

# Exploring the Prehistoric and Historic Sites in Joharin Village and its Significance in Demonstrating the Settlement Patterns in the Southern District of the Qazvin Plain

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**Abstract:** Due to its great significance and numerous pre-historic sites, the southern district of the Qazvin Plain has been at the foreground of various explorations and excavations. However, the questions and uncertainties generated by previous findings and the settlement patterns of this site during the Bronze and Iron ages prompted the authors to review it. In doing so, a number of sites belonging to the Bronze and Iron ages were identified, which may be helpful in demonstrating the settlement patterns of the Plain. Introducing Yass Tepe in Joharin village, this article aimed at showing the significance of this site during the Bronze and Iron ages and illustrating the settlement patterns in the southern district of the Qazvin Plain in the specified periods. The explorations of Yass Tepe and its magnitude revealed that the excavations were not sufficiently extensive and that, despite previous observations, there are a number of sites belonging to the Bronze Age in this region. In addition, explorations in this site proved to be significant in providing an understanding of the settlement patterns.

**Keywords:** The Qazvin Plain, Bronze Age, Iron Age, Settlement patterns, Yass Tepe, Joharin village.

## Introduction

Due to its climatic conditions, the Qazvin Plain has always been an attractive settlement since prehistoric times. The southern district of this plain has been subject to greater attention and explorations resulting in numerous papers published in this regard. However, such explorations have undergone little scrutiny, leading to cultural generalizations about this region during specific periods of time. The Bronze Age and the transition from the Iron Age to the historical time are regarded as periods associated with such cultural generalizations based on previous explorations about which some observations have been made. Accordingly, the southern district of the Qazvin Plain was studied and reviewed, resulting in occasionally conflicting conclusions to those reached previously. The findings pointed to major sites belonging to the Bronze Age with great significance in demonstrating the Bronze Age settlements of the southern district of the Qazvin Plain and the Central Plateau. Yass Tepe in Joharin village was one of these sites, which will be studied in this paper.

## Geographical area

The Qazvin Province covers 15600 km<sup>2</sup> between 48°45' to 50°45'E and 35°27' to 36°45'N. The province is bounded to the north by Mazandaran and Gilan, to the west by Zanjan, to the south by Markazi and Hamedan, and to the east by Alborz Provinces. It is the 28<sup>th</sup> province of Iran in terms of area (Bakhtiari 2006: 144). Buin Zahra is located in the southern part of this province at 35°25' to 36°5'N and 48°55' to 50°13'E (Fig. 1).

The city of Buin Zahra is located on the natural continuum of the Qazvin Plain in the east of the province and covers 2323 km<sup>2</sup>, about 14.75 percent of the province

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Fig. 1: the map of Qazvin province and the location of Buin Zahra town.

area. A part of this area includes parts of two rural districts, Basharyat-e-Sharqi and Basharyat-e-Gharbi, in Abyek County, and the other part is situated in Buin Zahra, including Zahray-ye Bala and Zahray-ye Pain rural districts and Sagzabad. Buin Zahra and Sagzabad are the two cities in this region with a total population of 21.3 thousand people, approximately 2.75% of the urban population of the Qazvin Province and the rural population is 33.5 thousand people, about 9.17% of the rural population of the province. The city center is 55 km away from the provincial capital and 130 km away from Tehran (Mollasalehi 2007).

This city is the juncture of Qazvin-Saveh and Karaj-Hamedan roadways and consists of four districts: Dashtabi, Ramand, Shal, and Markazi. Mah, Raz, katabatic and anabatic winds are the main winds of this region. Mah winds blow in the north and northwest of the region strongly, bringing the cool-humid atmosphere of the Caspian Sea to the Qazvin Plain (Fazeli Nashli 2006:21).

The water resources in Buin Zahra are surface water and groundwater. Khar Rud, Avaj Rud and Kalenj Chay are the major rivers in the city of Buin Zahra.

### The History of Excavations in the Southern part of the Qazvin Plain

The history of archaeological excavations in Buin Zahra dates back to the late 1940s when a Belgian-Japanese group carried out the first excavations in Sagzabad (Fazeli Nashli *et al.* 2011: 139). Later, Mahani, the head of the Department of Arts and Culture in Qazvin, was involved in a number of explorations in Seqz-Abad Tepe in 1968 (Azizi Kharanaghi *et al.* 2010: 23). Then, the University of Tehran conducted regular studies on the site from July 1970 to 1978. After a long hiatus, the excavations were resumed in the region and continue to be carried out to date.

The periodic reports and the discovered artifacts at Sagzabad as well as its surrounding areas brought this region to the center of attention and resulted in more explorations and excavations followed by the introduction of prehistoric ages related to this region. Among the studies conducted in the Buin Zahra region are the study of the Mohammad Abad site by Sobuti (1993), the archeological study of the Qazvin Plain by Fazeli Nashli (2003), the archeological study of Avaj and Buin Zahra by Mollasalehi (2004), the study of the ancient mountainous region of the south of Qazvin Plain, Buin Zahra (Mollasalehi 2007), the excavations and explorations of Sagzabad Tepe by Niknami (2008, 2009), speculations and stratigraphic evaluations of Tepe Zagheh by University of Tehran's Institute of Archaeology (2001), the speculations in Arasanj village by Azadi (2006), reports and articles on the gradual evolution of economic life in the Qazvin Plain (Mashkour *et al.* 1999), the metallurgical technologies of the Bronze and Iron Ages in Tepe Sagzabad (Talai 2002), methods of making metal objects during the Iron Age (Mortazavi *et al.* 2014), and radiocarbon chronology of the Iron Age Sagzabad by Pollard and colleagues (Pollard *et al.* 2012). However, although the excavations span across different periods of time from prehistoric times to the Islamic era, the stratigraphic evaluations of the settlement strata and reports on the Iron Age architecture (Talai 1999: 81-83) fail to provide a comprehensive picture of the settlement patterns in the Iron Age. Therefore, it is of great significance to study and extract new resources and analyze regions in this specific period of time which eventually transitioned to the historic era and led to the establishment of an empire.

### The prehistoric settlement patterns in Buin Zahra

Settlement patterns can be defined as the distribution of human activities across the landscape and the relationship between these activities, natural landscapes and social environments (Schreiber 1996: 236, Sabzi Doabi *et al.* 2013: 153, Mohammadifar and Niknami 2013). Various objects from prehistoric times to the present have been discovered from the few excavations conducted in Buin Zahra.



Fig. 2: the location of the areas of the Bronze Age in the southern district of the Qazvin Plain.

the first season of the archeological studies conducted in Avaj and Buin Zahra in the summer of 2007, Mousterian stone tools were discovered in the mountainous region of Buin Zahra (Mollasalehi *et al.* 2007: 1). In this systematic study, a number of Paleolithic sites were discovered in the city of Buin Zahra (Vahdati Nasab 2011: 75). The discovered objects were Levallois flakes from the Middle Paleolithic Period found in a region called Sepid Dasht in Aqcheh Dam village (Vahdati Nasab *et al.* 2009). In various excavations, different objects from the Neolithic, the Chalcolithic and the Late Bronze Ages were discovered among which the Charboneh excavation site in 2006 (Fazeli Nashli 2011) and extensive excavations at Zagheh and Sagzabad can be mentioned. It is beyond the scope of the present paper to elucidate Paleolithic/Bronze Age sites but the notable point is the cultural continuity from the Neolithic era to the Late Bronze Age.

However, observations regarding the scarcity of Bronze Age sites were made following a number of failed attempts to identify such sites. On account of previous excavations, Talai pointed to the absence of Bronze Age sites in the Qazvin Plain (Talai 2007: 135).

Nonetheless, Fazeli Nashli discovered a site, Tepe Douran-Abad, in the northern part of Buin Zahra in 2003, which he identified as belonging to the Iron/Bronze Age, reporting the possibility of strata from the Copper

and Stone Ages (Fazeli Nashli 2003: 10). In contrast to Sagzabad which was estimated to belong to the Late and Middle Bronze Age, Douran Abad demonstrated the characteristics of the Bronze, Chalcolithic Ages. However, despite the discovery of this site, a number of papers were written on the absence of Bronze Age sites based on previous observations (which were the result of the lack of comprehensive studies) (Sohbati *et al.* 2011: 17-31, Mortezaei *et al.* 2014). The latter article aptly points to the insufficient number of studies in this regard.

The main drawbacks acknowledged by the specified researchers were insufficient archaeological studies, sedimentation, and cultural site leveling. Therefore, the Buin Zahra site was restudied with the help of the Buin Zahra Cultural Heritage Organization in order to identify the site more effectively. Since the Iron Age supersedes the Bronze Age and determining the characteristics of the Bronze Age is helpful in identifying the Buin Zahra site, the sites belonging to this period were reviewed as well. In identifying the site, the authors used Google Maps and the identified sites were visited frequently in 2015 using level navigation. Four sites belonging to the Bronze Age and seven sites belonging to the Iron Age were identified based on conducted studies and reviews in the Buin Zahra region. The identified sites of the Bronze Age, which are the subjects of the present study, included the sites of Sagzabad, Sakhs-Abad, Douran-Abad and Yass Tepe in Joharin which contained objects belonging to the Bronze Age and were common in the Iron and Historical Ages as well. Although some of these sites were identified before, the sites of Sakhs-Abad and Yass Tepe were identified in this study, the study of which points to observations other than what has previously been made. Recent studies have revealed that such sites as Douran Abad, Sagzabad, Yass Tepe and Sakhs-Abad, which all belong to the bronze Age, exist in this region; a different contention than the one supported by Talaei (Talai 2007: 135) ( Fig. 2).

Due to the significance of Yass Tepe in Joharin village, this site was reviewed several times, and objects belonging to the Bronze Age, Iron Age, and the early Historical Age were found. The identification of Yass Tepe was helpful in explaining the settlement patterns and transition from the Bronze Age to the Iron and Historical Ages in the southern district of the Qazvin Plain. These are the subjects of discussions to follow.

### The Site of Yass Tepe Joharin

Yass Tepe site is located at 49°49.396E and 36°00.514N coordinates. The site was introduced by a member of The Buin Zahra Cultural Heritage Organization, and the level examination of the site was carried out (Fig. 6), through which the site was identified as belonging to the Bronze, Iron, and Historical Ages.





Figs. 3 and 4: perspective and the aerial view of Yass Tepe site of the Bronze and Iron Ages and possibly the early historic age.



Figs. 5: Illegal digs at Yass Tepe, Joharin.



Fig. 6: Yass Tepe, Joharin.

With an area of over 14 hectares, Yass Tepe is 1km southeast of Joharin village and is regarded as the property of this village. It is located 300 m east of Hussein-Abad village. It is 1261m above sea level and 7 m higher than the surrounding lands such that it is visible and can be differentiated (Figs. 3&4). Yass Tepe has a circular shape.

Yass Tepe site is 24 km away from Sagzabad and 100.9 km far from the site of Sakhs-Abad in a straight line. Wild rue (Espand), tamarix, acanthus and salsolab grow on Tepe and surrounding areas. Farmers grow grapes, wheat, barley and alfalfa around the site. There are also Fruit orchards with distance from this site. it is 900m away from Joharin Islamic- Historical site. The roads connecting to Yass Tepe are two separate dirt roads of Joharin and Hussein-Abad villages.

According to the level examinations, numerous clay ceramics from the Bronze Age and the Iron Age were found all over the hill. There were also ceramics from the early historic period on the hill. Two illegal excavations

were observed on the surface of the hill, one 1.5 m in diameter and 3 m in depth and the other 1 m in diameter and 2 m in depth (Fig. 5). The site has not been registered yet. There are various black, gray, red and cream ceramics on the surface of the Yass Tepe (Figs 8-14). These types of ceramics can be classified based on their color and the production technique as follows:

1- Black and gray ceramics: Most of the black ceramics are coarse and hand-made. Some of these ceramics have carved designs engraved in diagonal or parallel forms (Fig.7). Superficial examination of ceramics with burnished designs showed that there are forms of wheel-made ceramics scattered in the site. Some ceramics with black porous bodies with a mixture of plaster can also be seen among the ones found at Yass Tepe.

2- Red ceramics: This kind of pottery in the range of rose color can be found all over the site (Fig. 14). Some of the red wheel-made ceramics and some



Fig. 7: some samples of the ceramics of Joharin Yass Tepe (carved designs).



Fig. 8: the edge of the pottery containers of Joharin Yass Tepe.



Fig. 9: the handle of the pottery containers of Joharin Yass Tepe.

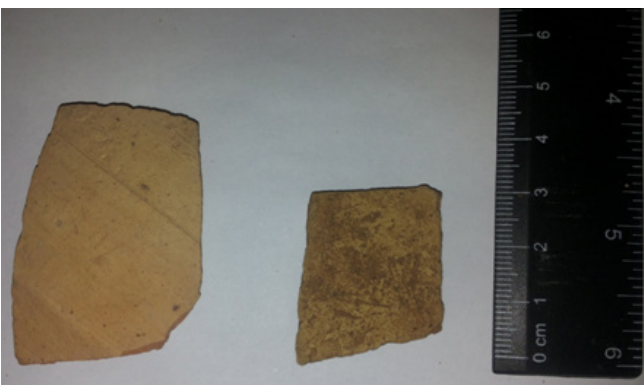


Fig. 10: the samples of the wheel-made cream ceramics of Yass Tepe.

other ceramics with different designs are made of hand-made pottery pieces with porous surfaces.

3- Cream ceramics: This type is less abundant and comes in two forms: handmade coarse and fine wheel-made. Other ceramics with different colors, due to different firing methods, are also visible on the site (Fig. 10).

ceramics of the site come in various types. No two- or multi-colored pottery of Urmia type was found. It is worth noting that unlike this classification, the production technique and pottery types reveal different dates which will be discussed in the next section.

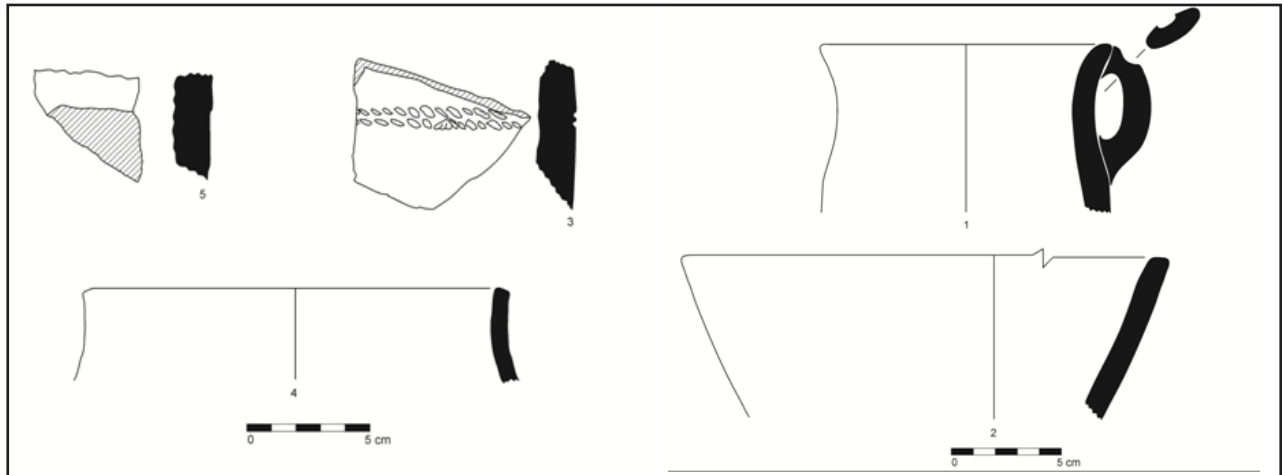
#### **An analysis of the settlement patterns of the site of Joharin Yass Tepe**

Due to the numerous gray ceramics, this site was initially believed to belong to the Iron Age, but as a result of a visit in 2015 of the site it was demonstrated that the site had strata of the Bronze and Iron Ages, being transited to the Historical Period.

According to the comparative samples, some of the black handmade, as well as cream and red handmade ceramics, belong to the Bronze Age. The pottery types and forms, including the edge and body of the gray ceramics

found at Yass Tepe, can be compared with those found at Ali Yord Tepe of the city of Abhar in the west of the Qazvin Plain. These samples belong to the Bronze Age (Khosravi *et al.* 2012: 148). There are also lots of similarities in the form and materials used on the edge of two samples found in Joharin Yass Tepe and Trench IV found in Sagzabad. The absolute chronology of this trench shows that it belongs to the late Bronze Age (Fazeli Nashli *et al.* 2011: 149). The forms of some handles can be compared to those samples from the Bronze Age.

However, most of the ceramics found at Yass Tepe belong to the Iron Age. Containing many ceramics from the Iron Age I, this site is of great importance. The forms and handles of some pottery forms found at Yass Tepe (Fig. 9) are quite comparable to the forms of pottery handles found in Taleghan Horsiband site in the northeast of the Qazvin Plain, which belong to the Iron Age I (Darabi and Niazi 2011: 56). Furthermore, the forms of the wide-open gray-black ceramics with smooth bodies at Yass Tepe (Fig. 9) are quite similar to the ones found in Robot Karim Golestan Tepe in the east of the Qazvin Plain, which belong to the Iron Ages I and II (Alibeigi and Khosravi 2009: 87). Other types of gray ceramics and their forms reveal the various types of the Iron Age ceramics. Most of these ceramics are wheel-made and show the common forms of the Iron Age.



Figs. 11 and 12: designs of the ceramics of Joharin Yass Tepe.



Fig.13: the edge of the pottery plate of Joharin Yass Tepe.



Fig. 14: A range of the ceramics of Joharin Yass Tepe.

The majority of the ceramics of Joharin Yass Tepe have been fired in kilns with sufficient temperature.

While the type and form of the wheel-made gray ceramics obviously reveal the Iron Age characteristics in such dishes, small numbers and the form of wheel-made cream ceramics raise doubts on their history. Although the observed samples are pieces with no design forming the bodies of containers (Fig. 10), the elegance of the cream ceramics and the production technique reinforce the possibility that they belong to the late pre-historic and early Historic Age. According to the techniques used in the Historic Age, these ceramics are wheel-made and fired in kilns with sufficient temperature.

The presence of ceramics from the Bronze Age demonstrates that Yass Tepe site was a residential area in that age (Fig. 13) and its vast area indicates the importance of this site in the Iron and Bronze Ages. Although the dispersion of ceramics of the Bronze Age can be observed more in the south of the site and the dispersion of the ceramics belonging to the Iron Age is more in the north,

there are numerous ceramics belonging to the Bronze and Iron Ages all over the hill, according to level examinations. Moreover, there are ceramics from early Historic Age on the hill.

The excavations carried out on Yass Tepe reveal the transition of settlement patterns from the Bronze Age to the Iron Age. Associations can be made between the types of ceramics from the Bronze Age and those found in the western areas of the Iranian Plateau. Although no Urmia type pottery could be found in level examinations like those found in Sagzabad, it was revealed that the pottery types from the Bronze Age had cultural relations with those found in western and northwestern parts of the Iranian Plateau in the early and late Bronze Age.

It has been assumed that Tepe Sagzabad was cluster-centric. Bou Gocheki, in this regard, believes that in areas with diverse fertile resources surrounded by natural factors such as deserts or mountains, social complexity develops rapidly and small royal chairmanships reach their maximum potential. Then, these centers will regress and



lose their control over other settlements. No settlement can sustain for a long time; however, the religious centers are exceptions (Fazeli Nashli 2006: 25).

Therefore, due to the vast area of Yass Tepe and discovery of a big area like Douran-Abad, it could be argued that political control has been transferred to these areas in a particular period of the Bronze and Iron Ages.

Along with transition from the Iron Age in the southern district of the Qazvin Plain, it seems that the other sites are less known while some ceramics can be identified, which belong to the Historic Age at Yass Tepe. Yass Tepe is located in the north of the southern district of the Qazvin Plain in an area with numerous remains belonging to the Historic Age in a linear trajectory from east to west. Although this issue needs to be discussed in a separate paper for a better explanation, the presence of numerous Historic sites in a linear model suggests the possibility of the transition from cluster-centric settlements to the linear ones in the Iron Age III with governmental supervision.

## Conclusion

Due to the findings of Sagzabad excavations, it was believed that the southern district of the Qazvin Plain lacks any site from the Bronze Age. Regarding the form of faults, this theory even led to this idea that this issue was one of the main obstacles to living in the Bronze Age. In this context, the southern district of the Qazvin Plain was reviewed, having revealed the presence of four sites from the Bronze Age and 7 sites from the Iron Age. Therefore, the insufficient number of adequate archaeological studies, sedimentation, and leveling of cultural sites are the main reasons behind the observations about the settlements of the Bronze Age and subsequently, demonstrating the settlements patterns in the Iron and Historical Ages.

One of the sites identified in this study is the 14-hectare Yass Tepe site in which there are many remains from the old and Middle Bronze Age to the Historic Age. The numerous ceramics of the Bronze Age indicate the settlement patterns of the Bronze Age and the types of ceramics are related to those found in the western areas. It also demonstrates the cultural transition from the Chalcolithic Ages and the fact that the continental factors like faults had little influence on the settlement of the Bronze Age. Regarding the vast area of Yass Tepe, failure in identifying this site and the other identified ones must be considered as the result of the lack of a comprehensive investigation in the region.

Yass Tepe presents a cultural transition from the Bronze Age to the Iron Age, making it a site of great significance. Although most of the ceramics found in this area include the gray ceramics from the Bronze and Iron Ages, the presence of few cream ceramics belonging to the Historic Age reveals the continuity of residence in the region. The identification of numerous sites from the Historic Age

adjacent to and the north of Yass Tepe, which are lined up from east to west, may demonstrate the transition from cluster settlements in the Bronze Age and Iron Age I and II to the linear settlements in the Iron Age III and the beginning of the Historic Age at the time of Mad era; this matter is significant to be studied. It seems that Joharin Yass Tepe is one of the most appropriate settlements from the Bronze and the Iron Ages to the Historic Age, revealing useful information on demonstrating the settlement patterns and changes occurred in the region.

## References

- Alibeigi, S. and S. Khosravi,  
2009 The Evidence of Socio-economic Establishments of the Iron Age in the Center of Iranian Plateau. *Motaleat-e Bastanshenasi (Iranian Journal of archaeological studies)* 2, 88-108 (in Persian).
- Azadi, A.,  
2006 *Report on the Excavation for Determining the Area of the Site of Arasanj*, Qazvin province's Cultural Heritage Center (unpublished report in Persian).
- Azizi Kharanaghi, M. H., K. Niknami and N. Moradi,  
2010 The New Bronze Age Period in Tepe Sagzabad Based on the Pottery Findings. *Payam-e Bastanshenas (Archaeologist Message)* 14, 21-34 (in Persian).
- Darabi, H. and N. Niazi,  
2011 The Areas of the Iron Age in northern Taleghan, *Motaleat-e Bastanshenasi (Iranian Journal of archaeological studies)* 6, 35-54 (in Persian).
- Fazeli Nashli, H.,  
2003 *Archeological Analysis Report of the Qazvin Plain*, Qazvin province's Cultural Heritage Center (unpublished report in Persian).  
2006 *The Archeology of Qazvin Plain from 6000 to 1000 B.C.* Tehran University Publication, Tehran (in Persian).  
2011 *Primary Report of Tepe Zaghe in Qazvin Plain*, Qazvin Province Cultural Heritage Center (unpublished report in Persian).
- Fazeli Nashli, H., H. Darabi, Y. Fallahian and R. Naseri,  
2011 The Absolute and Relative Chronology of Tepe Sagzabad in Qazvin Plain. *Motaleat-e Bastanshenasi (Iranian Journal of archaeological studies)* 5, 133-158 (in Persian).
- Bakhtiari, S.,  
2006 *Geographical Atlas of Iran's provinces*. Geography and Cartography Research Center of Iran, Tehran (in Persian).
- Khosravi, S., H. Khatib Shahidi, H. Vahdati Nasab, S. Alibeigi and A. Aali,  
2012 Early Villages and Prehistoric Settlements in the Bank of Abhar River in the East of Zanjan Province. *Motaleat-e Bastanshenasi (Iranian Journal of archaeological studies)* 7, 131-154 (in Persian).
- Mashkour, M., M. Fontugne and V. C. Hatee,  
1999 Investigations on the Evolution of Subsistence Economy in the Qazvin Plain (Iran) from the Neolithic to the Iron Age. *Antiquity* 73, 65-76.
- Mollasalehi, H.,  
2004 *The Collection of References and the Chronology of the Prehistoric areas of Zagheh from 1349 to 1383*, Qazvin province's Cultural Heritage Center (unpublished report in Persian).

- 2007 *The Report of the Survey of Archaeological sites of the Mountainous South of Qazvin Plain (Boein Zahra)*, Qazvin province's Cultural Heritage Center (unpublished report in Persian).
- Mortazavi, M., A. Salehi, M. A. Golzar and H. Talai,  
2014 Tracing Manufacturing Techniques In an Archaeological Thin sheet Tube From Tepe Sagzabad In Qazvin Plain Iran (1500-800 BC). *Mediterranean Archaeology and Archaeometry* 15, 1-9.
- Niknami, K.,  
2008 *The Preliminary Report on the Excavation at Tepe Sagzabad*, Qazvin Province's Cultural Heritage Center (unpublished report in Persian).
- 2009 *Excavation at Tepe Sagzabad*, Qazvin Province's Cultural Heritage Center (unpublished report in Persian).
- Pollard A. M., H. Davoudi, I. Mostafapour, H. R. Valipour and H. Fazeli Nashli,  
2012 A New Radiocarbon Chronology for the Late Neolithic to Iron Age in the Qazvin Plain. *International Journal of Humanities* 19 (3), 110-151.
- Sabzi Doabi, M., A. Hojabri Nobari and F. Khademi Nadooshan,  
2013 A Study and Analysis of the Settlement Patterns of the Khaveh Plain in Partian Period. *Jame'eshenasi-e Tarikhi (Journal of Historical Sociology)*, 10, 145-169 (in Persian).
- Schreiber, K.,  
1996 Settlement archaeology. In: Fagan, B. (ed.), *The Oxford companion to archaeology*, Oxford University Press, Oxford, pp. 635-636.
- Sobuti, H.,  
1993 *Analytical Report of Mohammad Abad Area*, Qazvin province's Cultural Heritage Center (unpublished report in Persian).
- Sohbati, R., M. Fattahi, H. Fazeli Nashli, M. Koeigli, A. Schmitt, G. Azizi Kharanaghi and M. Maghsoudi,  
2011 The Hidden Movement of Cheskin and Its Possible Effect on the Lost millennium (the Qazvin Plain). *Majaleh-e Physic-e Zamin va Faza (Journal of Earth and Space Physics)* 37 (3), 17-31 (in Persian).
- Talai, H.,  
1999 The New Findings of Architecture of New Bronze Age in Sagzabad. In: Ayatollahzadeh Shirazi, B. (ed.), *Proceedings of Second Conference of History of Urbanism and Architecture, Arg-e Bam, Kerman*, Vol. 5, Cultural Heritage Organization, Tehran, pp. 343-358 (in Persian).
- 2002 The Metallurgical Technologies of the Bronze and Iron Age in Tepe Sagzabad. *Majaleh-e Daneshkadey-e Adabiat va Olum-e Ensani (Journal of Faculty of Literature and Humanities of Tehran University)* 164, 547-564 (in Persian).
- 2007 *The Bronze Age of Iran*. SAMT Publications, Tehran (in Persian).
- Vahdati Nasab, H.,  
2011 Paleolithic Archaeology of Iran. *International Journal of Humanities* 18 (2), 63-87.
- Vahdati Nasab, H., H. Mollasalehi, M. Saeedpour and N. Jamshidi,  
2009 Palaeolithic Levalloisian assemblages from Boeen Zahra in the Qazvin plain (Iran). *Antiquity* 83 (320), Project Gallery [available online: [www.antiquity.ac.uk/projgall/nasab1](http://www.antiquity.ac.uk/projgall/nasab1)]