Settlement continuity in Kurdistan

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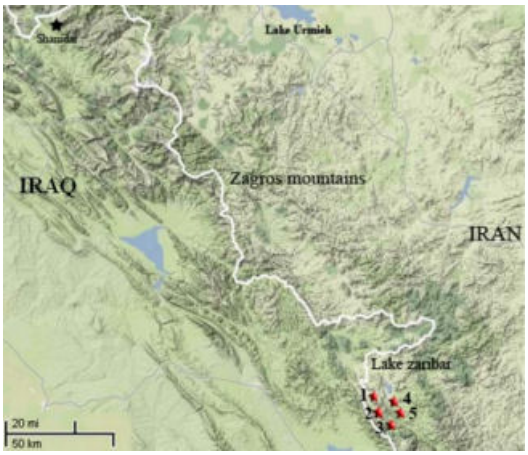


Figure 1. *Location map.*

Introduction

Paleolithic research in the region of the Iran-Iraq border dates back to 1928 when Dorothy Garrod excavated at the Zarzi and Hazarmerd caves in northern Iraq (Davis 1999). The initiation of Palaeolithic studies in Iran could be said to date from 1949, when a mission from Pennsylvania University headed by Carlton Stanley Coon investigated Shekarchian Cave in Iranian Kermanshah province, confirming the presence of a Middle Paleolithic community (Coon 1951). Shanidar Cave was discovered in 1951 in the Baradost mountains, in the western Zagros in north-east Kurdistan. The excavations carried out by Ralph Solecki within the cave over the next decade (1967-1971) yielded material and skeletal remains of both Middle Palaeolithic ancients and Late Palaeolithic humans (Solecki 1963; 1971). In 1967, an environmental team headed by Willem van Zeist studying vegetation change at Lake Zaribar in the Zagros mountains, Iran, during the last 40 000 years proposed a delayed forest expansion in this part of the Zagros mountains caused by an arid climate (Zeist & Bottema1977). This sequence has remained the principal reference for the palaeo-climatology of the region.



Figure 2. *Lake Zaribar.*

However, before 2003 this part of the Zagros mountains had not been explored by systematic archaeological survey. The Marivan survey conducted by the Department of Archaeology at Bu Ali University in Hamadan, and announced in this short note is the first to be reported from the region. Our broad survey design included the study of settlement continuity from the earliest time up to the Islamic period (Mohammadifar & Motarjem,2003). This paper gives a brief notice of new sites of the early prehistoric periods and confirms that the Sianoo valley and its western opening into the plains from Panjvein to Soleimanieh provides a

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remarkable concentration of Middle Palaeolithic to Neolithic activity. It includes the most significant sites in northern Mesopotamia, such as the Kandihar Cave.

Landscape of Marivan

The city of Marivan lies close to the Iran-Iraq border 130km west of Sanandaj, the capital city of Kurdistan province (Figure 1). The region divides into three main zones of mountains, plain and lake. The Marivan plain is a small alluvial plain surrounded by mountains, with Lake Zaribar, 5km long and 170m wide (Figure 2) lying at its heart. The area was investigated by surface survey and by means of 'free sections' where strata had been exposed by farming, road-building or other activities. Our artefacts were identified through the archaeological literature relating to adjacent regions (for example the findings at the Shanidar, Zarzi and Bisitun caves, as well as Peder Mortensen's (1975) research in Hulailan valley). Moreover, we took advantage of the Neolithic and Chalcolithic databases of significant archaeological sites such as Jarmo, Oma Dabaghiye in Iraqi Kurdistan and Sarab, Asiab and Gang Dareh in western Iran.

New sites located: Middle Palaeolithic

The *Middle Paleolithic* period (MP) saw the emergence of hominins associated with a flake tool industry, Mode III technology, which broadly equate with Neanderthals and the Mousterian industry in Middle Palaeolithic Europe (Smith 1975; Biglari & Heidari 2001). *Kach-Gaver* (E: 46.00.02, N: 35.29.43), discovered during the survey, had typical stone assemblages of the Mousterian type. The site is 1518m abovve sea level and located on a slope of mountain densely covered with oak trees (Figure 3). The assemblage was collected from a black cultural layer 70-100cm deep exposed in section by road construction. The rest of the site lies beneath 1m or more of sediment. The implements are made from fine light to dark brown flint, and include flakes, retouched side scrapers, points and cores (Figure 4). Artefacts similar to those from Kach Gaver have been reported from Karraieen Cave in north-west of Anatolia and Konji Cave in central Zagros (Minzoni & Deroche 1993).



Figure 3. *Kach-Gaver.*



Figure 4. *a-c) Retouched side scrapers taken from Levallois cores (after Baumler & Speth 1993: Figure 1:16); d-f) triangle point, with edges partially retouched and two retouched flake tools; g-i) disc-shaped cores with radially directed flakes taken off the entire periphery; h) typical Levallois core (after Baumler & Speth 1993: Figure 1:12).*

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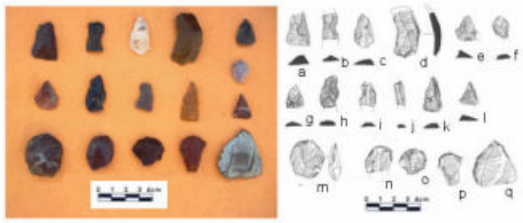


Figure 5. *Tools of Rivas Rock Shelter and Eskol Rock Shelter: c-h, j-l) Triangular, crescentic or trapezoid microliths; b) debris from tool manufacture; i) drill in the shape instrument in shape of a notched blade; m-p) scrapers, including end-scraper (n, p) and double convex side scraper (m, o).*

Epi-Palaeolithic period

Material assigned specifically to the Upper Palaeolithic period was not recognised in the survey. Material *Epi-Palaeolithic* in type was collected from *Rivas Rock Shelter* (N: 35.26.45, E: 46.03.54), which is situated 1425m above sea level with its entrance facing onto the Sianoo valley with a stream running at the bottom. Large pieces of stone had fallen from the roof of the shelter, as at Shanidar Cave (Solecki 1971). The lithics were collected from the front of the shelter, and consisted of flake tools with some geometrical and crescent-shaped microliths similar to those of Zarzi tradition (Figure 5). The number of flakes indicates that tool manufacturing was probably done *in situ* (Mortensen 1975). A second assemblage of similar date was collected from the mouth of *Eskol Rock Shelter* (N: 35.27.08, E: 46.02.25) which lies at 1441m above sea level and also faces onto a valley in which a permanent stream flows. The lithics collected from these two rock shelters contrast with those from Kach Gaver, being smaller and made from more brightly coloured flint. Triangular, crescentic or trapezoid microliths were perhaps employed in early sickles. Traces of luminosity and erosion resulting from harvesting plants could be observed on the edge of these stone tools. There were a number of scrapers and a drill, while evidence for on-site manufacture was given by incomplete tools and debris resulting from the process of manufacturing (Figure 5b). These specimens are very similar to the material culture found during the excavation of Khar Cave and the collection of stone tools related to the Holailan investigation which are known as the Zarzi tradition.

Neolithic period

The material cultures related to the *Neolithic* period are mainly distributed in the Marivan plain. In the Zagros there is no evidence for continuity in caves and rock shelters of the Epi-Palaeolithic period. Neolithic sites in the Zagros take the form of mounds, less than 2500m^2 in extent and up to 2m high, lying in the transition areas between the mountains and the plains. *Hama Avin Tepe* (N: 35.28.13. E: 46.09.18) lies in a cultivated field at 1357m above sea level in the alluvial plain of Marivan to the east of Lake Zaribar. It has a diameter of 46m and a depth of deposits between 1.8 and 2m. The assemblage was collected from the surface of the mound, and included a variety of flint stone tools such as ridged blade, conical cores and microliths manufactured within by tangential pressure technique. *Hama Morad Tepe* (N : 35.29.40, E: 46.08.31) is located on the south-eastern side of Lake Zaribar at 1338m above sea level. Its diameter is 43m and it rises to about 1.6m. A wide range of fine flint stone tools in diverse colours was collected from the surface of the mound.

The major characteristic of the stone artefacts from this period was the tangential-pressure technique, in which blades were taken from conical cores, which were also present (Figure 6). This technique is characteristic of tool production during the Neolithic period in Zagros and has been reported from other diagnostic sites such as Jarmo, Chamchara, Asiab, Sarab and Ali Kosh. The blades (Figure 7) included one blade with its foot retouched to form a burin (l) and a blade with two notches, which was unidentified (g). The technology, manufacturing techniques and raw materials are closely similar to those of Ali Kosh phase

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from Chogha Sefid in the Dehloran plain (Hole 1976).



Figure 6. *Core stones of Hama Avin and Hama Morad Tepe.*



Figure 7. *Tools of hama Avin and Hama Morad Tepe.*



Figure 8. *Tools of Hama Morad Tepe.*

Chalcolithic period

In addition to its Neolithic assemblage, *Hama Morad Tepe* had a range of later stone tools (Figure 8). These are of a kind that occur with *Chalcolithic* pottery, such as impressed Dalma ware, and have been identified in other archaeological sites in the Marivan plain. This confirms the continuity and expansion of settlement, and of flint use, while metal was being adopted during the Chalcolithic period. Elegant microliths in the Neolithic style were replaced by longer and thicker blades which continued in use in the Zagros until the end of the Bronze Age. A recent expedition in central Zagros led to the discovery of one of the flint mines exploited during this period (Brenbek & Pollack 2003).

Conclusion

The preliminary results of the survey project indicates that settlement in the central Zagros was continuous from the Middle Palaeolithic to the Copper Age, although distributed in different zones. Potentially fruitful sequences have been located in the Rivas and Eskol rock shelters and the tepes at Hama Avin and Hama Morad. However the chance discovery of the Middle Palaeolithic open site at Kach-Gaver shows that potentially extensive Neanderthal type evidence remains sealed under a metre or more of made ground. Needless to say, the region as a whole, so crucial for the replacement of *H. ergaster* by *H. sapiens* and for the emergence of Mesopotamian civilisation, merits more intensive archaeological investigation.

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