Intl. J. Humanities (2012) Vol. 19 (2): (27- 41)

A New Archaeological Research in Northwestern Iran: Prehistoric Settlements of Little Zab River Basin

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Received: 2011/9/10 Accepted: 2011/11/28

Abstract

The little Zab River in northwestern Iran rises from the mountains Piranshehr and flows from the northwest to the southeast direction to join Iraq from Alan passage. The River basin contains a large number of ancient settlements, and its lower area that is close to the Zab River has been the most interesting place for people in the Neolithic Age. An increasing population during Chalcolithic Age led to the dispersion of settlements. These sites are located in the north of this basin, in a valley and a little plain.

Keywords: North-Western Iran; The Little Zab River; Archaeological Survey; Neolithic; Chalcolithic.

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Introduction

The Zab River basin consists of Piranshehr and Sardasht of Iran's West Azerbaijan province and parts of Bane in Kurdistan province. The Zab River rises from northwest highlands of Piranshehr and after joining different branches and passing through highlands of Alan enters into Iraq. The extension of this basin has drawn a relatively vertical strip along the international Iran-Iraq border and the little Zab River encounters longitudinal and latitudinal expansions from northwest to south-east and east-west directions (Khezri: 2000). The Zab basin is located in an area with cold and temperate mountainous climate as well as Mediterranean rainfall, with an average annual temperature between 11/7 to 13/3 and an annual downpour of about 700 ml.

Fig 1 Location of Zab Basin in Northwestern Iran

The Zab basin has sparse vegetation and its dense forests include oak, ors and sometimes wild pistachio (Qzvan), almonds and tamarisk. Density scales in some areas is more to the neighboring regions. The basin is located in Urmia-Sanandaj-Sirjan or so called Sanandaj–Sirjan zone, geologically after Zagros range in the northeast. In the northwestern parts of this zone, geologocal Laramie factors have created severe transformation (Nabavi: 1976).

Archeological Studies in West Azerbaijan

Northwest of Iran, with its appropriate climate and neighborhood with Anatolia, Mesopotamia, and Naxjavan, had a particular importance in archeology of different prehistoric and historical periods. The specific geographical situation of country's northwest and specially the West Azerbaijan in ancient age, as the meeting place of important cultures turned the attentions of most scholars and archaeologists. Since the beginning of scientific and archaeological studies in the early nineteenth century, this area has been studied and excavated frequently by Iranian and foreign archaeologists.

Studies by Coon (1951), Stein (1940), Italian group led by Pecorella and Salvini (1984) and Solecki is convincing reason about its archeological importance (Solecki & Solecki 1973; Solecki 1999). Also, during 1969 and 1978, German archaeologists in Bastam, English group led by Burney in Haftvan and Yanik (Burney 1964; 1969; 1970; 1972; 1973) conducted excavations, and also Swiny surveyed a large area in northwest of Iran (Swiny 1975). Basic archeological studies in the south of Urmia lake started with Hassanlu project by Dyson and his team (Muscarella 2006), Dinkha Tepe (Muscarella 1974), Agrab Tepe (Muscarella 1973) and Kord-Lar Tepe (Lippert 1979). Prehistoric sites like Hajji Firuz (Voigt 1983), Dalma (Hamlin 1975), Pizdelli (Dyson & Yong 1960), Goy Tepe (Brown 1951) and Gijlar and Balo were excavated before the Islamic Revolution in Iran. In recent years, Iranian archeologist have conducted many surveys and excavations in this territory like continuance of Hassanlu excavations (Khatib-Shahidi 2006), Qalaichi which is a Manaians site (Kargar 2005), Rabat excavation in the Little Zab basin (Kargar & Binandeh 2009) and (Heydari 2007) and Jolbar Tepe, a Neolithic site near Urmia lake (Razaghi & Fahemi 1996).

Little Zab basin: Stein had visited some of ancient sites in the north of this basin (Stein 1940). Kliess had mentioned one Neolithic site and some Iron Age places in this basin and Kroll mentioned some Iron Age (I) sites in Piranshahr (Kroll 2005: 65-85) and in recent years Tepe Rabat near Sardashat had excavated (Kargar and Binandeh 2009:113-129). As mentioned, most studies are related to proto-history and historical period, and prehistoric studies remain limited.

Methodology

Choosing a method to collect archeological data depends on regional conditions and theoretical- practical objectives of archaeological researches(Alizadeh 2001).

The proposed Zab basin was divided into northern and southern parts and the survey started from the northern and finally ended in the southern part. Characteristically, factors such as its local position, remains and their types, its height from the sea level, environmental possibilities, and neighboring structures were taken into account. In order to record the findings, we, sites were coded with five letters where three letters (Zab) represented Zab River whereas the fourth

and fifth letters were the sites number.

Recognized Works and Objects

Altogether 22 sites could be identified through surveying prehistoric areas around the Little Zab River basin. Artifacts from six sites belonged to Neolithic period and the rest were identified from the Chalcolithic period.

Proximity of Neolithic Sites to Water Resources

Water has been the key to human settlements. The Zab River basin with permanent and seasonal branches as well as water springs has always attracted such settlements. As mentioned, six sites belonging to the Neolithic period have been identified in the proposed area of study. Two are located in the northern part of the basin and four in the southern part. In the center, with more compressed branches, settlements have not been identified. (Zab 42) site is located at the margin of the river and (Zab 47) is close to a tributary, faraway from the river. In the south, (Zab 38) is located in eastern margin and (Zab 31) and (Zab 36) are located near the eastern and western branches relatively at closer distance from Zab River and (Zab39) is located between one of the branches and Zab River.

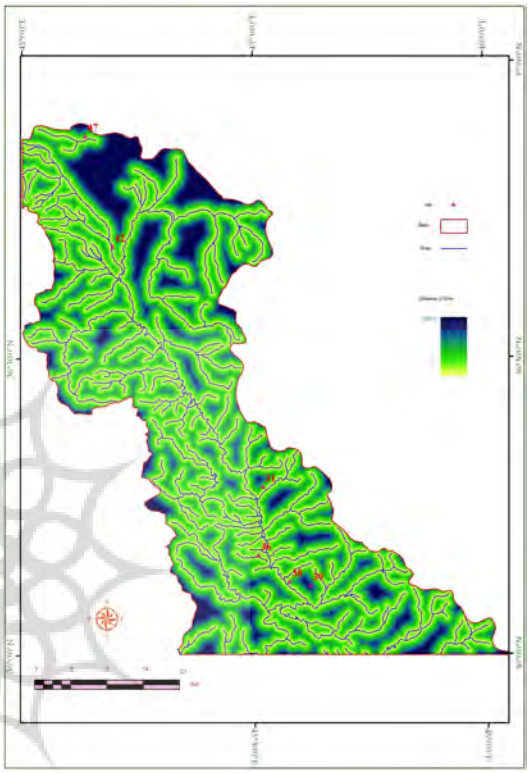

Fig 2 Proximity of Neolithic Sites to Water Resources

Neolithic Sites and Elevation

Except Jaldian Tepe (Zab 47) which is 1500 meters above the sea level, rest of the sites is located at lower altitude. (Zab 42) is located in a small plain of Lajan Mountain; some 1150 meters from the sea level. The southern sites of the Zab basin are located at heights between 800 and 1150 meters. (Zab 36) is located in the lowest parts of the basin between Sardasht and Rabat, near Zab

River. It seems that lowlands of the basin are due to its proximity to the Zab River and its favorable conditions had attracted Neolithic people more. (Zab 47) is the only site located in a high area.

Neolithic Sites and Forest Cover

Forest cover of the Zab basin is divided into two completely distinct parts. The northern section, which includes more of the city of Piranshehr, almost lacks forest cover. The southern part in the city of Sardasht has forest covering, with different density. Jaldian and Lavin site are very far from the forest. (Zab 36) and (Zab31) are located in forest area with low density and (Zab 38) is in the area with an average forest density. (Zab 39) is located at the margin of high density forest.

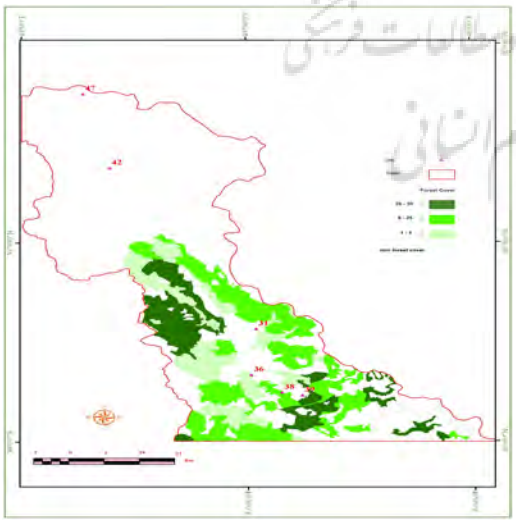

Fig 3 Neolithic Sites and Forest Covers

Proximity of Chalcolithic Sites to Water Resources

As pointed, water is key to the human survival. With some permanent and seasonal multiple branches and high water springs, the Zab River basin had always attracted settlers. About 16 Chalcolithic sites have been identified, 8 of them situated in northern part of the basin, two in the center and six sites in the southern part. In northern part, four sites are located along Brkmran River, which is one of the main branches of the Zab River. It seems that this part with its plains had been the center of attraction during the Chalcolithic period. (Zab 15) and (Zab 17) are located along one of the sub branches with seasonal water, and high water springs. Khri-Qalatan (Zab 10) which is separated from the Zab River with a high rolling hill range on in the southern margin of a riverbed and surrounded by several springs. In the central part of the basin (Zab 30) in the margin of Zab River and (Zab 53) is allocated along one of the branches. In the south basin only (Zab 38) is situated on the margin of Zab and other Chalcolithic sites of this part are located along sub branches. It seems that this part with its plains among mountain had been of much importance

during the Chalcolithic period. (Zab 15) and (Zab 17) are located near sub branches with seasonal water, and beside the high water springs and relatively in a distance far from the River. Khri-Qalatan (Zab 10) which is separated from the Zab River with a high rolling hill range is on the southern margin of a River bed and surrounded by several springs.

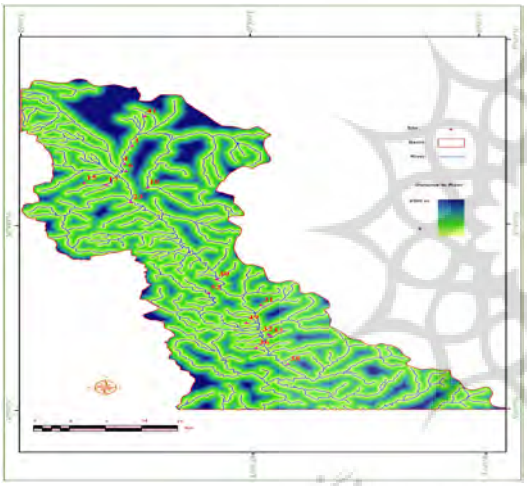

Fig 4 Proximity of Chacolithic Sites to Water Resources

Chalcolithic Sites and Forest Cover

The northern sites are in non-forest areas and principally these lacks the forest cover. Sites (Zab 30) and (Zab 36) with low cover forest area, (Zab 38) with an average cover and (Zab 52) with dense cover. Other sites are located at the margin of the forest. Sites (Zab 4), (Zab 6), (Zab10) and (Zab 23) are located in the high margin with poor forest cover.

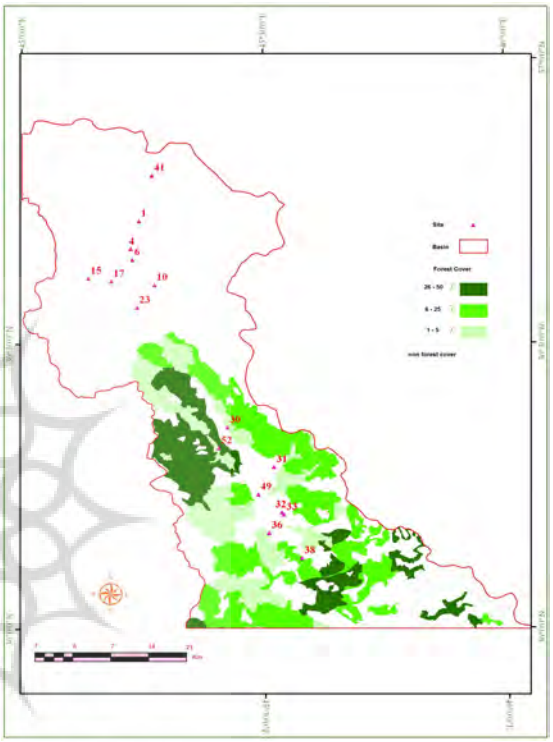

Fig 5 Position of Chalcolithic Sites to Forest Cover

Conclusion

The Zab River basin has been potential for Paleolithic groups. Natural food resources in the forest such as fruit trees, wild animals that continue to exist in these forests and water-full valleys all could be ideal environment for hunter and food collector human. Also, several caves with good condition was identified, but unfortunately

despite many attempts in foot and around the cave, stone artifacts has not been found, and this can be due to high sedimentation into the cave. Noticeably no open air site has been identified.

Neolithic Settlements: Based on surface data, the oldest period identified in this study is related to the Neolithic period. As a result of survey at six sites, pottery works related to the Neolithic period were identified. Neolithic sites are located in the north and south of the basin. Now more Neolithic settlements are situated within the existing village. Sherds of pottery which are collected from surface levels and belong to Neolithic period are in two simple and painted groups with red color tends to pale buff with a polished surface and pale and dense mud cover with vegetative grit, handmade and mostly half-baked. These potteries decorated with geometrical designs that could be compared with Hajji-Firuz pottery. Dyson and Voigt knew Hajji-Firuz as contemporary to Hasanlu and representative of permanent settlement in village; also they suggest its oldest settlement period to the later sixth millennium B.C. and related it to late Neolithic (Voigt 1983). Hamlin knows Hajji-Firuz as representative and in equivalent horizon with Hasanlu X layer (Hamlin 1975:120). Based on the surface findings in Zab basin, no place during the early Neolithic period has been inhabited and apparently like Sulduz plain the oldest rural settlement is related to the late Neolithic period. Although it seems that in terms of natural conditions, it is different from the Sulduz plain which contains Hajji-Firuz Tepe. The Sulduz (late Neolithic) had been a marshy plain. But it seem that unlike the Zab basin there had been a favorable condition for establishment before late Neolithic. However, lack of site before the late Neolithic is considerable. It seems that marginal areas of forest and mountain had attracted people to those regions during Neolithic period. It is only (Zab 47) which is in a poor high area but other sites are not located in high area. Neolithic peoples of Zab basin could be classified into rancher and farmer groups. Jaldian and Lavin sites according to their favorable environment seem to be propitious for ranching and agriculture. Some obsidian blade has been found at this site (Lavin) that probably like other Neolithic sites in North-West Iran, the place of supplying them had been the Anatolian. In Chalcolithic period, number of

settlements reaches to16. In north of the basin, sites (Zab 30) and (Zab 36) are located in low cover forest, (Zab 38) in forest area with the average cover and (Zab 52) in area with compressed cover, and other sites are on the forest margins with low cover. Sites (Zab 4), (Zab 6), (Zab 10) and (Zab 23) are located on the margin of poor quality pasture and other sites in this period are in non-pasture areas. In this period, we are faced with increasing population, the need for more space and access to resources has caused dispersion of establishments. This sites in north of the basin in small valleys and plains between the mountain, are more in linear shape and sub-branches of Zab are more considered and in addition to animal-husbandry, they developed agriculture as well. The basin southern sites according to its natural condition are situated in margin of forest and they are almost as a colony. This shows that forest resources cannot be supplier of major food needed in society. Most of these sites had Dalma potteries which are hand-made with inadequate cooking and vegetative blended which are often in simple and applied forms with thick mud glaze. There vast and abnormal geographical dispersion in the west of Iran had appropriate importance. Solecki knew nomads the factor of these potteries dispersion (Hole 2004: 101), that is of course considerable. Hamlin refers to wider connections and name Mesopotamia, Kermanshah and adjacent regions (Hamlin 1975:110-120). In any case, existence of rich Chalcolithic sites in Dalma period showed its relation with suburbs and Mesopotamia. Halaf Culture had considerable impression and influence on its adjacent and contemporary cultures.

Halaf culture impressed local and weaker cultures. In East of Anatolia especially in Telki, in Mesopotamia and adjacent regions there are evidences of the Halaf culture. But in despite of these areas, there isn't evidence of the Halaf culture in the Sulduz plain (Dyson & Young 1960: 19-28). Based on the surface findings, it is also not evident in the Zab basin. When this subject became more considerable that in the later periods we seen impression of cultures in this basin that in the Sulduz plain and south of the Urmia Lake basin it is not seen. Influence of the Pisdeli culture at least in the northern district of Zab basin is evident. Up to now, in North West of Iran, evidences of the Ubaid cultural communication have been reported in

Pisdeli – the period that belongs to about 3200 - 3900 B.C and is contemporary to Hasanlu VIII.

Expansion of the Late Chalcolithic culture and its similarity at Goy Tepe M, Yanik, Gawra XI-IX, Arsalan Tepe VII and Tal-Barak is sensible (Helwing, 2005:11-23). Although, many of the decorative elements can be seen in different regions but with a local authenticity.

At a little distance from Pisdeli Tepe, near Urmia M trench, M and N phases at Goy Tepe are newer chronologically (Helwing 2005: 11-23). Continued relation with Ubaid in 3000 B.C is visible in M layer of Goy Tepe. Also, similar gray pottery obtained at the late Chalcolithic sites in northern Zagros. Similar bowls and pitchers in Arsalan Tepe and also in Goy Tepe M are significant and visible. In the Chalcolithic layers of Arsalan Tepe (layer VII); there are potteries comparable to Goy Tepe, Yanik Tepe (Helwing 2005: 11-23) and Telki Tepe, which approximately its second layer (II layer) is related to late Chalcolithic.

Another considerable case is identifying the Uruk type pottery in the three southern sites.

Site in the north basin, which doesn't observe this kind of potteries at elevated Hamedan region, has not reported. Potteries called beveled-rim bowl includes considerable number and based on their finding, places were proposed (Abdi 1999; Goulder 2010).

Considering these potteries belong to the late Uruk period i.e. later 4^{th} millennium B.C, we see social complexities accelerating in the Middle East. In some areas, this bowls indicates the beginning urbanization (Majedzadeh 1989). But in the Zab basin, sites with these kinds of pottery was not a big vast so that this could no be signs of urbanization and perhaps these bowls are mostly signs of relation with adjacent areas.

Chalcolithic cultures in northwest Iran in the late fourth millennium B.C have been abandoned (Talaei 2002, Kroll 2004: 115-121). Urmia Lake basin after late Chalcolithic is occupied by different beyond Caucasus gray monochrome pottery. Sometimes this type of pottery Called as Yanik culture. Yanik culture in the Godin Tepe in western Iran is placed immediately on the Uruk culture which perhaps be due to Yanik expansion and

pushing back (GodinV) to merchants for controlling trade transactions. Although the Yanik culture, in many parts of North-West Iran, had prominent presence, but apparently its presence in the Sulduz plain was insignificant while was almost absent in the Zab basin. At that point of time, the Zab basin had cultural-commercial ties with Mesopotamia more than the northwest Iran. It seems that there are evidences of all these cultures in the Zob basin and chronologically it can fill existence gap in the north west of Iran or at least south of Urmia Lake basin. It should be noted that, some cases should not be considered completely only due to the lack of culture (for example Uruk culture) rather due to lack of researches in these areas.

At least, at one site (Lavin Tepe), Dalma, Pisdeli and Uruk pottery (beveled-rim bowl) have been traced out together. Now, if based on prehistoric chronology of the Sulduz plain and the south of Urmia Lake basin, we could consider 4000-5000 B.C for the Dalma culture (Hamlin 1975: 111-128), 3200-3900 B.C. for Pisdeli (Doyson, Young 1960: 19-28) and thus, the Uruk culture will certainly come after 3100 B.C.

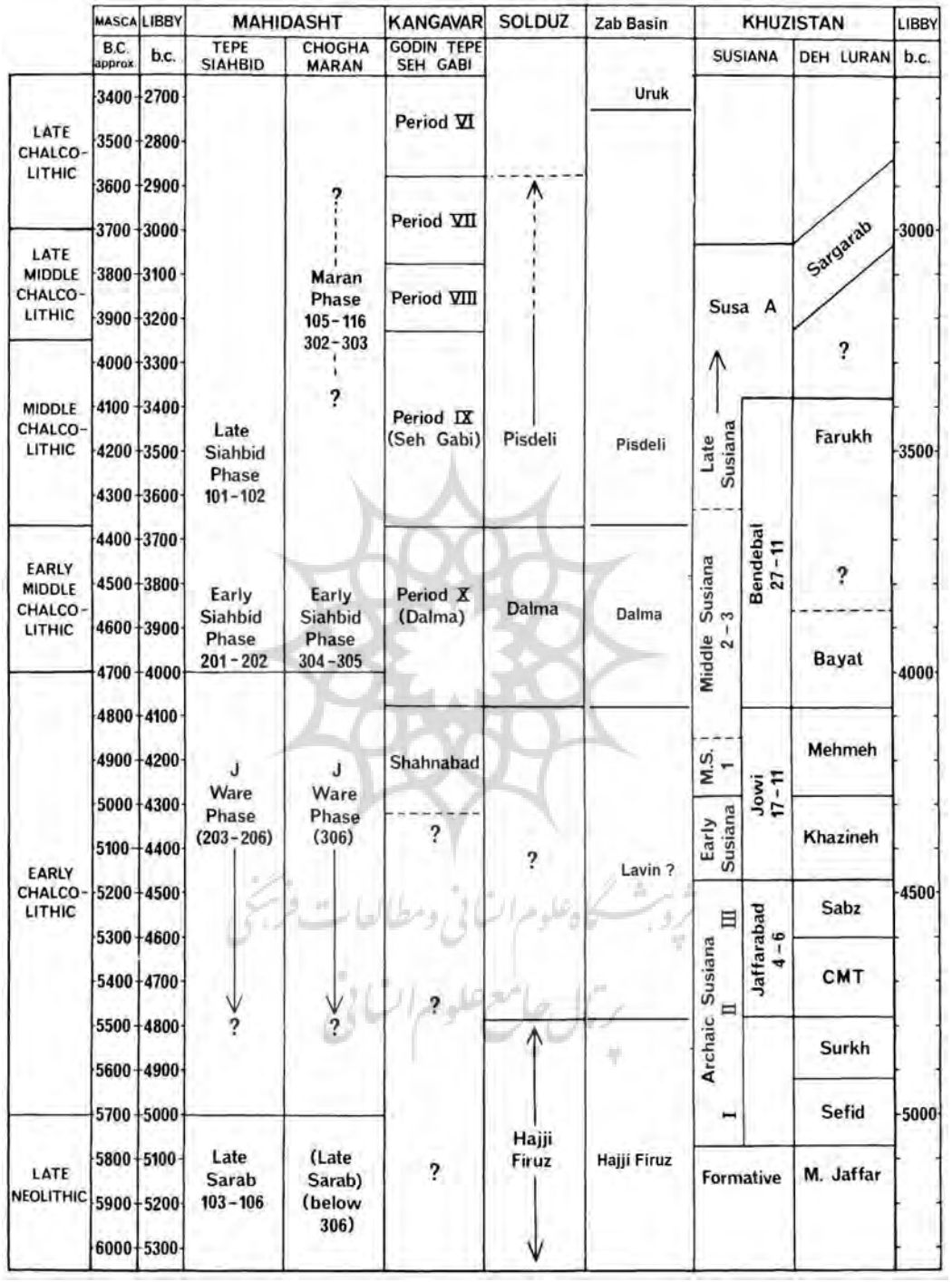

Fig 6 Comparative Chronology of Zab Basin and Adjacent Regions (Henrickson, 1985a, Fig. 21, with Some Revisions and Modifications)

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پژوهش باستان شناسی جدید در شمال غرب ایران: استقرارهای پیش از تاریخ حوضه رودخانه زاب کوچک

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تاریخ دریافت: ۸۸/۲/۱۲ تاریخ پذیرش:۹۰/۱/۲۸

رودخانه زاب کوچک در شمال غرب ایران از ارتفاعات شمال غربی پیرانشهر سرچشمه گرفته و از شمال غرب به طرف جنوب شرق وسپس به سمت غرب جاری شده و در امتداد کوههای مرزی جریان می یابد،ودر نهایت از معبر آلان وارد خاک عراق می شود. باتوجه به اهمیت این رودخانه در شکل گیری استقرارهای مختلف واشاره متون بین النهرینی تا به حال این منطقه به صورت علمی مورد بررسی قرار نگرفته است.

حوضه این رودخانه دارای محوطه های باستانی فراوانی است و با توجه به نمونه¬های سفالی از دوره پیش از تاریخ تا کنون استقراری بوده است. بخش پست حوضه با توجه به نزدیکی به رودخانه زاب و شرایط مساعد آن بیشتر مورد علاقه مردمان عصر نوسنگی منطقه بوده است. در دوره مس سنگی با افزایش جمعیت مواجه هستیم، نیاز به فضای بیشتر و .. موجب پراکندگی استقرارها شده است. این محوطه‌ها در شمال حوضه در دره و دشت کوچک میان کوهی بیشتر به شکل خطی هستند و شاخه‌های فرعی زاب بیشتر مورد توجه هستند.

واژگان کلیدی: شمال غرب ایران، رودخانه زاب کوچک،بررسی باستان شناسی، نوسنگی، مس و سنگ

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