

The Early Neolithic Period in the Urmia Lake Region

A Prospect of Neolithization and Impression of Zagros Traditions

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Abstract

The study of the Early Neolithic period in the Urmia Lake region, in Iranian Azerbaijan, was a problem: none of the studies published so far provides convincing evidence for the Early Neolithic settlements. There are some well-known and well excavated/surveyed Neolithic sites around the Urmia Lake such as Hajji Firuz, Yanik Tepe, and Ahrendjan Tepe. Contrary to what has been posited in the site publications, the materials from these sites date back to both the Early Pottery Neolithic and the Late Neolithic, c. 6500-5000 BC. There is, however, growing evidence for traces of an Early Pottery Neolithic occupation, generally at the same horizon with Jarmo II, Sarab, Guran II and Tepe Abdul- Hosein II in Northern- Central Zagros, c.7000-6000 BC. This paper revisits former studies on the basis of recently studied Ahrendjan- Qara Tepe in comparison to Hajji Firuz tradition. Moreover, it puts forward a new interpretation of the Early Neolithic period in the Urmia Lake region, rather than presenting some new data. In accordance with a diffusionist approach, the author finally concludes that both the Early and Late Neolithic sites of the region were affected by contemporary developments in the Northern-Central Zagros.

Keywords

Neolithization, Early Neolithic, Late Neolithic, The Urmia Lake region, Zagros.

Introduction

The origins and the formation processes of the Early Neolithic period in the Urmia Lake region, located in Iranian Azerbaijan, merit further research. The Urmia basin is the lowest land in the heartland of Azerbaijan, where the majority of prehistoric sites are reported. Remarkably, in this region, in contrast to Mesopotamia, the Neolithic sites are reported as close to each other. The unconvincing evidence for settlement before the Late Neolithic village of Hajji Firuz in the Urmia Lake basin was one of the main problems in the prehistory of Iranian plateau. Consequently, in addition to the need for investigation of evidences of earlier settlements, it should be asked: What were the processes leading up to the emergence of the Neolithic life ways in the region? And what regions were influential in the formation of the Neolithic traditions in this region? The main hypothesis of this paper is that the Early Neolithic sites of the Urmia Lake basin are the result of migration from the northern-central Zagros, since Zagros was one of the important core regions in the Fertile Crescent during the Neolithization process. This paper also revisits former studies on the basis of new evidences recently recorded from Ahrendjan Tepe and Qara Tepe that remain to be published. The aim here is to propose a new interpretation of the Early Neolithic period in the Urmia Lake region based on the Neolithic diffusionism, rather than to present some new data from some new sites. Therefore, the Early Neolithic period in this region is not pre-dated than the Proto- Hassunan horizon, as the latest stage in the Early Pottery Neolithic period. There are some well excavated Neolithic sites around the Lake such as Hajji Firuz Tepe, Yanik Tepe, Ahrendjan Tepe and Qara Tepe (Talai, 1983; Voigt, 1983; Ajorloo, 2008, a, b; Talai & Ajorloo, 2008). But, as an introduction to the Early Neolithic, it seems necessary to have a general overview of the problem of PPN in the region.

Hypothesis

According to the archaeological records, the Early Pottery Neolithic settlements in the Lake Urmia region emerged as the result of the immigrant peo-

ple from Northern- Central Zagros territories. Archaeologically, the Zagros had played a key role in the Near Eastern Neolithization processes; while Azerbaijan was a marginal region to the Fertile Crescent.

The Problem of Pre- Pottery Neolithic sites in the Region

Despite the Anglo-American expeditions to the region in the 1960s-1970s, no Early Holocene site was found in the Urmia Lake basin (e.g. Mellaart, 1975; Voigt, 1983; Talai, 1983; Talai and Ajorloo, 2008; Hole, 1987 & 1999; Solecki, 1999; Ajorloo, 2008a & b). The earliest evidence for human occupation in the Urmia Lake basin comes from the Acheulian (Sadek-Kooros, 1975; Jaubert et al. 2006), Mousterian and Baradustian cultures (Coon, 1957; Solecki, 1999). Carlton S. Coon (1957) has reported the earliest settlement of the region dated to the Late Levallloisian assemblage from the village of Ismail'aqa. Therefore, it seems that there is a hiatus until the Neolithic, at least from c.60000 to 6500 BC.

Hole (1999) has suggested that the region, because of its agricultural potential, is very suitable for development of the Neolithic societies. But missing traces of the Proto-Neolithic and PPN occupations around the Lake still remained a serious problem. On the other hand, perhaps previous campaigns in the region were not successful to recognize such a site. Because of the palaeo-climate conditions of the Early Holocene, however, it seems impossible to find such remains.

The Lake of Urmia, located at the heart of Azerbaijan in northwestern Iranian plateau and extending about 5200 square kilometers, is 1300 meters above sea level (Fig.1). The lake itself is too salty for the fish and has been shrinking for a long time, with an annual evaporation rate of 600-975 mm. A preliminary radiocarbon and pollen analysis suggests a playa stage prior to c. 7000 BC with saline lake deposition in a cool and arid climate. From c. 7000 to 5500 BC higher energy faces prevailed in a shallow saline lake and, since then, present day



Fig.1. The distribution map of the recognized type- sites in the Lake Urmia region and the Zagros. Source: B. Ajorloo, on the basis of a map from Wikimedia. Legend: No. 1 & 2: AhrendjanTepe and QaraTepe in Salmas plain, No. 2: Hajji FiruzTepe in Solduz valley, No. 4: Yan-ikTepe in the steppe of Tabriz, No. 5: Tamtama cave, No. 6 & 7 & 8: Zawichemi & Shanidar & Jarmo, No. 9: TepeAsiab, No. 10: Tepe Sarab, No. 11: Tepe Ganj Dareh, No. 12: TepeAbdol- Hossein, No. 13: Tepe Guran

saline environments have persisted with evidence of numerous second orders water level fluctuations (Kelts & Shahrabi 1986). Currently, the region is semi-arid with less than 500 mm annual precipitation. The maximum temperature is $+30^{\circ}\text{C}$ in summer and -20°C during winter. Therefore, the development of dry farming in the region is the result of such climate. The gentle breezes off the Caspian Sea have some effects on the climate of the low-lying areas. Neighboring to the Lake Van, the Urmia Lake basin has joint climate-geographical aspects with eastern Anatolia (Ajorloo, 2008a). According to the pollen analysis from the Lake Van, therefore, the termination of the Younger Dryas dates back to c. 11000 BP (Landmann et al, 1996). Where the climate is cooler, drier or both, arboreal pollen shows a significant rise only after the onset of the Holocene. Moreover, this increase was rather slow, so that maximum arboreal pollen values were only achieved in the mid-Holocene times. In the south-east of Anatolia and western Zagros, this process was not complete until c. 4000 cal. BC. The pro-

cess of woodland expansion was time-trans aggressive across interior parts of the Near East. Instead of woodland, the glacial-age steppe of Artemisia and chenopod was replaced in these regions during the Neolithic times by open grass-dominated savanna parkland. Until now, the delayed re-establishment of trees in these regions has been interpreted primarily as a result of the slow increase of precipitation during the Early Holocene, implying that climatic conditions were drier than the present in Anatolia and western Iran during the Neolithic times (Roberts, 2002). It seems, therefore, that the modern ecosystem of the region was established after c. 5500 BC, when the water level of the Lake Urmia increased, the Playa stage of the Lake ended, permanent rivers flowed and the arid face of the land changed to grassland, meadows and some woodland (Kelts & Shahrabi, 1986).

Based on the data from his 1960s field surveys in the Urmia Lake basin, Ralph Solecki (1999) emphasizes that the process of transition of Mousterian culture reported from the Tamtama cave to the pottery Neolithic is still unclear. It seems that a major cultural change occurred by the pottery Neolithic stage in the region c. 6500 BC. It needs to be pointed out that Solecki did not survey the eastern and northern banks of the lake and his survey project was short-term. Indeed more researches are required to investigate these issues.

According to the recent publications, the Neolithization process in the center and southeast of Anatolia and Levant took place some 2000 years prior to Mesopotamia and interior Iranian plateau (e.g. McCorriston & Hole, 1991; Hole, 1999; Özdoğan & Başgelen, 1999; Matthews, 2000 & 2007). The studies on the Near Eastern Neolithization suggest that the Fertile Crescent, especially southern Levant and northern-central Zagros, was the natural habitat of grains and animals suitable for domestication. Evidence comes from the Natufian sites in southern Levant and the foothills of northern Zagros in Iraq (Matthews, 2000, 2007: 67-89). Yet the Urmia Lake basin is out of the Fertile Crescent.

Ecologically, in other words, the region was not the natural habitat zone suitable for domesticable plants and animals; and the Early Neolithic in the region may start later than the first villages within the Fertile Crescent (Ajourloo, 2008a). This means that the climate and ecological conditions in the region, contrary to southern Levant, southeast Anatolia and northern-central Zagros highlands, could not allow the Neolithization process to occur. This can explain no trace of either Proto-Neolithic or PPN sites in the region has been found.

The study of materials found from Ahrendjan Tepe and Qara Tepe, as discussed here, suggest that both of them fall within the Early Pottery Neolithic horizon, comparable with northern-central Zagros traditions. Subsequently, the Early Pottery Neolithic period in the region should be revised. In this regard, the discussion is divided into the Late Neolithic assemblage and the Early Pottery Neolithic one, as seen from Ahrendjan-Qara Tepe tradition. The former Early Neolithic Hajji Firuz and Yanik Tepe traditions must be reviewed first. Those are considered as the type sites of the Early Pottery Neolithic in Azerbaijan, NW Iran.

The Late Neolithic period

The Late Neolithic period in Azerbaijan is well known thanks to the Anglo-American expeditionary missions to the region; the main type sites are Hajji Firuz and Yanik Tepe, located in both sides of the Lake (see Fig. 1). The Solduz valley is located in the southwest of the Urmia Lake where the Late Neolithic village of Hajji Firuz is settled. During the 1970s-1990s Hajji Firuz became the main type site for the Early Pottery Neolithic period in the region (Mellaart, 1975; Voigt, 1983; Hole, 1987). According to Mary M. Voigt (1983) the Neolithization process of the region was initiated by migrants from the Hassunan area of northern Mesopotamia, who settled on the west bank of the Urmia Lake. Radiocarbon dating for the earliest phase (L) at Hajji Firuz Tepe is ca. 5500 BC; while the site of Seyyed Hamadani shows ca. 5850 BC (Ibid:

350). Finally, Voigt (1983) has dated the Hajji Firuz period to c. 6000-5000 BC. Excluding the other banks of the lake, her viewpoint is based on the comparison of the pottery sherds of Hajji Firuz and Hassuna. For example, the potteries defined as the Husking tray and red (orange) banded on red (orange) wares, which are characteristic forms of Hassunan culture, have been reported at Hajji Firuz (Voigt, 1983: 123, 139-68; Fig. 81, 92-8; Pl. 20). The sherds are handmade with inclusions of chaff, fine sand and minerals (Voigt, 1983: 102-68).

Despite the fact that the Hassuna/Samarra horizon plays a significant role in the Near Eastern prehistory of innovations in architecture and painted pottery, it should be defined as the Late Neolithic culture, c. 6000-5000 BC (Clark, 1977; Tekin, 2005 & 2007).

According to the published results of the recent archaeological excavations, in particular in Levant, Syria and Anatolia, at the first decade of the 21st century, our understanding about the socio-cultural changes during the Neolithic Age, mainly on the transition of the Early Neolithic to the Late Neolithic has been improved. For instance, the material culture found from Domuz Tepe in south central Turkey, has presented the Early Halaf as a Late Neolithic Anatolian tradition, c. 6000- 5000 BC (Campbell, 2007; Nieuwenhuyse & Cruells, 2004). While, Tell Sabi Abyad, located in northeast Syria, is another Late Neolithic tradition in the horizon of Hassuna/ Samarra and Halafian cultures, c. 6000-5000 BC (Akkermans & Le Mièrè, 1992; Akkermans & Verhoeven, 1995). It should be noted that the materials of Proto-Hassunan horizon (Sotto-Um Dabbaghiyah) presents the later stage of the Early Pottery Neolithic in Upper Mesopotamia, Northern Zagros and Southeastern Anatolia. By the end of the 7th millennium BC, This tradition was replaced by the Late Neolithic entities of the Early Halaf, Hassuna/ Samarra and Hajji Firuz including their various traditions of handmade painted pottery.¹

The earliest pottery Neolithic of Upper Mesopotamia, including the Khabur basin, has long been thought to be represented by the Proto-Hassuna (Sotto-Um Dabaghiyah) horizon. But, latest excavations at Tell Seker Al-Heimar, on the upper Khabur, provided new evidences to review such an idea. The excavations revealed that a PN stage

predating the Proto-Hassuna existed in the region. The long continuous sequences at this site, beginning perhaps from the PPNB and finalized with the Proto-Hassuna, proves that this tradition, provisionally referred to as Pre-Proto-Hassuna or Sekerian. Radiocarbon dates for this stage indicate the early 7th millennium BC (Nishiaki & Le Mièrre, 2004 & 2005). Consequently, Hajji Firuz should be revised as the Late Neolithic settlement.² The problem of the Early Neolithic sequences in the region requires a new archaeological solution. The cultural assemblages found at Hajji Firuz is more advanced and more complicated than Early Neolithic sites such as Tepe Abdul-Hosein II, Jarmo II, Sarab, Ganj Dareh D-B and Guran II (e.g. Mellaart, 1975; Smith, 1978 & 1990; Pullar, 1990). Here the main architecture element is mud brick with clay mortar, and the plan is complicated with at least three rooms and well plastered walls (Voigt, 1983: 23-31, 40-55; Fig. 15-6, 20-45). Emmer wheat, Einkorn wheat, barley, rye, lentil and grape were all domesticated and well cultivated at Hajji Firuz. The domesticated species of pig, sheep and goat were being feed and slaughtered at Hajji Firuz as well. Moreover, there is a reported archaeological trace of wine production³ (Voigt, 1983: 275-9). Ceramic assemblage of Hajji Firuz is well-made and in various simple/painted forms. In other words, Hajji Firuz falls within the Late Neolithic horizon both in the terms of radiocarbon dating (ca. 5500-5000 BC) and cultural assemblages. In addition, most of the Early Neolithic sites in the western Iranian plateau were discovered in highlands and hilly flanks of northern-central Zagros. Archaeologically, it should be reminded that Zagros is presented as one of the Neolithization centers in the Near East. As mentioned above, the Urmia Lake region entered into a playa stage prior to c. 7000 BC and the region had an arid and cool steppe climate during c. 7000-6000 BC. It is so interesting, if one considers the fact that those Neolithic settlements were developed through the region after c. 6000 BC, when the environmental conditions became moderate and suitable. To the au-

thor, new recorded materials found in Hakemi-Use, upper Tigris of southeastern Turkey (Tekin, 2005 & 2007) prove this idea that Hajji Firuz-Hassunan traditions were had common root in northern Zagros. Yanik Tepe is still the main prehistoric type site for eastern bank of the lake, excavated in 1960-1963 by Charles A. Burney (1964). The site stands less than 20 km far from the modern Tabriz (see Fig. 1). Burney (1964) has reported evidences of the Neolithic from two areas at Yanik Tepe: the first is a low mound some 400 m from Yanik Tepe, while the second is the lower level of Yanik Tepe itself. At the first mound, he excavated an architectural level 4 m under the surface of the plain. The British expedition to the plain of Tabriz uncovered nine architectural phases at the low mound. These architectural remains offer a similar picture of a village of rectangular, well-built houses of mud brick, but here lime plastered floors occur. Pottery sherds of Yanik Tepe are straw faced and soft backed light buff or greenish in color. The ware is plain and the shapes are limited to heavy bowls, open mouth jars, flat bottomed dishes and some carinated bowls. Painted pottery appears in the upper layers. The chevron painted ware of Yanik Tepe in general is comparable with Hajji Firuz one (see Burney, 1964, Fig. 1-19); while a red burnished ware with a decoration in chalky white paint also known from Tepe Sarab, far to the south in central Zagros is reported at Yanik Tepe. Three basic types of potteries including coarse unburnished, burnished monochrome and painted are, of course, familiar to some of the well-known traditions; for example, the chevron ware has been compared with Hassunan archaic painted ware; while the white on red to Tepe Sarab in central Zagros. The general stone tradition is also of the Zagros pattern. Ground stone celts occur and there is a simple blade industry in local chert and imported obsidian, Type³ (Mellaart, 1975: 206-7). According to the results of radiocarbon dating, the Neolithic assemblage of Yanik Tepe indicates c.5200 BC (Voigt, 1983: 348). Furthermore, the Neolithic levels at the main mound

of Yanik Tepe continue into the Early Chalcolithic levels. Therefore, it is possible to date these materials to the Late Neolithic.

Hajji Firuz type settlements have not yet been recorded in the field surveys in the plains of Marand, Shabistar, Khoy in north of the Lake and Leylan region in the southeast of the lake (Ajourloo, 2008a). On the other hand, Yanik Tepe is the only Neolithic settlement in Tabriz plain.⁴ Additionally, Hajji Firuz expansion is not yet recorded from the rural district of Leylan towards the steppe of Tabriz.

The reason seems to be the saline condition of western edge of the Tabriz plain which is not suitable for cultivation. The brine Adji Chay was the main river flowing through the steppe of Tabriz and cultivation is relied heavily on deep wells, dry farming and modern irrigation systems. This infertile condition continued until the modern time.⁵

Though no trace of the Early Neolithic at the east of the Lake has been reported yet, two different Late Neolithic traditions are remarkable at both sides. Whether Hajji Firuz or Zagros, the problem of Late Neolithic's origin at Yanik Tepe requires more field investigations.

The Early Neolithic period

Two areas particularly favorable for agriculture are the broad and fertile plains of Urmia and Salmas in the west and northwest of the Lake. The plains are also situated along what may be considered a major natural 'highways' linking the southern Caucasus with the Lake Urmia region, Mesopotamia and northern Zagros (see Fig. 1). Overall, local conditions must have been favorable for settlers during the Neolithic Age. A few permanent rivers and streams flow in both plains of Urmia and Salmas (Talai, 1983). Despite the harshness of winter in most parts, the fertility of the plateau's volcanic soil makes it possible that the region was one of the world's earliest for agricultural activities (e.g. Mellaart, 1975: 195-207). From the Lake Urmia basin to the Araxes River valley and beyond, there are areas whose natural resources offer fruitful prospects for the investigation of the development of food producing economies during the Neolithic

Age (Talai, 1983). Barely, bread wheat and wine grape were cultivated in the region in the Neolithic Age (Voigt, 1983: 275-7). As mentioned above, the region has good environmental conditions for dry farming. The farming and harvesting tools were also discovered at Ahrendjan Tepe, Qara Tepe, Hajji Firuz and Yanik Tepe (e.g. Burney, 1964; Mellaart, 1975; Voigt, 1983; Talai, 1983; Hole, 1987). Ahrendjan Tepe is a Neolithic site in the Salmas plain, with an area of three hectares and the height of three meters (Fig. 2). Hassan Talai (1983) first reported the archaeological materials discovered at Ahrendjan Tepe as the Early Pottery Neolithic. The author assumes that this provide evidence for the relationship between the Zagros and Azerbaijan. It should be regarded that the technology of pottery at Ahrendjan-Qara Tepe was more developed than the sun-dried Ganj Dareh D ones, not Hajji Firuz and Yanik Tepe. Typologically, the Ahrendjan pottery assemblage can be classified as the Early Neolithic ware and technologically it is homogenous though



Fig. 2. A view from Ahrendjan Tepe in Salmas, 2007. Source: Ajourloo, 2008a.

diverse in terms of painting patterns. All sherds are handmade. The side thickness of these potteries range from 5 to 25 mm and the measurable base is up to 20 mm thick. These sherds are heavily straw-tempered and even when the exterior is smoothed –a rare case, the imprints of straw are still evident on the surface (Fig. 3). Some are covered with a red and cream slip

(Talai, 1983). The decorations are, in the main, characteristic of the Early Neolithic ware, either painted or burnished. Painted decoration occurs on vessels of almost all forms and is applied in a range of colors from deep red (perhaps ochre) through brown over a cream or red slip (Ibid.). Generally speaking, some of the painted patterns of Ahrendjan potteries are comparable with those of Hajji Firuz (Aliyari & Talai, 2005), which as mentioned shows affinities with Hassunan culture. The form and shape of some of the Hajji Firuz plain wares are similar to those found at Ahrendjan as well (Ayorloo, 2008a).

There are indications of pottery from the Early Pottery



Fig.3. The samples of Ahrendjan-Qara Tepe chaff tempered pottery, 2007. Source: Ajorloo, 2008a.

Neolithic. The archaeological materials from lower layer of Ahrendjan fall within the same horizon of Jarmo II, Sarab, Abdul- Hosein II and Guran II traditions (Ayorloo, 2008 a & 2008b; Talai & Ajorloo, 2008). The ceramic assemblage at lower layers of Ahrendjan is simple and plain both in terms of form and decoration. The pottery sherds generally are handmade and soft, full chaff tempered, coarse, and crude and fired in low temperature by open kilns (soft baked). The coat of some of the ceramic sherds is wet-smoothed which falls within red-orange spectrum. Also the main forms are simple bowls, open mouth jars and also spouted wares, as the new technical innovation

through the Near Eastern Neolithic Age (Fig. 4).

It should be considered that some stone-carved spouted wares, and not ceramic, are unearthed in the Late Neolithic Halafian tradition recorded at Domuztepe in south central Turkey (Carter, Campbell & Gauld 2003; Campbell, 2007). The Ahrendjan type ceramic sherds are excavated together with the Hajji Firuz sherds from the upper layers and final phases as well. Consequently, the cultural levels which are regarded as the Ahrendjan-Qara Tepe culture date back to the 6th millennium BC. To the author, this means that Hajji Firuz expansion, from northern Zagros to the west of the Lake Urmia, put an end to the Ahrendjan tradition c. 6000 BC. The Early Neolithic tradition of Ahrendjan-Qara Tepe desires absolute dating too. But there are some testimonies for the relative dating of Ahrendjan- Qara Tepe:

1- The materials of Ahrendjan tradition are earlier than the Late Neolithic tradition of Hajji Firuz. The tradition of Hajji Firuz in compare with the entities of Proto- Hassuna and Hassuna/ Samarra is not earlier than c. 6000 BC. Consequently, the culture of Ah-



Fig.4. A sample of spouted wares found at Qara Tepe, 2007. Source: Ajorloo, 2008a.

rendjan- Qara Tepe might be falls within the range of c. 6500- 6000 BC.

2- The pottery technique of Ahrendjan- Qara Tepe tradition, in comparison with Hajji Firuz and Yanik Tepe, is primitive. While it is enhanced than Ganj Dareh D and Tell Seker Al- Heimar, the Sekerian period. Such a pottery technique can be compared with

Proto- Hassunan horizon. Thus, it can be fallen within c. 6500- 6000 BC.⁶

3- Husking tray is reported as a sign for the Late Neolithic in northern Mesopotamia and northern Zagros (Bernbeck, 1994). But the Ahrendjan- Qara Tepe assemblage has no husking tray (Ajourloo, 2008a & 2008b); and finally,

4- It is comparable just with Jarmo II, Guran II and explicitly Abdul-Hosein II. The author, for that reason, proposes c. 6500- 6000 BC for the Ahrendjan-Qara Tepe relative dating. As mentioned above, the climate conditions of the Lake region became moderate by mid-7th millennium BC. Qara Tepe is located in the Salmas plain; some three kilometers to Ahrendjan Tepe (see Fig. 1). Today, the dimension of the site

is 250x250 meters. The cultural layers of Qara Tepe are the same as those of Ahrendjan. The test trenches revealed a sub-floor burial (Ajourloo, 2008a). Similar graves related to the Early Neolithic Near East have also been recorded (Campbell & Green, 1995; Talai, 1999; Özdoğan & Başgelen, 2007; Mathews, 2007; Simmons, 2010).

Lithic assemblage from both Ahrendjan and Qara Tepe include some Early Neolithic indications such as bullet core, blade core and burin (Fig. 5). Obsidian is the main material in both sites. The most important thing to consider is the proximity of the two sites.

Conclusion

No archaeological evidence has yet been found for

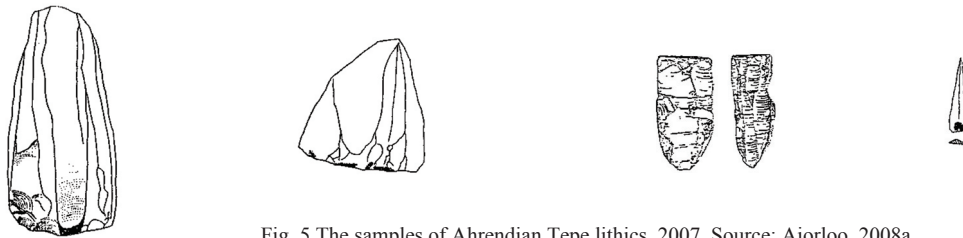


Fig. 5. The samples of Ahrendjan Tepe lithics, 2007. Source: Ajourloo, 2008a.

the socio-cultural sequences during the PPN in the Urmia Lake basin. Because of the arid and cool climate of the region by the mid- mid-7th millennium BC (the Lake of Urmia is currently in the playa regime) discovering PPN sites in future campaigns seems improbable. Yet the earliest reliable evidence published so far is Ceramic Neolithic. But why should we expect to find no earlier sites?

Azerbaijan is a marginal region to the Fertile Crescent without a natural habitat for domesticable species, and domestication seems not have been occurred here. The main hypothesis, therefore, is that the Early Pottery Neolithic sites of the Urmia Lake basin, for example Ahrendjan Tepe and Qara Tepe, were affected by contemporary developments in northern-central Zagros, and probably colonized from that region. However this hypothesis of migration faces archaeologists with a new question: What was the main attraction for such migration from northern-central Zagros to the Urmia Lake basin?

A possible answer is that by moving from an arid/cool climate to the moderate and rainy conditions in Urmia basin, c. 7000- 6500 BC, some Early Pottery Neolithic people migrated into the region from the Zagros to seek new fertile lands. At the same time, another possible answer lies in obsidian resources of some inactive volcanoes from the west of the Urmia Lake towards the Van Lake. Both of these ideas, albeit, seem to be true. In any way, it is obvious that more new field works are required to examine these ideas. Ahrendjan Tepe and Qara Tepe are imperative sites for the study of the Early Neolithic Urmia basin in accordance with diffusion from a Zagros origin. Both of them have presented two assemblages from the Early Pottery Neolithic period in the region, during the mid-7th millennium BC. In addition, Hajji Firuz is another best case in point to emphasize on a diffusionist approach to interpret the Neolithization process in the region of Lake Urmia, and explain the processes of the Neolithic early village's expansion in northwestern Iranian plateau. The Origin of Ahrendjan-Qara Tepe tradition in northern- central Zagros is still unclear. The main question, nowadays, about the Ahrendjan- Qara Tepe tradition dose not point out to its indigenous formation, but migration. As it has been argued, there is enough archaeological evidence to support this idea that the west bank of the Urmia Lake was affected by northern-central Zagros

during both the Early and Late Neolithic periods. The material from Hajji Firuz, in comparison with Hassuna IA and Hakemi-Use, is the best example for its northern Zagros origin. The Ahrendjan- Qara Tepe tradition, by any means, requires more archaeological evidences in order to verify its origin. With further publication and investigation of these sites the socio-cultural interactions between the lowlands of Urmia Lake basin with the highlands of northern-central Zagros during the Early Neolithic period will be better understood.

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Endnote

1. It is interesting that some of the Iranian scholars present Halaf as the Early Chalcolithic culture of Upper Mesopotamia, instead of an Anatolian Late Neolithic one (e.g. Talai, 2011). Despite the Late Neolithic entity of Halaf, according to Domuz Tepe excavations, its burial rites are comparable with Çatal Höyük (Campbell and Green, 1995; Carter, Campbell and Gauld, 2003; Campbell, 2003).
2. In accordance with the archaeological materials found from Levant, Upper Euphrates valley and Central Anatolia, the Early Neolithic Age in the Near East, generally, is categorized into four main periods of the development of the early villages, including Proto- Neolithic, PPNA, PPNB and Early Pottery Neolithic. This long term period of developments, c. 10500- 6500 BC, is documented by the processes in architecture and sedentarism, pottery and domestication of animals and plants (Simmons, 2010).
3. Bahman Kargar, contrary to R. Bernbeck (1994) and S. M. Shahmirzadi (1999) thinks that husking trays were made for wine production (Durdu), not grain harvesting.
4. Recently an expedition to Tepe Khaleseh in the Zanjan plain, close to the modern town of Abhar, has reported a Hajji Firuz type settlement (Thanks to Prof. H. Talai). It seems, therefore, that east of the Lake requires more field investigations and it is possible that Hajji Firuz expansion to the Zanjan plain might have been via Kurdistan, not Azerbaijan.
5. The German expedition to the East Azerbaijan province, in 1991, has reported no cultural traces earlier than the Early Chalcolithic in the surveyed area in Marand plain and Shebli gorge towards Tehran (Kroll & Kleiss, 1992). Meanwhile, archaeological reports of Iranian expeditions to the plains of Marand and Shabistar are silent about the Neolithic settlements.
6. The handmade pottery of Proto-Hassunan horizon, similar to Ahrendjan- Qara Tepe tradition, is tempered by straw; while those are all fired in low temperature. And for Ganj Dareh Tepe in central Zagros, primitive pottery at level D essentially is a kind of burnt clay wares or sun dried, as reported by P. Smith (1978, 1990). They also have asymmetric forms. But, the simple and plain pottery assemblage of Sekerian period at Tell Seker Al- Heimar has basalt and carbonite mineral tempers. All found samples are fired in low temperature (Nishiaki & Le Mièrè, 2004, 2005).

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