

Qal'at Surmagh: A Pre-Pottery Neolithic Site from Neyriz Plain, Eastern Fars, Iran

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Introduction

The Fertile Crescent is one of the world's major zones for the formation of food production (Zeder 2011; Özdoğan 2014). From here, subsistence economy based on agriculture spread from the eastern wing of the Fertile Crescent to Fars region, from Fars to Kerman region and Mehrgarh in Pakistan and ultimately to South Asia (Weeks 2013; Gangal *et al.* 2014). The eastern Fars region, located between the Kur River Basin in the southern Zagros and the southeastern parts of Iran, represents a gap of knowledge in the regional dispersal of the Neolithic: Until recent times, no Neolithic sites have been reported from this region. Despite the presence of Pre-Pottery Neolithic sites such as Tepe Rahmatabad in the vicinity of Marvdasht (Azizi *et al.* 2013), the TB130 and TB75 caves in the Bolaghi valley (Tsuneki 2013), some Proto-Neolithic sites in Arsanjan (Ikeda 1979; Tsuneki 2013), and Pre-Pottery Neolithic sites such as Tell Atashi near Bam (Garazhian 2016),

the absence of Neolithic sites in the eastern region of Fars would seem to be unusual.

In terms of cultural-geography, Fars province includes the southern parts of Zagros Mountains. In the decades before the 1979 Islamic Revolution, no Pre-Pottery Neolithic sites were reported for the Kur River Basin. In other words, there appeared to be an occupational gap after the end of the Epipalaeolithic period (Sumner 1990). During the past decade, however, evidence of the Pre-Pottery Neolithic has been reported from excavated sites such as Rahmatabad (Azizi *et al.* 2013) and the caves of TB130 and TB75 in the Bolaghi valley (Tsuneki 2013) to the west, and Tell Atashi of Darestān Bam to the east (Garazhian 2016). Considering the wide cultural scope of Fars and the various climatic and environmental conditions, major studies in Neolithic archaeology have been limited to the northern parts of this area, such as the Kur River Basin. Recently, during survey of the Fasa and Jahrom areas, there is evidence from two

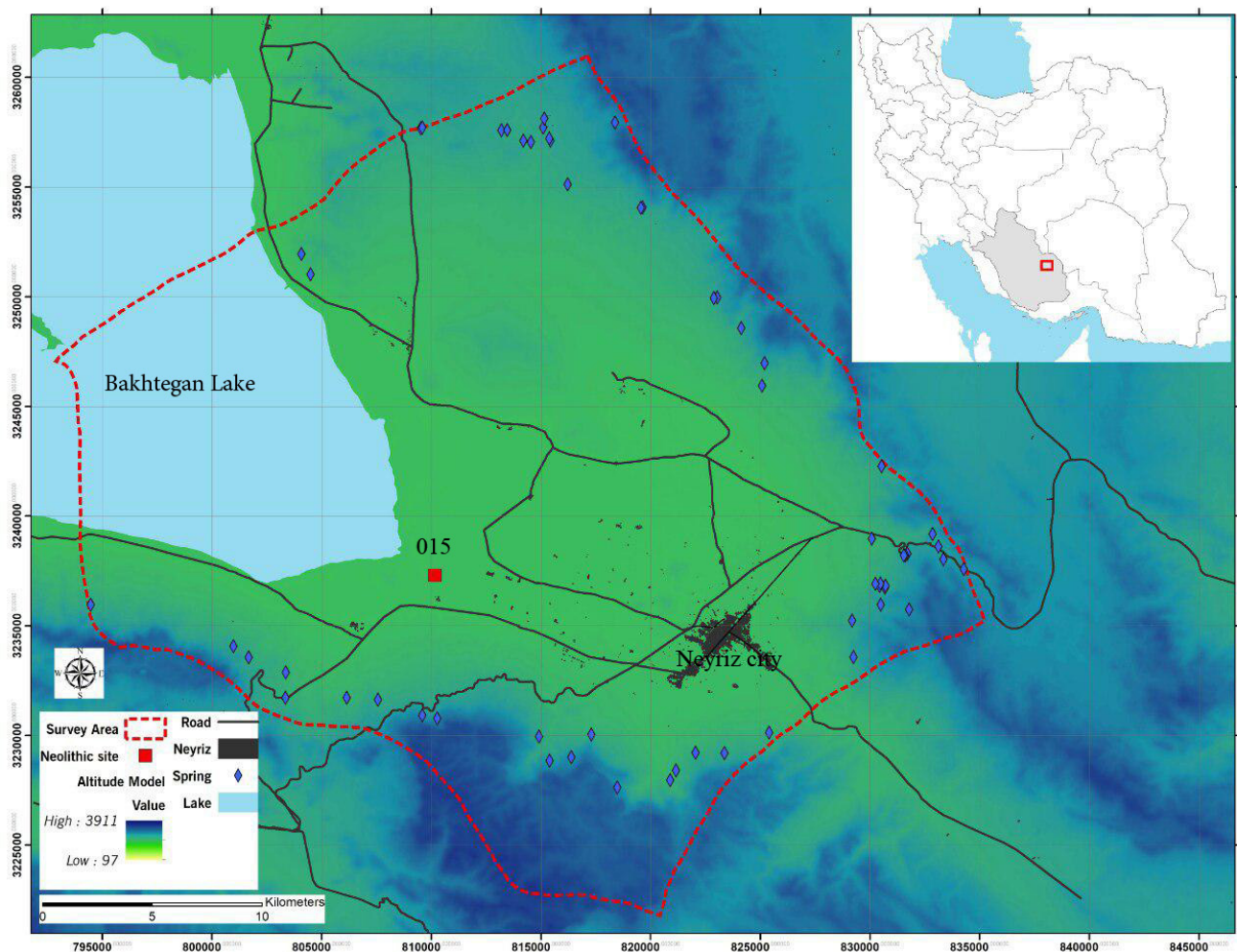


Fig. 1 Map of Neyriz Plain. (Map: H. Moradi)



Fig. 2 General view of Neyriz Plain. (Photo: H. Emadi)

open air sites of the Pre-Pottery Neolithic (Mansori 2011, 2016). Furthermore, during a survey launched in spring 2017 in the Neyriz district of Fars, located between Fars and Kerman, a new Pre-Pottery Neolithic site was identified. The present article is a brief note about this site.

Geographical Setting of Neyriz Plain

The survey area includes the Rostagh District of Neyriz County in eastern Fars province, which includes the Neyriz Plain and the surrounding mountains; the city of Neyriz is located here (Fig. 1). Neyriz is a “sedimentary plain” with a gentle eastern-western slope surrounded by mountains on three sides (north, east and south), and limited to the west by Lake Bakhtegan. The study area includes parts of the plain and mountains (Fig. 2). The climate is dry and semi-arid. The Neyriz has no permanent rivers, although there is a seasonal river in the east. A *qanat* is the main source of water supply to the area. In addition, some parts of the plain are rocky without agricultural potential.

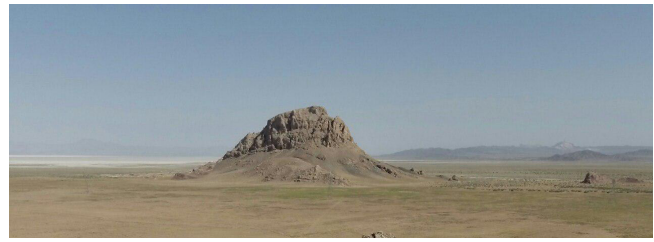


Fig. 3 General view of Qal'at Surmagh. (Photo: M. Aali Pur)

The 2017 Survey

In order to provide an archaeological map, the central part of the Neyriz was surveyed by one of the authors. The survey was conducted by walking in areas suitable for settlement, and carried out by vehicle in the rocky areas. The survey identified 110 sites, dating from the Palaeolithic through to the late Islamic period. Based on the results of the survey, it seems the area was occupied in the Islamic period due to the development of *qanat* technology, so that most identified sites belong to that era. Among them, one Pre-Pottery Neolithic site can be recorded.

The Qal'at Surmagh

Qal'at Hussein-e Abad Surmagh is a single ridge about 100 meters above the surrounding land in the southwestern part of Neyriz Plain, on the edge of Lake Bakhtegan (Figs. 1 and 3). This natural ridge runs east-west, and is about 1200 meters long and 680 meters wide. Due to mining activity, the western part of Qal'at Surmagh is damaged, and mining operations are still ongoing. The land surrounding Qal'at Surmagh rep-



Fig. 4 Aerial photo of Qal'at Surmagh and the location of scatters A and B. (Photo: H. Emadi)



Fig. 5 A view of Scatter A. (Photo: H. Emadi)

resents sedimentary soil environments which appear to have been underwater during the rise of the lake. In the survey of Qal'at Surmagh, four sites of different periods were identified, consisting of two scatters of stone tools, a vast Islamic period site and a historical castle.

The two scatters of stone tools are located on: A) the southwest slope, and B) on the eastern side of the ridge (Fig. 4). Scatter A is 65 meters long and 48 meters wide (Fig. 5). This scatter is fairly even with a slight north-south slope. Its surface has been severely damaged by mining activities and the use of bulldozers *etc.* As a result, the stone artifacts in Scatter A were dispersed; more artifacts were observed in soil dumps. The assemblage of Scatter A yielded 31 chipped stones of chert and tuff in light brown, red, green and gray colors, representing medium to high qualities. The assemblage in-

cludes 7 cores, 3 blades, 3 micro-blades, 10 flakes and 6 debris (Figs. 6-7). The cores include 3 pieces with amorphous removals and 4 pieces with unidirectional micro-blade removals. The largest flake core's dimensions is 39 x 29 x 21 mm. All irregular flake cores have no cortex and show no micro-blade removals. The micro-blade cores include 4 pieces, of which the largest is a bullet core with dimensions of 31 mm in length and 15 mm diameter. Pressure technique is not seen in the core knapping. Among the flakes, there are one notched (Fig. 6: 16) and a platform preparation flake.

Scatter B is a small scatter of lithics located on the ridge's southeast side. This scatter is sloping east-west, is limited by sedimentary deposits on its east, and measures 200 x 180 m. In total, 22 lithic artifacts were collected from Scatter B. These are made from light brown, brown, red and gray, medium to high quality cherts. The assemblage includes 7 micro-blades, 5 cores, 2 borers and 8 flakes (Figs. 7-8). The largest core is 31 mm long, 23 mm wide and 19 mm thick; all removals represent those of micro-blades. The largest borer is 29 x 19 x 5 mm; all borers of the assemblage are made on flakes.

Conclusions

Given the presence of unidirectional micro-blade cores, blades and micro-blades in the assemblage, Qal'at Surmagh can be attributed to the Pre-Pottery Neolithic. The surface scatters seem to have no con-

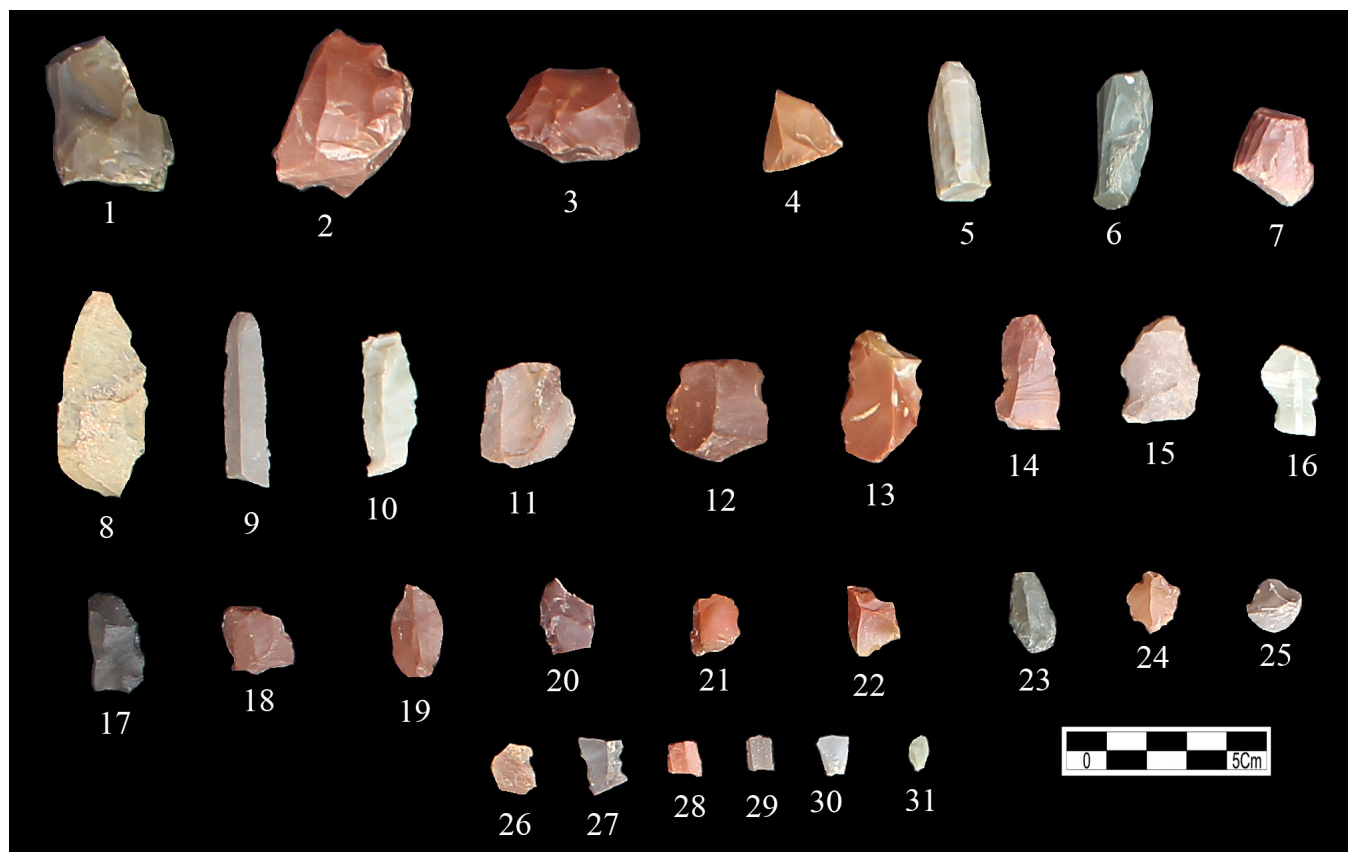


Fig. 6 Lithic artifacts of Scatter A. (Photo: H. Emadi)

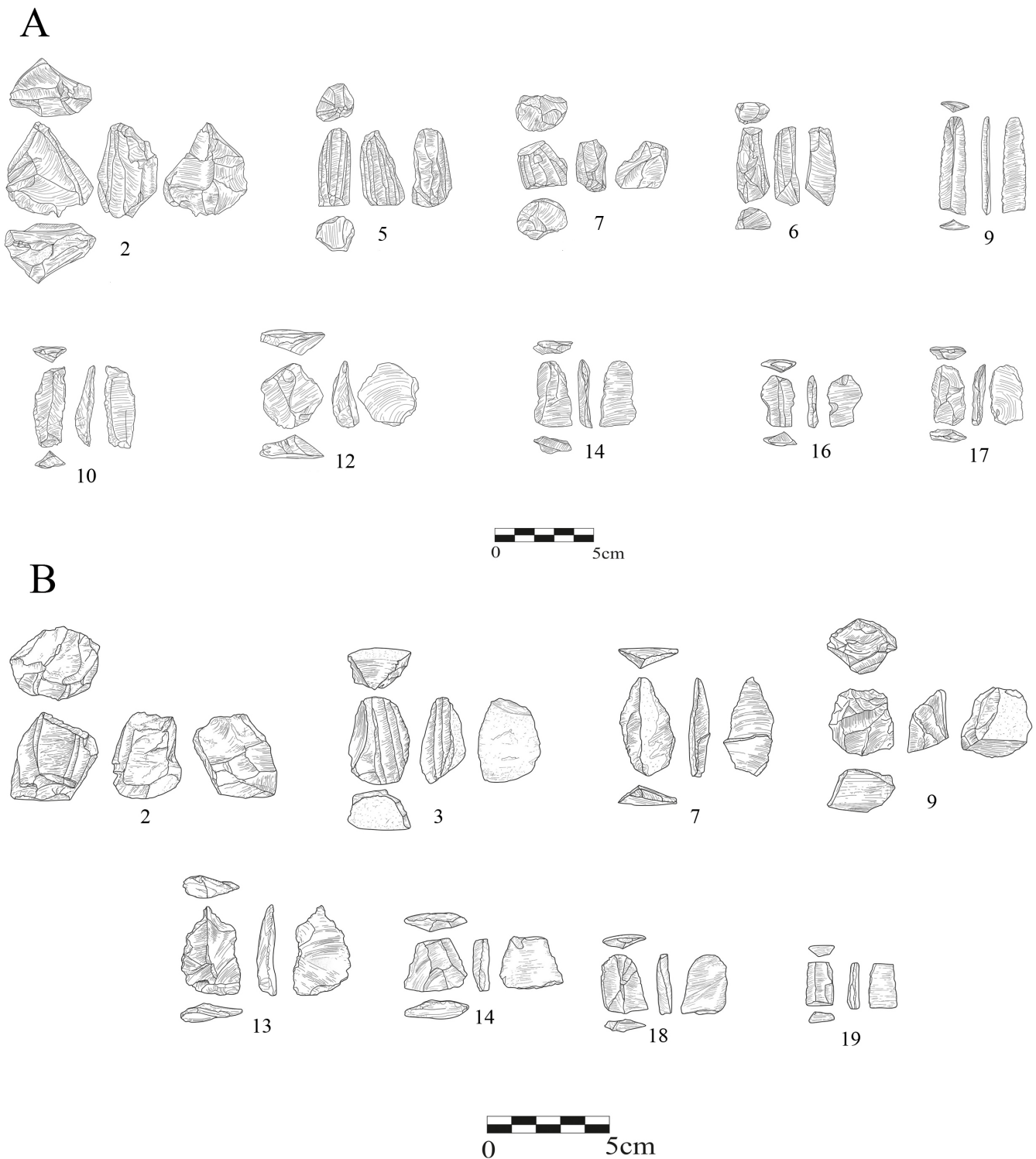


Fig. 7 Sketch of lithic artifacts of Scatters A and B. (Drawing: E. Mohamadi)

tact to cultural deposits underneath. Given their location near the Bakhteghan Lake, they might represent ephemeral-temporal sites with a special function rather than representing base camp sites. The lithic assemblages are comparable to the Pre-Pottery Neolithic assemblage of Tepe Rahmatabd (Nishiaki *et al.* 2013), meaning that the site can be dated to the late eighth and early seventh millennium BCE.

The identification of Qal'at Surmagh and two newly

discovered sites in Fasa and Jahrom show that Neolithic communities were present in the eastern Fars. With continuing systematic studies it will be possible to shed more and new light on the processes of the Neolithic transitions in the Fars and in the southeastern regions of Iran: The paucity of (Pre-Pottery) Neolithic sites in Fars and the identification of new such sites is of challenging and increasing importance for reassessing the Neolithic processes in the southeastern of Iran.



Fig. 8 Lithic artifacts of Scatter B. (Photo: H. Emadi)

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