New evidence of the Neolithic period in West Central Zagros: the Sarfirouzabad-Mahidasht Region, Iran

Kamal-Aldin Niknami and Meisam Nikzad
Department of Archaeology, Tehran University, IR
Kniknami@ut.ac.ir; Meisam_Nikzad@yahoo.com

ABSTRACT – Because the eastern region of the Mahidasht Valley in the Sarfirouzabad region, to the south-east of Kermanshah Province, had not been studied by archaeologists, this area of central Zagros was surveyed in 2009 by a team from Tehran University. We identified 17 sites dating to the Neolithic period. The finds indicate that the formation of sedentary societies began in the pre-pottery Neolithic in this area and was followed by a considerable increase in the number of sites during the pottery Neolithic period. Preliminary analyses of these sites will be presented in the present article.

KEY WORDS – archaeological survey; Neolithic settlement; Sarfirouzabad; central Zagros

Introduction

As a result of the increasing number of archaeological studies in the 1960s and 1970s, and following Robert J. Braidwood’s excavations (Braidwood 1960a; 1960b; 1961; Braidwood et. al. 1961), the central Zagros area of Iran was identified as a key region with great potential for studying the process of Neolithisation in the Near East. After Braidwood, other areas of central Zagros, including Hulailan (Meldgard et al. 1963; Mortensen 1972; 1974), Luqestan (Goff 1971; Young 1966; Hole, Flannery 1967; Pullar 1990), Mahidasht (Levine 1974; Levine, McDonald 1977), the Kermanshah suburbs (Smith 1976; 1990; Smith, Mortensen 1980), and Kangavar (Young 1969; 1975) were also investigated and excavated by archaeologists from different countries; this period of research is called the Golden Age (Wilkinson 2000). With the Islamic revolution in Iran, Neolithic studies came to a halt. Although laboratory and field studies have recently commenced (Zeder 2005; Matthews et al. 2010; Darabi et al. 2011), the lack of research caused a change in the views of researchers about the status of studies of central Zagros in the process of the Near Eastern Neolithisation (Hole 1999). One of the complicating factors in researching the Neolithic in this region, compared to areas like the Levant, is the inadequacy of identified and excavated sites, which has led to the assumption that some parts of the region were abandoned and deserted (McDonald 1979; Hole 1987).

Therefore, the identification of a considerable number of Neolithic sites in the Sarfirouzabad area in the 2009 survey will greatly enhance our knowledge about central Zagros in the Neolithic period.

Meanwhile, new excavations and recent studies point to the significance of the Zagros area and its valleys
as one of the earliest focuses of plants and animals domestication (Matthews et al. 2010; Nikzad 2011; Darabi et al. 2011).

Geographical setting

Sarfirouzabad is located 30 km west-southwest of Kermanshah and measures 971 km² in area (Fig. 1). Geographically, Sarfirouzabad is the natural continuation of the Mahidasht plain, which is located to the south-southeast; the southern part is bounded by the Saimareh River and Luristan Province. Sarfirouzabad is a large compound syncline surrounded by two mountainous southwestern and northeastern chains. The northeastern chain includes Mts. Khowra-tav and Sefid, while the southwestern mountains are lower and include the Nesar, Kaleh Mol, and Lal-abad mountains. Another natural morphological feature of the plain is the Mereg River, which is a tributary of Iran’s third long river, the Karkheh. The region is considered to have a rich environment and has abundant water resources, chert outcrops, and abundant forests and pasture.

Archaeological studies in Sarfirouzabad

Despite the fact that Sarfirouzabad shares a border with Mahidasht, its archaeological research is less well-known. Until the 2009 survey, only two expeditions had been able to conduct a limited survey in the Sarfirouzabad area. During the first, between 1963–1967 when Clare Goff was investigating Pishkoh district in Luristan, she was able to visit Sarfirouzabad (south-east of Mahidasht) and recorded a few sites (Goff 1971). But she never published data on the number or chronology of the sites she identified.

Later, during the Mahidasht project, Louise Levine was able to visit some parts of the Sarfirouzabad area (Levine 1974; 1975; Levine, McDonald 1977), although Levine never referred to any recognised sites in the area. However, Mary A. McDonald mentioned in her PhD thesis that there were three sites with pottery Neolithic remains in Sarfirouzabad (McDonald 1979.552).

The 2009 survey

In 2009 a team supervised by Kamal-Aldin Niknami conducted an intensive field survey of the Sarfirouzabad area (Fig. 2). They recorded a total of 246 archaeological sites with Neolithic remains, including 194 with pottery. The sites were distributed over the whole of the plain, with a higher concentration in the southern part. The majority of sites were located in the southern part of the plain, which is the most fertile and well-watered area. The distribution of sites is shown in Fig. 2.

Fig. 1. Map of the Sarfirouzabad area.

Fig. 2. Map of the distribution of Neolithic sites on the Sarfirouzabad plain.
New evidence of the Neolithic period in West Central Zagros: the Sarfirouzabad-Mahidasht Region, Iran

The survey, which consisted solely of field-walking, covered all areas suitable for settlement, including agricultural flatlands, the terraces of the Mereg River and the hillocks on the border of the plain. During the survey, 332 sites from the Palaeolithic to late the Islamic period were identified, including 17 settlements with remains attributable to the Neolithic period (Fig 2).

Neolithic settlements

According to the surface finds study, three sites – Chia chakhmagho (SF.5), Banbavani 1 (SF.166) and Chelleh Olia 1 (SF.286) – yielded remains from the pre-pottery Neolithic. The significance of these sites lies in the fact that sites of this age have never been reported from previous research at Mahidasht (Braidwood 1960a; 1960b; 1961; Levine 1974; 1975). Brookes et al. believe that the absence of such sites was due to geological phenomena and extreme sedimentation in Mahidasht, which perhaps buried the early sites (Brookes et al. 1982). However, Phillip E. L. Smith and Cuyler T. Young (1983) note that settlements of this age should not be sought on wide, open plains, but in narrow and open river valleys, since such valleys are considered attractive and significant to early Neolithic societies in terms of providing food security for both people and livestock. They also mention that river valleys provided hunter-gatherer societies with a number of ecological niches and special food resources during particular seasons of the year.

The proximity of food resources such as game animals, grains, acorn, and other nuts and fruits, and also easy access to springs and the food security required for wild goat herds throughout the year were probably among the factors in the border valleys that attracted the first sedentary societies on the Sarfirouzabad plain, or in other words, in Mahidasht. Pre-pottery Neolithic sites are located at 1509m a.s.l., and all three sites are located at a distance of 250m from reliable water sources; the sites cover less than one hectare each and are located in places which benefit from various niches. Surface finds from these sites include a bullet-shape core, a backed and sided blade, a sickle blade, micro-blades, a scraper and end scraper, flakes, a blade core and flake core, a discoidal flake core and an amorphous flake core (Figs. 3 and 4).

However, Neolithic pottery remains were collected from 15 sites; 14 of these were settlements. In fact, the only site which had both pre-pottery and pottery Neolithic remains was the Chia chakhmagho mound (SF 015). These settlements are located from 1476m a.s.l. (Ghomesh Dar Amroo S.F 52) to 1647m a.s.l. (Dom-e khor khor S.F 319), of which 4 are located in the northern basin and 11 in the southern basin of the Mereg.

Most of the Neolithic settlements were formed on the first hillock of the southern edge. The water sour-
ces of most settlements (10) consisted of streams and seasonal drainages of the Mereg, most of which are located at distances less than 250m from the sites. The sites of this period include settlements and seasonal sites. Some settlements were probably used seasonally and for purposes such as hunting, fishing, and grazing etc. given the lack of cultural deposits, distance to water, and proximity to hillocks and pastures, and the scarcity and simplicity of the pottery finds. In conclusion, in the pottery Neolithic of Sarfirouzabad plain settlements with areas of approximately 1–2ha were concentrated in the southern basin of the Mereg River and the north side of Mt. Nesar. The reason for the centralisation of these settlements in the southern basin must be sought in the environmental richness of this area. Factors such as abundant drainages of the Mereg outcrop chert and flatter lands and forest are among the attractions and factors in the formation of pottery settlements in the southern basin of the plain. Most surface settlements on these sites yielded coarse, plain, buff, hand-made, chaff tempered and basic forms of pottery (Fig. 6).

Only a small quantity of painted pottery distinctive of the central Zagros Neolithic – relating to Sarab linear and geometric pottery – was obtained from Tape Sarab Sarfirouzabad (SF095) (Fig. 5).

Conclusion
The results of the survey in 2009 showed that Neolithic sites are merely identified by field-walking surveys, since these settlements are located in areas remote from accessible paths and modern villages, and the absence or scarcity of sites identified is not due to their actual absence, but to approaches taken in field surveys. According to the surface finds and settlement patterns, environmental variables play an important role in locating settlements, as we expected. Settlement patterns show that in the pre-pottery Neolithic period hunting was still very important, while agriculture was probably not the basis of subsistence.

Generally, pottery Neolithic settlements in Sarfirouzabad were based on animal husbandry, hunting, and dry farming and were very dependent on natural resources near rivers and mountainsides; in regard to the location and dispersal of sites and surface finds we can observe the following characteristics: (i) the presence of permanent and semi-permanent settlements with a mixed economy with the evident prevalence of livestock and husbandry; (ii) an increasing tendency of patterning in adopting sedentism; (iii) sufficient knowledge from environmental variables; (iv) relative superiority of a herding economy.

Acknowledgements
Appreciation is offered to the Iran National Science Foundation (INSF) for a grant to collect site data which were used for this research. The authors would like to thanks all the members of the survey team for their kindly cooperation and A. Javanmardzadeh and S. Alibeigi for providing the map of the region and comments. Grateful thanks to the Cultural Heritage Organization of Kermanshah that provided access to site locations.
References


