975). Although surveyors of the Kashafud terraces claimed middle Pleistocene age based on the sedimentology of the river terraces, there is still a great deal of uncertainty for the employed dating methods (Jamialahmadi et al., 2008).

That same year, some field surveys in the northern coast of the Oman Sea in Makran region resulted the discovery of few Paleolithic

sites, which some of them represented some elements of the Middle Paleolithic industries such as the presence of Levalloisian techniques (Vita-Finzi and Copeland, 1980). In 1976, Sadek-Kooros published the results of her 1974 Paleolithic surveys, which was conducted as a side project of the University of Berkley's Paleontological research in Maragheh. She reported three caves and seven Paleolithic open sites in northwestern Iran in Azerbaijan area and assigned the caves to the Lower Paleolithic (Sadek-Kooros, 1976). Unfortunately, due to the technological shortages at the time of survey, the exact locations of the sites are remaining unidentified up to this time.

Finally in 1978, in continuation of William Sumner works in the Fars plain, Michael Rosenberg reported some Paleolithic sites in the Marvdasht region (Rosenberg, 2003), later he excavated Eshkaft-e Gavi cave and reported the presence of Middle to Epipaleolithic layers in this site; however, he could not prove any continuity among the industries (Rosenberg, 1985). Eshkaft-e Gavi is among few Paleolithic sites in Iran that could have provided few pieces of Humian skeletal remains.

1980-2000, Twenty Year Gap

In the early 1980s, all Paleolithic studies in Iran were suspended. Aside from political instability in the Zagros region (Iraq-Iran War, 1980-1988), a primary reason for the gap was the lack

of scholarly enthusiasm on the part of Iranian archaeologists. Not having access to the Paleolithic fields in Iran forced some western scholars to study and sometimes reanalysis of the archaeological materials that had already been stored in different western universities and museums. Harold Dibble restudied the Mousterian artifacts derived from Bisitun rock shelter during the 1949 expedition by Coon (Coon, 1951), and proposed that in spite of the previous claims concerning the lack of Levallois technique in the Zagros Mousterian industries, Bisitun collections demonstrate relatively high quantity of Levallois technique, he also established his scraper reduction model based on the Mousterian materials from Zagros (Dibble, 1984).

Deborah Olszewski conducted extensive work on the Upper and Epipaleolithic of Zagros in general and on Warwasi rock shelter, which had been excavated by Howe in particular. Due to the presence of almost all of the diagnostic lithic elements of Aurignacian industries in Warwasi, Olszewski and Dibble proposed the term Zagros Aurignacian instead of Baradostian for some of the Upper Paleolithic industries in Zagros (Olszewski, 1993; Olszewski & Dibble, 2006).

Baumler and Speth performed technotypological analysis on the Mousterian artifacts of Kunji cave, and concluded that the raw material accessibility played an important

rule on the final shape of the artifacts in the central Zagros (Baumler & Speth, 1993).

John Lindly as part of his doctoral dissertation research compared some of the Middle Paleolithic artifacts of highland Zagros with the lowland ones and proposed that most of the Paleolithic settlements in Zagros were seasonal (Lindly, 1997). The Zagros migratory model proposes that, during the Pleistocene period, Paleolithic societies were left with no other option than to migrate from the highlands to lowland regions in the nearby Central Iranian Desert and Khuzestan Plain (Lindly, 2005).

Almost the same kind of question was raised by Angela Minzoni-Déroche concerning the differences in lithic industries in the Zagros-Taurus and Levant. Her research suggested that the reason for such differences among the Paleolithic industries from Zagros-Taurus and Levant could have been due to the different degree of raw material availability (Minzoni-Déroche, 1993).

It must be mentioned that although during these years (1980-2000) as it was discussed earlier the Paleolithic field missions in Iran got suspended, few surveys and one excavation were exempted. Prior to the early twenty first century, Vahdati Nasab and Biglari initiated some independent Paleolithic surveys in the Zagros and Albroz Mountains and managed to revisit some of the known Paleolithic sites plus introducing some new ones (Abdi et al., 1999,

Vahdati Nasab, 1999). In addition to that limited survey conducted at Masile basin located at the South part of Tehran at the edge of the Central desert led to the discovery of a possible Paleolithic site (Shahmirzadi, 1994); however, because of the small sample size any scientific judgment to assign relative chronology must be halted. The only Paleolithic excavation in this period was carried out by Late Amirloo in Ghaleh Askar nearby Mount Demavand in Tehran province. Based on the primary artifact typology, Amirloo assigned this site to the Upper and Epipaleolithic periods (Amirloo, 1990).

2000 to Present Era: Reopening

In year 1999, some major changes occurred in the archaeology of Iran in general and in the Paleolithic studies in particular. In that year, for the first time a research centre called Paleolithic Research Group¹ was established in the Iranian Cultural Heritage and Tourism Organization (ICTHO), that its sole purpose was to conduct Paleolithic surveys and field missions across Iran. One of the first regions chosen by this group was Khorramabad valley and its proximate areas (e.g. Kuhdasht and Pole Dokhtar). In the winter of 1999 the members of this group reported 21 Paleolithic sites

1. The original name of this research center was Paleoanthropology and Paleontology department!, which due to its irrelevant meaning was later renamed as the Centre for Paleolithic Studies, and transferred to the Iranian National Museum.

(Roustaei et al., 2002, 2004), which among them were some of the sites had already been reported and excavated by Hole and Flannery in 1963 mission (Hole & Flannery, 1967).

In addition to the establishment of the Paleolithic Research Group, a shift toward permitting non-Iranian scholars to conduct Paleolithic field works in Iran was a major breakthrough by the ICTHO. Tübingen University, University of Liège, University of Bordeaux, and Centre national de la recherche scientifique (CNRS) were among the first non-Iranian organizations that received such opportunity to conduct Paleolithic field works in Iran after close to twenty years gap.

Between 1999 and 2001, as a part of the archaeological surveys in Islamabad plain in western Iran (Abdi, 1999), some Paleolithic sites were reported, which among them Wazmeh cave and the open site of Amarmardeg (Lower Paleolithic) were the significant ones that the former was gone under small size excavation providing a Humian Maxillary premolar dated to the Upper Paleolithic (Trinkaus et al., 2007). That same year as a side project with the Iran-Japan archaeological expedition at the northern part of the Alborz Mountains in Gilan province, the Lower Paleolithic site of GanjPar located at the terraces of Sepidroud River was discovered (Biglari et al., 2004).

In 2002-2003, the French and Iranian

Paleoanthropological ProGarm (FIPP) started its field surveys by targeting some regions in Central Iran (Yazd province). The FIPP later shifted its focus to the Alborz Mountains in North. Five consecutive field missions revealed the great potential of Alborz Mountains in general and the Caspian Sea regions in particular. FIPP managed to report some open sites assigned to the Middle Paleolithic period at the slopes of mount Demavand (southern slopes of Alborz) called Moghanak and Otchunak (Berillon et al., 2007; Chevrier et al., 2006). FIPP also performed three seasons of excavations at Garm Rud 2 open air site (northern slope of Alborz), relatively close to Caspian Sea, which is a butchering station with a single short time occupation dates to 34727 ± 344 Cal BP, (Berillon et al., 2009).

In 2004, the first season of excavation at Middle Paleolithic cave of Mar-Tarik (University of Bordeaux and the centre for Paleolithic research in the National Museum of Iran) started (Jaubert et al., 2009). That same year the Tübingen-Iranian Stone Age Research Project (TISARP) initiated its field works in some regions in central and southwestern of Iran such as northeastern of Karkas Mountain and as a result of that numerous Paleolithic localities were reported including the large open site of Barida, which was assigned to the Epi and Upper Paleolithic based on the technotypological analysis of the recovered

artifacts (Conard et al., 2009). The TISARP members also conducted Paleolithic surveys at the southern foothills of Zagros and northern Khuzistan in the Basht region reporting several Upper and Middle Paleolithic localities mostly in the form of caves and rock shelters (Ghasidian et al., 2009).

In 2005, as a part of a joint project between the centre for Paleolithic research in the National Museum of Iran and University of Liège, an excavation conducted in the Upper Paleolithic cave of Yafteh, which was originally tested by Hole and Flannery in 60s (Hole & Flannery, 1967) in order to reevaluate the work by Hole and Flannery and propose some new dating. This excavation continued till 2007 (Shidrang, 2007) and its results confirmed what was previously published concerning the Upper Paleolithic of central Zagros, meantime new chronological data pushed back the Paleolithic settlements in this region to the early stages of the Upper Paleolithic in the Near East and Europe. The oldest Upper Paleolithic occupations in Yafteh were dated to 35450±600 BP (Otte et al., 2007).

Locating the geographical origins of the Aurignacian industries was among the main reasons for Otte and his colleagues to conduct field missions in Yafteh cave. As a consequence they have nominated the central Zagros as the possible birthplace of such industry (Otte et al., 2007). However, neither Otte (Otte et al., 2007)

nor Olszweski and Dibble (1994, 2006) present convincing cases to prove such claim. Apparently one of the most fundamental requirements in this regard would be sites possessing uninterrupted archaeological sequences from Middle to Upper Paleolithic in the Zagros Mountains. Yafteh does not have Middle Paleolithic layers. On the other hand Warwasi rock shelter seems a suitable candidate having archaeological layers assigning to Middle, Upper, and Epipaleolithic; however, some methodological problems at the time of excavation (using 20 cm layers) might raise the issue that there might have been some admixtures among the layers. Therefore it seems a bit premature to consider Zagros Mountains as the geographical place for the origin of Aurignacian industry.

In the same year, excavation at the Paleolithic cave complex known as Qaleh Bozi, located in the central Iran nearby the city of Isfahan was began by the Iranian researchers at the National Museum of Iran. Among three cave sites, only Qaleh Bozi 2 demonstrated enough archaeological evidence to be nominated as a Middle Paleolithic base camp. The preliminary analysis of the artifacts indicates relative similarities with the Zagros Mousterian site; however, at the same time it deviates from typical Iranian Mousterian assemblages in case of having bifacial technologies (Biglari et al., 2009).

In the spring of 2009, the first season of excavation at Komishan cave located few km away from the already known sites of Huto and Kamarband near by the Caspian Sea in north of Iran started (Vahdati Nasab, 2009a). The preliminary analysis of the artifacts and results of absolute dating confirms this cave was occupied by groups of hunters since middle Epipaleolithic and had been in use through historical time periods almost with no interruption. The AMS dating results imply the date of 11771 CalBC for the oldest archaeological layers (Vahdati Nasab et al., in press). Figure 2 demonstrates some of the lithic materials discovered at the Epipaleolithic layers of Komishan.

It must be taken to the account that during this period aside from the limited number of excavations, numerous Paleolithic surveys were conducted all across Iran, which led to the discovery of hand full of new sites. As an illustration, Paleolithic surveys at the Northern shore of Parishan Lake located in the southern part of Fars province in south-central Iran revealed the Helak cave complex, consisting of four caves and rock shelters. Based on their artifact typology all were assigned to the Upper and Epipaleolithic periods (Vahdati Nasab et al., 2008).

In addition, Paleolithic surveys of caves and rock shelters in Izeh plain in the southern portion of Zagros revealed that this area had

witnessed some major occupations during the end of Pleistocene and beginning of the Holocene (Niknami et al., 2009).

Another Paleolithic survey was performed on the northern coast of the Persian Gulf, between the geographical boundaries of Jam and Riz, the region adjusted to some previously known sites such as Makran. This survey appeared to provide some additional information concerning the significance of the coastal areas during the Pleistocene period (Dashtizadeh, 2009).

Conducting some general archaeological surveys on the terraces of Abhar Rud River in Zanjan province located at 200 km west of Tehran led to the discovery of another Paleolithic site known as Khaleseh. Techno-typological analysis of the recovered artifacts indicates the presence of some of the diagnostic Lower Paleolithic tools such as choppers and cleavers (Alibeigi & Khosravi, 2009).

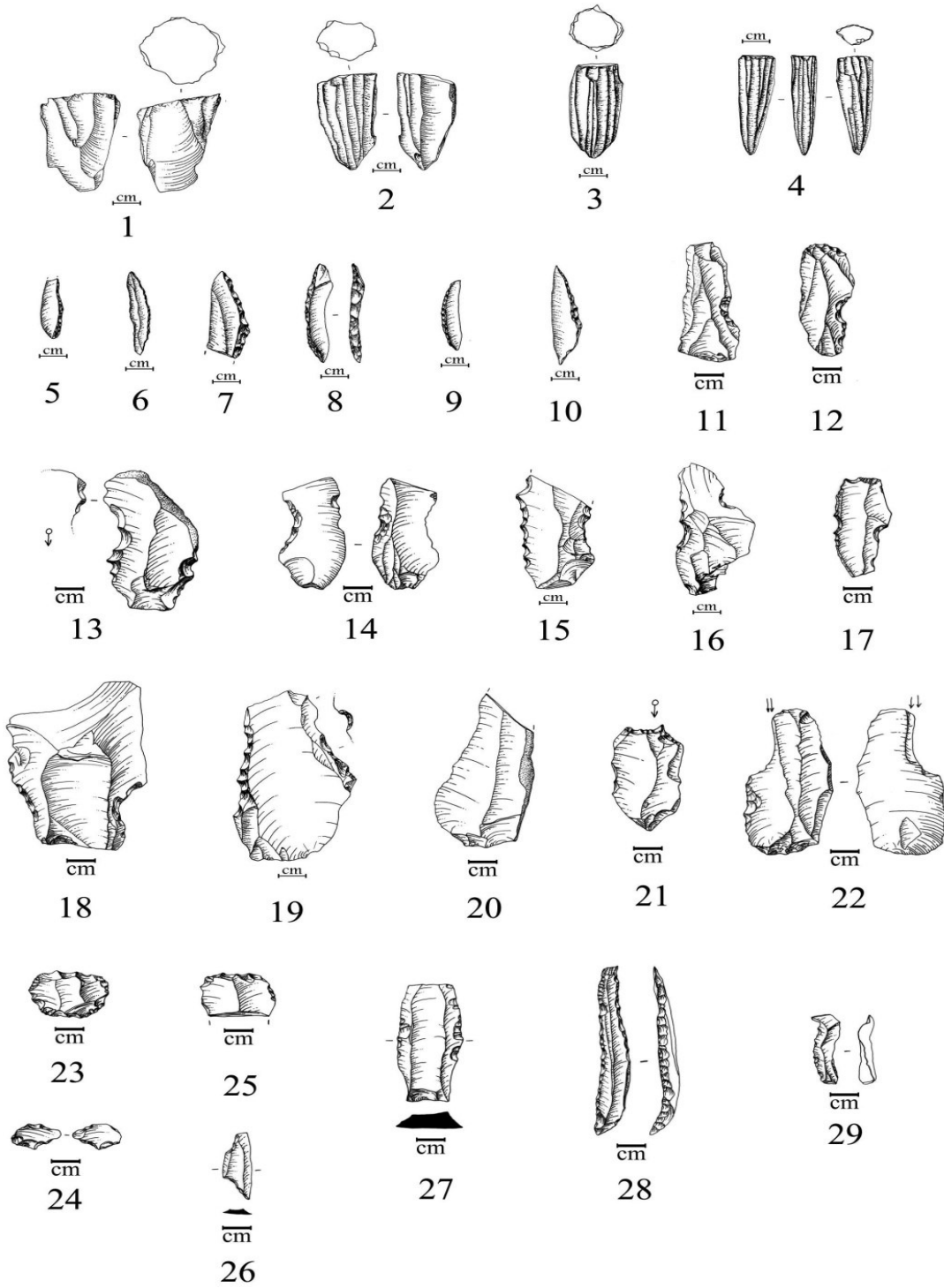


Figure 2. Lithics from Komishan Cave, illustrated by Mozghan Jayez

In 2006, two caves known as Darband A and B were recorded by archaeologists in Gilan province, which were located sixteen kilometers to the east and southeast of previously located Lower Paleolithic site of Ganj Par. After further examinations, and due to the presence of some Middle Pleistocene fauna remains in side of the site, Darband A was assigned to the Lower Paleolithic period (Biglari & Shidrang, 2006). In this case, Darband A and the unknown Paleolithic caves reported by Sadek-Kooros (1976) must be considered as the first evidences of Lower Paleolithic caves in Iran.

During the years of 2007 and 2008, as a part of some general archaeological surveys in the Boeen Zahra region, located at the south of Qazvin plain in western of Tehran, several Paleolithic sites were recorded, which later based on their artifact typology and presence of some elements of Middle Paleolithic industries (e.g., Levalloisian technique) were assigned to this period (Vahdati Nasab et al., 2009).

Sefid-Ab is another Paleolithic open site located in the central Iran at the slope of Karkas Mountains and few kilometers away from the famous archaeological site of Teppe Sialk in Kashan city. This site was first located by archaeologists in 2003 and later was chosen for further analysis. Technotypological analysis of its artifacts indicates that this site must be assigned to the Upper Paleolithic period (Shidrang, 2009).

Perhaps, Mirak and Delazian could be considered as two of the major discoveries concerning the surveying of the Paleolithic open sites in Iran. These localities that are located right at the northern edge of the Iranian Central desert and southern foothills of Alborz Mountains were first recognized during some general archaeological surveys in the 80s. Later one of them (Delazian) was chosen for random sampling, which the preliminary analysis of its stone artifacts implied that the site was in continuous use from the Upper Paleolithic to the historical times (Vahdati Nasab et al., 2010b). Delazian is a large dense artifact scatter by the size of more than 100 acres. Delazian was undergone through systematic surveys and artifact collection in 2009, and as a result of that the previous claims concerning the relative dating of the site was reconfirmed (Fig. 3); moreover, the in depth techno-typological analyses of the collected artifacts imply that the habitants of this site had enough access to the raw materials (Vahdati Nasab et al., in press).

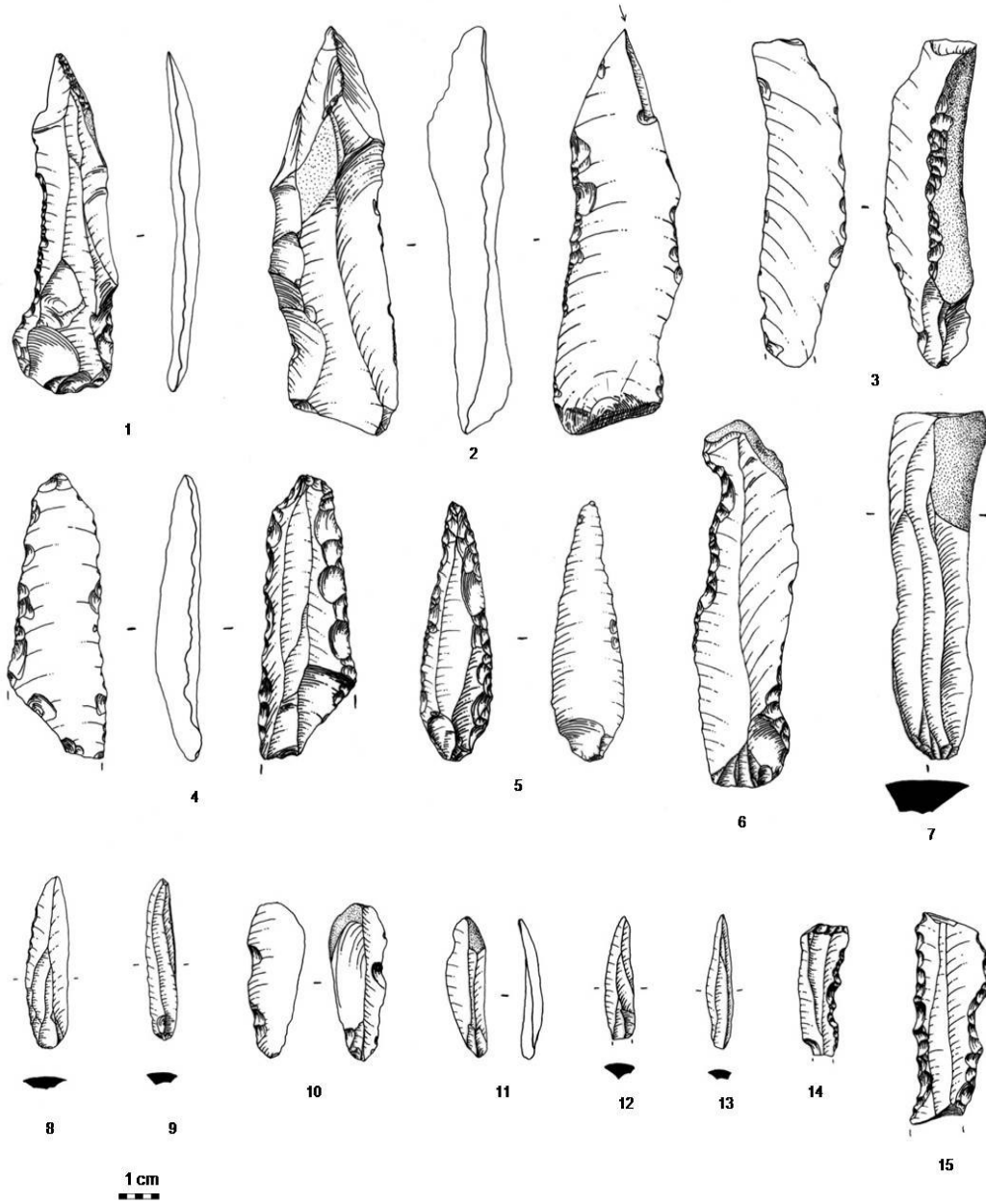


Figure 3. Lithics from Delazian open site, illustrated by Mozghan Jayez

On the other hand, Mirak mounds that are located 3 kilometers south of Delazian are eolithic open sites in the Near East with the size that goes beyond 320 acres (Rezvani and Vahdati Nasab 2010).

Mirak is also so distinguished concerning the quantity of the artifacts spread all over it and providing significant number of Levallois pieces (Vahdati Nasab 2009b). Figure 4 demonstrates some of the lithic materials of Mirak.

Aside from conducting field surveys and excavations, some laboratory analyses have contributed a great deal of new data to the Paleolithic of Iran. In 2006 Trinkaus and Biglari reanalyzed the two and only hominid remains (Humian right radius proximal diaphysis and an incisor) recovered from the Middle Paleolithic layers at the rock shelter of Bisitun during the 1949 Coon's expedition (Coon 1951), and claimed that in case of the incisor this must be removed from the hominid list and should be assigned to the bovids. However, concerning the Humian right radius proximal diaphysis, the comparative analysis suggests that this piece could belong to the either Neanderthals or some Upper Paleolithic Humians (Trinkaus & Biglari, 2006).

Just recently, reexamination of hominid remains discovered from the Upper and Epipaleolithic layers of Eshkaft-e Gavi cave during the summer of 1978 expedition by

Michael Rosenberg (1985) was carried out at the Arizona State University. This study suggests that presence of cut marks and some other signatures of cannibalism might be the indication of such activity in the site; however, due to the small sample size and their fragmentary nature, any firm judgment in this regard must be waited for more intact data (Scott & Marean, 2009).

Discussions and Conclusion

Based on the Paleolithic surveys and excavations, it is clear that the geographical boundaries of Iran have been in use by hunter-gatherers since the Pleistocene. Concentration of the majority of the Paleolithic field missions in the Zagros Mountains (Figure 1) has led some of the researchers to claim that this region consists most of the Paleolithic sites in Iran. However, some of the old and recent surveys have revealed that other geographical zones in Iran (e.g., Alborz Mountains, northern coast of the Persian Gulf, southern coast of the Caspian Sea, and the central Plateau) have been in use during the Paleolithic periods as well. Therefore, it seems the only reason behind having fewer sites in other regions compare to Zagros could be the less focus on them.

Although, the rate of conducting Paleolithic surveys and excavations in Iran is relatively slow compare to the other archaeological periods (e.g., Neolithic, Chalcolithic, Bronze,

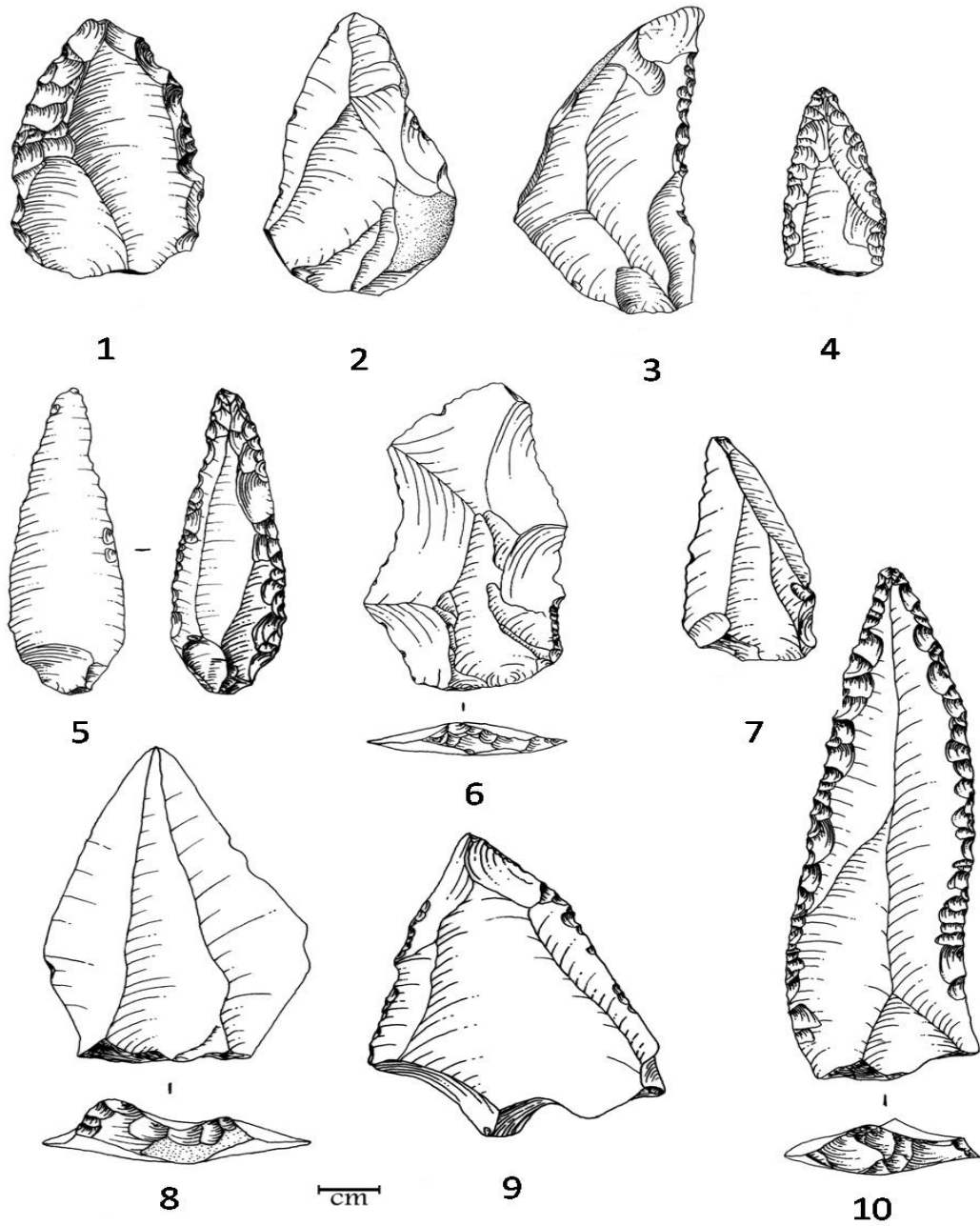


Figure 4. Lithics from Mirak open site, Illustrated by Mozghan Jayez.

and Historical periods), the systematic Paleolithic surveys of some of the selected regions in Iran has begun from the last ten years, and as a result of that numerous Paleolithic caves, rock shelters and open sites have been introduced, and among them some of the most promising ones have been selected for excavation. The most recent systematic surveys have shown that in contrast to the popular belief that the Middle-Upper Pleistocene societies used to spend their time in caves and rock shelters, the number of Paleolithic open air sites are far more than covered places (caves and rock shelters). The main reason behind abundance of the later is that they are easy to find. The Paleolithic open air sites are difficult to come across unless systematic intensive surveys are performed.

Almost all of the Iranian Paleolithic sites that were assigned to the Lower Paleolithic are some surface scatters with no datable data. In some instances some of the researchers have proposed some absolute dates based on the artifacts typologies and in some cases based on the sediments that the artifacts were found on them. It is crucial to emphasize that in most cases these dates must be abandoned. Generally speaking all of the proposed absolute chronologies for the surface collections in Iran (e.g., 800 kya for Kashaf Rud [Ariai and Thibault 1975], and Würm age for Ladiz [Hume, 1976] are based on some ambiguous

sediments or artifact comparisons between the regions that geographically are exceptionally away from each other's and by no means comparable to one another.

As it was discussed earlier in this article, the Paleolithic archaeology of Iran must be treated such as the Near East and Europe. Except Lower Paleolithic, data derived from Middle, Upper, and Epi-paleolithic sites which hold absolute chronologies clearly imply that these periods and the lithic industries assigned to them were started and ended in the Iranian Paleolithic sites as their contemporaneous ones in the Near East and Europe. Humian chronology with its Mousterian assemblages is comparable with the Levant, Taurus, and Europe. The oldest Upper Paleolithic occupations in Yafteh and Garm Rud 2 demonstrate similar dating as the oldest Upper Paleolithic occupations of Europe and Near East. Moreover, in case of lithic technotypology the Upper Paleolithic of Iran is so similar with that of Europe, which some scientists have proposed the term Zagros Aurignacian instead of Baradustian for them (Olszewski & Dibble, 2006). The same scenario stands for the Iranian Epipaleolithic as well. Once more results obtained from absolute dating and technotypological analysis of the artifacts of Komishan, Huto and Kamarband all are comprehensibly comparable with sites from Levant and Europe.

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باستان شناسی پارینه سنگی ایران

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گرچه از شروع مطالعات باستان شناسی پارینه سنگی در ایران نزدیک به یک صده می گذرد، کماکان اطلاعات ناچیزی از این گستره فرهنگی در ایران در دست است. دلایل متعددی برای وضع موجود پیشنهاد گردیده که از مهمترین آنها می توان به فقدان علاقه در نزد بدنه باستان شناسی ایران اشاره نمود. پژوهشهای باستان شناسی پارینه سنگی در ایران را می توان به سه فاز اصلی تقسیم نمود: فاز یک که از ابتدای قرن بیستم و با فعالیتهای دموورگان آغاز گشته و تا ۱۹۸۰ میلادی امتداد می یابد. در این مقطع تمامی مطالعات، کاوشها و بررسی ها توسط هیئت های غیر ایرانی انجام شده است. فاز دوم که شاهد یک فترت بیست ساله در باستان شناسی پارینه سنگی ایران بوده و به جز معدود بررسی ها و یک کاوش، پژوهش دیگری انجام نپذیرفته و نهایتا با ورود به قرن بیست و یکم و آغاز دوباره مطالعات پارینه سنگی فاز سوم شروع می گردد که اینبار نقش باستان شناسان ایرانی در کنار متخصصین غیر ایرانی پر رنگ تر شده است.

واژگان کلیدی: پارینه سنگی، ایران، زاگرس، البرز

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