



ISSN: 0975-833X

REVIEW ARTICLE

A GLANCE AT SETTLEMENT PATTERN ON INTERMOUNTAIN PLAINS OF CENTRAL PART OF
KOJOUR, MAZANDARAN; IRAN: FROM PREHISTORY TO THE RISE OF ISLAM

*¹Parasto Masjedi, ²Abbas Panahi, ¹Maryam Mohaghegh, ³Masoud Khazaei Poul, ⁴Mohsen Bahrami Nia, ¹Mostafa Khazaie and ⁵Esamail Hemati Azandariani

¹Department of Archaeology Tarbiat Modares University, Tehran, Iran

²Department of History, University of Guilan

³PhD Student, Drexel University, Civil, Architectural and Environmental Engineering Department

⁴M.A Graduated of Archaeology Art University of Esfahan, Iran

⁵Ph.D. Student Department of Archaeology Bu Ali University Hamedan

ARTICLE INFO

Article History:

Received 15th February, 2015

Received in revised form

25th March, 2015

Accepted 28th April, 2015

Published online 31st May, 2015

Key words:

Settlement pattern,
Archaeological sites,
Archaeological survey,
Kojour,
Mazandaran.

ABSTRACT

Archaeological survey was conducted by the authors (Khazaie, BahramiNia and Masjedi) in Kojour in the south of Caspian Sea and in Alborz Mountain in summer 2011. Kojour was selected because of its suitable conditions for human occupation such as water sources, suitable soil, intermountain plains and finally its suitable elevation that protected this region from extensive environmental changes during prehistoric times such as glacial periods in high levels of Alborz Mountain as well as from Caspian Sea's water elevation changes. In our survey 47 archaeological sites were registered among which 10 sites had evidence from prehistoric times, 27 sites had evidence from historical times and 22 sites had evidence from Islamic times. Settlement pattern at the understudy area changed across the periods. Water sources and arable land with low slope and population were the most important factors of these changes.

Copyright © 2015 Parasto Masjedi et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Parasto Masjedi, Abbas Panahi, Maryam Mohaghegh, et al. 2015. "A glance at settlement pattern on intermountain plains of central part of Kojour, Mazandaran; Iran: from prehistory to the rise of Islam", *International Journal of Current Research*, 7, (5), 16563-16571.

INTRODUCTION

Archaeology as a young science, compared with other sciences, is developing. Archaeologists study different aspects of humans' past life; therefore other sciences are used in archaeology for further help. Some archaeologists take different approaches to archaeology such as mathematical, anthropological, ecological and art. These differences originate from their way and approach in the interpretation of archaeological data and their view of character of archaeology (Dark 1995: 13). Settlement pattern at a region is in fact interaction between space-local, environmental conditions, social-cultural, and political in that region during time; that with regard to these factors settlement pattern will change across the periods (Rezvani 1999). Even some people believe that archaeology is like geography of past time (Dark 1995: 17-18).

*Corresponding author: Parasto Masjedi,
Department of Archaeology Tarbiat Modares University, Tehran,
Iran.

With no debate about its accuracy or falseness, we know that environment and geography in each region have affected humans' life and, nowadays geography is used more in archaeology. Geography shows humans' settlement changes during times in relation to natural sources, humans' factors and other unexpected factors. In fact we can say that settlement pattern in a region depends on the conditions of the natural environment, economic conditions and the political, cultural and social factors of a region during time. Settlement patterns change depending on the changes in these factors (Rezvani 1999). In addition, sometimes we can't understand the real reasons behind settlements patterns and our interpretations at present don't show the main factors in settlement pattern changes.

Under study region

Kojour region is located in west of Mazandaran province in North of Iran and according to political divisions Kojour is a subsidiary of Nowshahr City (Fig 1). Kojour region is situated

on an intermountain plain which is surrounded by Albourz mountain ranges. At this region about 69 villages exist; Kojour's direction is Eastern-western. The region's geographical location is 51 15 50 and 36 15 36 45 and its elevation from open sea in the surveyed region is from 1200 to more than 3000 meters. In the past Kojour was called by different names such as Ruyan, Rostamdar and Mahal-e Salas (Triple regions). Kojour, because of its geographical location during the historic and Islamic period, had political importance, especially during the transitional period from historic to Islamic period (from collapse of Sassanid Empire to Arabs conquest). Kojour is mentioned in several historical sources such as *Tarikhe-Ruyan* (Amoli, 1969), *Tarikh-e Mazandaran*, *Rouyan* and *Tabarestan* (Mar'ashi, 1966) and *Tarikhe-Tabarestan* (Ibn-Esfandiar, 1987). This region has low potential for agriculture. Main crops are wheat and in some valleys rice. Agriculture is in the form of dry farming. However, the region is for ranch, especially in high latitudes.

Environment

Rainfalls in winter is in the form of snow, and according to weather reports between 2006-2008 annual average of rain fall was about 313 mm. Maximum and minimum of rainfall based on Kojour's weather station report was in the middle of November-December (Azar month) was 67/7 and in the middle of June-July (Tir month) was 10/7 mm (Zarif Mo'azzam, 2009: 12). Average temperature in January-February (Bahman month) is about 5 cg (in some places is about -10 centigrade) and in the middle of July-August (Mordad month) is about 22 centigrade (Sheikh-ol Eslamiet *al*, 2007). Kojour, Zanous and Chalous are three rivers in the understudy region in from east to west order. Chalos River is on the western border of Kojour region.

Survey

The Kojour region before our survey in 2011 was surveyed three times. First it was surveyed by Mosavi Kouhpar and Abbas Nezhad in 2000-2004 (Mousavi Kouhpar and Abbas Nezhad, 2004). The second time it was surveyed by Lazardosti (2001). And finally it was surveyed for the third time in 2008 in a huge project by Mousavi Kouhpar (Mousavikouhpar, 2008). No prehistoric sites (before Iron Age) were reported by the explorers during these surveys. Therefore, we decide to find the probable evidences of prehistoric periods with a systematic approach and we find several sites with prehistoric periods (before Iron Age). Because those prehistoric periods of this region aren't good known, for dating the findings we used the excavated sites of neighborhood regions.

To find the prehistoric sites in region we spread on row with about 10 m distance and in regular steps all the evidences recorded. This survey with low speed was finished in almost one month. All the sites were recorded by GPS and also were photographed and described in details. After the survey all the sites were shown on maps in order to understand the changes in the location of the sites during these periods. At this survey 3 Neolithic-Chalcolithic sites, 2 Chalcolithic period sites, 1 Bronze Age and 8 Iron Age, and about 22 sites had historical evidences. Obviously we can see the changes in the location of these sites across periods.

Settlement pattern and effect of environment

Suitable environmental conditions have attracted social groups to this region during different periods. Ethnic observations in central Kojour show that this region is the final destination of coastal plain dwellers of Mazandaran in summer.

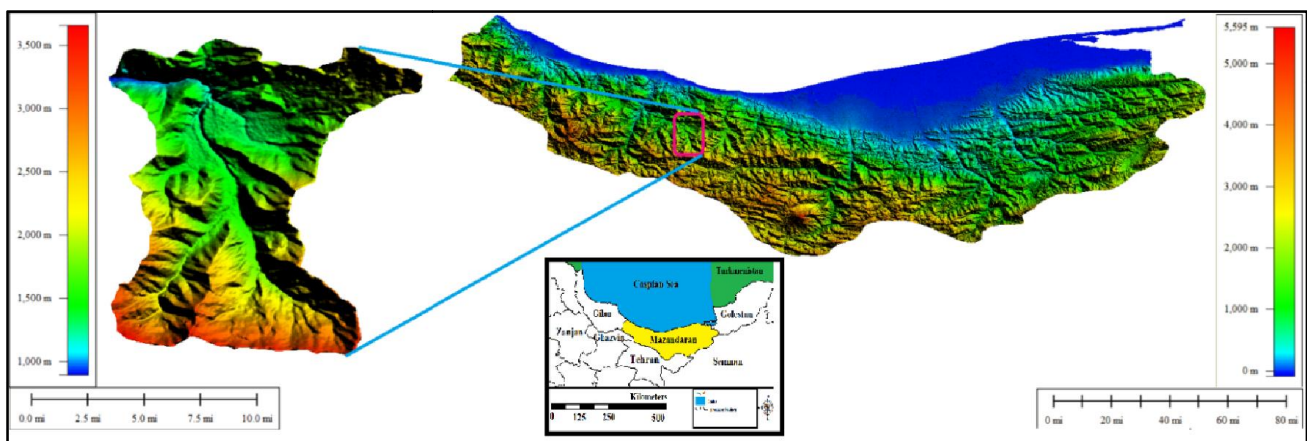


Fig. 1. Kojour region in north of Iran

Background study

Although digitization of archaeological sites found in surveys goes back to 1970's (Mousaviet *al* 2011), Among the Iranian archaeologists this digitization happened late. To fighian (1998) used this method for the first time to study archaeological sites in Susiana plain and then this method was used by Mohamdifar (2006) for analyzing Parthian sites in central Zagros. After them archaeologists used this method for their interpretations of archaeological sites.

Some currents citizens of coastal regions specially Nowshahr/Nor/Chalous spend summer in this part and make the most use of its environmental resources and suitable weather. This style of life could be generalized to prehistoric times and consider the first dwellers of this region as the nomads which spent at least half of the year at the coastal areas and half of it in these areas.

Results of surveys

In our survey for first time in western part Mazandran Province 3 sites with evidence of Neolithic period (right now 2

new sites are added) were reported in an archaeological survey (Fig. 2). Ashkol Cave site is a small site near a cave named by aboriginal peoples Ashkol (den of bear). This site is located on the crest of a relatively low elevation mount that is dominated on the plain. Around the site is Northern and western slopes covered by plenty of trees and wild fruits that are good nutrition sources but the water sources are far from the site. In the surface of this site some handmade, coarse and hollow potteries were found that attributed to Neolithic period (Khazaie Kouhpar 2012: 87-90, privacy conversation with Prof. Frank Hole).

Other sites are Hanisak and Astanakrod 2 that are located in the plain. The plain has different elevations with wild trees and shrubs in marginal areas. It is possible that once all the plain was covered by these trees and then during the periods become deforested. Hanisak is a mound near a village (Hanisak village) damaged by road making activities which cut and destroyed the mound. These activities damaged the site but revealed the evidence of Cheshmeh Ali (a pottery tradition in north of Iranian plateau from Late Neolithic until early Chalcolithic) traditional pottery found about 3 meters below the surface of site (on the surface of site some evidence of Iron ages evidences found). This site is near Zanos River and is situated among a plenty of wild trees (Khazaie Kouhpar, 2012: 172-175; privacy conversation with Dr. Fazeli; Prof. Hole in privacy conversation said that he is believed that this potteries probably are from Neolithic period not from early Chalcolithic period).

Astanakrod 2 is another Neolithic site that is located on plain. At this site some handmade potteries were found that were similar to Hanisak. This site is near the Biggest spring in Kojour region which is called Div Cheshmeh (Bogy spring) that flow in northern slope of the mound.

Next period is Chalcolithic. The evidence related to this period is found in 2 sites (Fig. 3). One of the most indicators of this period is buff pottery with paint on its surface (especially in middle Chalcolithic). These potteries are in NafChal and in Astanakrod 2 and are near the springs. Astanakrod 2 was described above and the new site is NafChal; a site that is located in slopes and is near spring called NafChal spring too. At Astanakrod the most famous motif of Chalcolithic period is found. This motif is reported in all Chalcolithic sites of Northern Part of Iranian central Plateau such as: Ghabrestan, Tappe Hesar and Sialk. The other famous motif is in NafChal that could be seen in the mentioned sites (see Schmidt 1937, Plate V DG 69,6.5.32; Girshman 1938, Plate 62 S.654; Fazeli 2007: 135, 200, and 201). During the periods from Neolithic to Bronze Age reduction in the number of sites occurs. 3 sites in Neolithic go to 2 sites in Chalcolithic and finally 1 site in Bronze Age. Although we found first evidences of prehistoric periods, no clear evidences about their space were found. Ashkol is a little site (30 × 30 m);

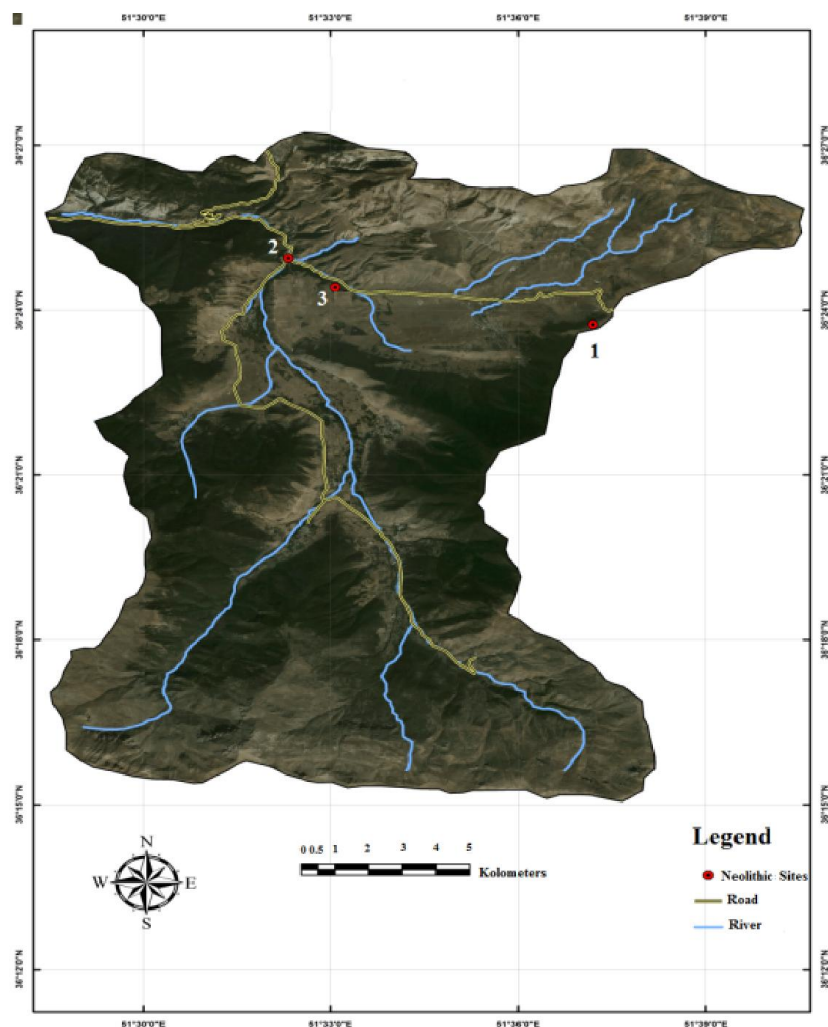


Fig. 2. Neolithic sites of Central Part of Kojour Region, 1: Ashkol, 2: Hanisak, 3: Astanakrod 2

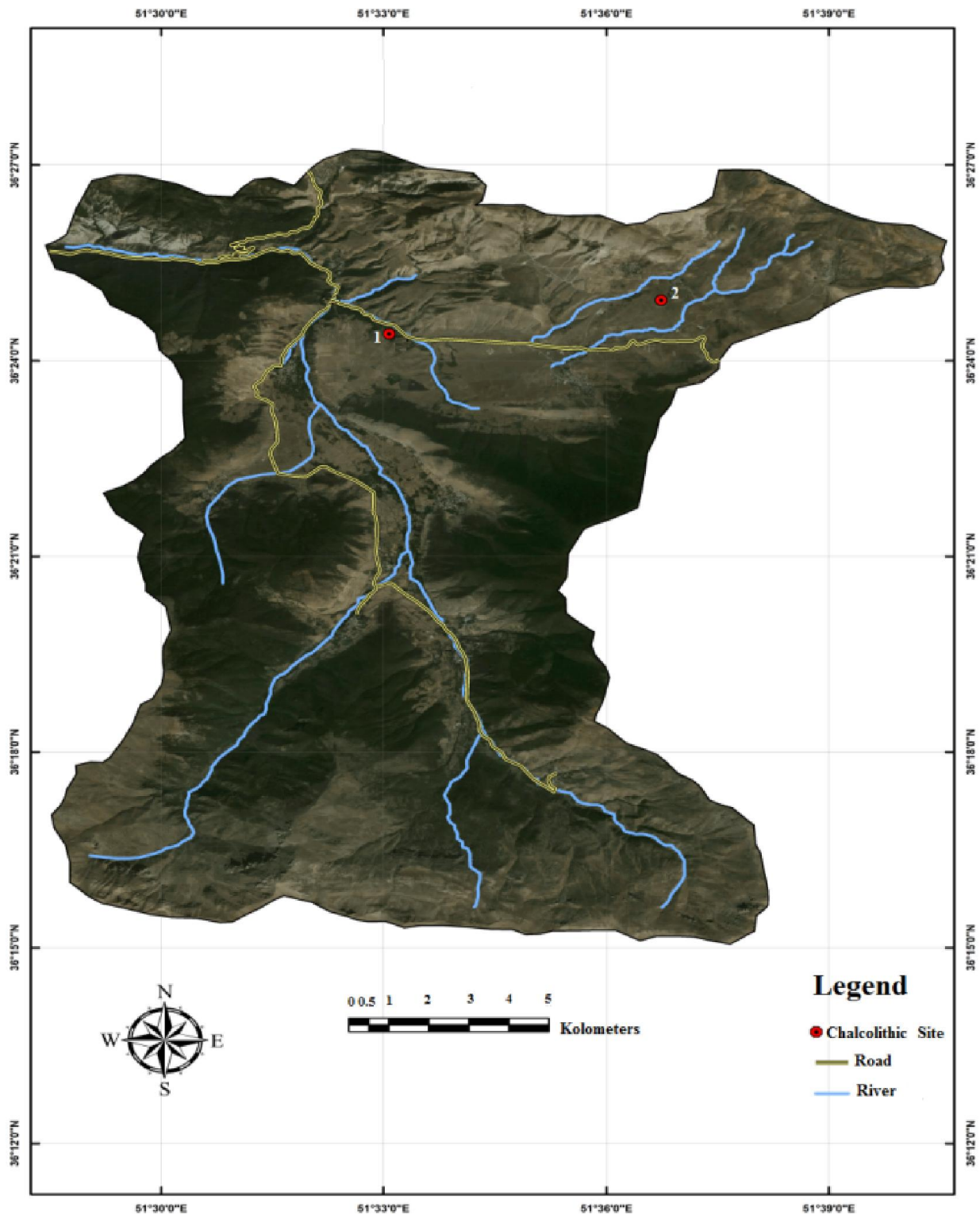


Fig.3. Chalcolithic sites of Central Part of Kojour Region, 1: Astanak Rod 2; 2: NafChal

Hanisak assume that was a little site because of its very thin layer and NafChal is about 40×40 mand Asatank Rod 2 was unknown. Nevertheless, we can say that Astanakrod 2 in Bronze Age had been a large occupation area since its potsherds are spread in a large area around the mound (about 600×600 m). At this period this site is only occupied site in central part of Kojour and its large proportion could answer the question about this reduction in number of sites (Fig. 4).

The potsherds of this period are similar to those of Tape Kelar (MousaviKouhpar and Abbas Nezhad2007; MosaviKouhpar 2008). These potteries with black and burnished surface with engraved motifs are called Trans-Caucase (named Kura-Arax and Yanik too). In Iron Age an obvious increase is seen in the number of the sites, a situation reported in other regions of Iran and even in some places like Gilan Province first evidences of

human occupation are reported. In this period at least 8 sites are reported by authors in the understudy region.

changes we can see a meaningful difference in the location of the sites.

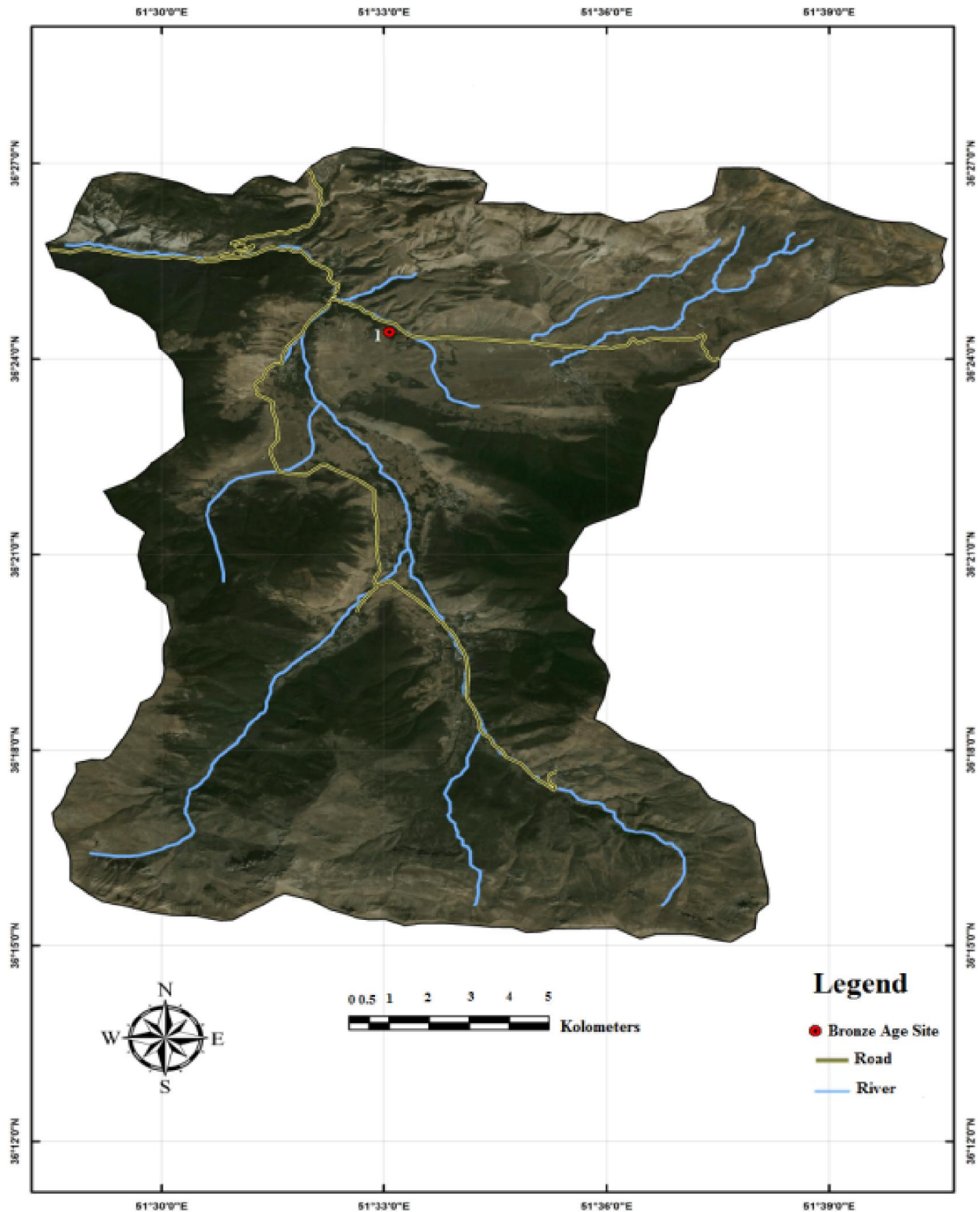


Fig. 4. Bronze Age sites of Central Part of Kojour Region, 1: Astanakrod

All the Iron Age sites are on the edge of valleys and near the streams flows. These sites are Diarak, Astanakrod2, Shores, Pol-Dareh, Hanisak, Kalaksar, GhalaKeti Pol, and Astanakrod 3 (Fig. 5). After these periods, an increase in archaeological sites is seen. These sites are at least 28 sites with evidence of Parthian and Sassanid periods potsherds (Fig. 6). In these

DISCUSSION

It is possible that at the moment Ashkol is the earliest site recorded in the region. This site is located on high elevation

from the surrounding plains. The potsherds are distributed around a circular structure.

because their soils (especially Astanakrod 2) are suitable for that. At next period (Chalcolithic) Hanisak isn't occupied but a new site (NafChal) that is nearer to water source is established.

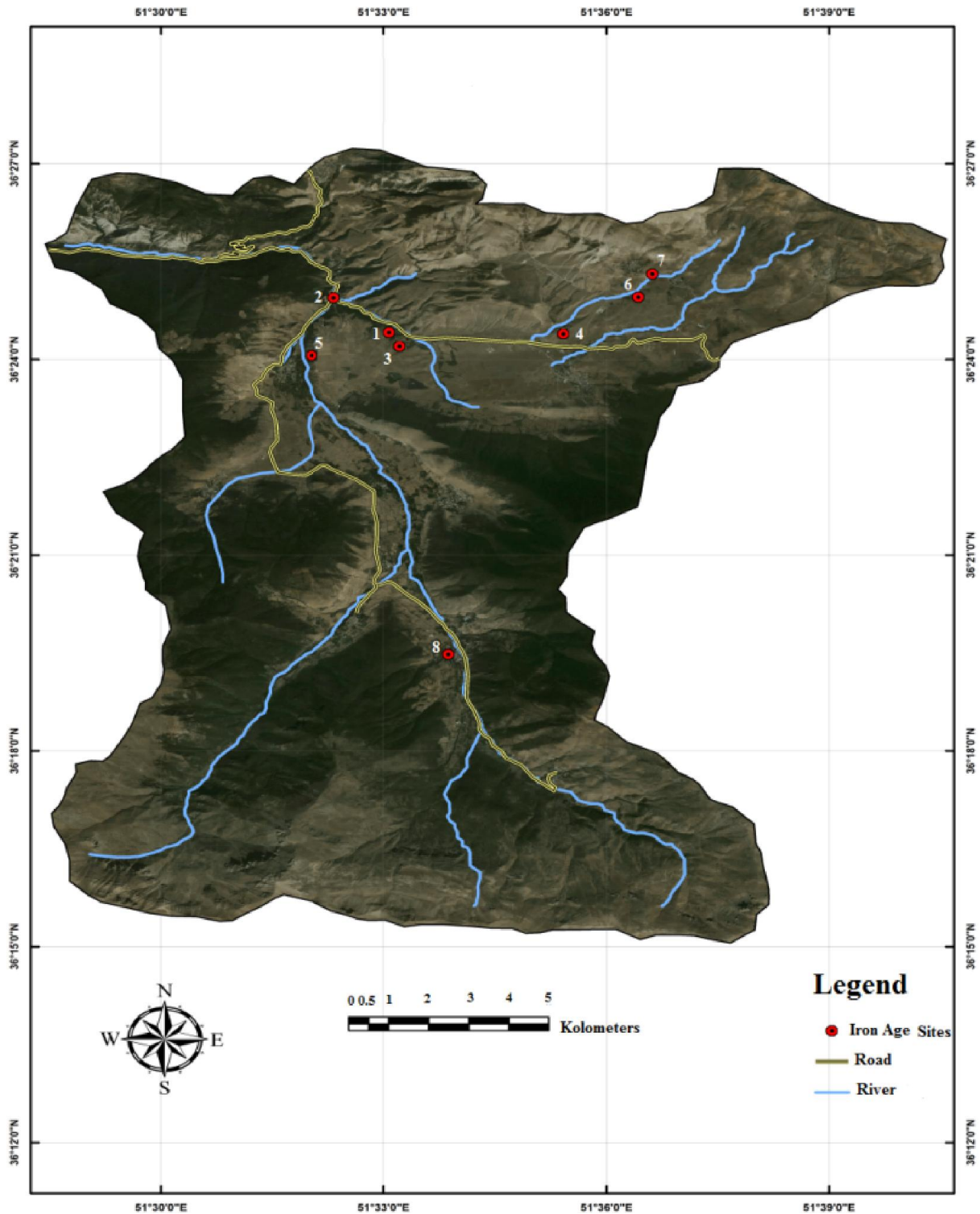


Fig. 5. Iron Age sites of Central Part of Kojour Region, 1: Astanakrod2, 2: Hanisak, 3: Astanakrod3, 4: GhalaKeti, 5: Shoreh, 6: Pol-Dareh, 7: Kalaksar, 8: Diarak

Although we aren't sure that this structure is contemporary with these potsherds however if this be true it may belong to nomad people with temporary campsite. In late Neolithic we see two sites on the plain and near water sources. It is possible (if not certainly) that it is related to practicing agriculture

This site is near a permanent large spring and some springs around it. Lands around the site are suitable for agriculture and husbandry. At this period the Astanakrod 2 is residential. At Bronze Age which is called urbanism and the formation of states in all Near East large sites is established. This situation

is correct at the understudy region. At this period the best place for occupation that is Astanakrod 2 has remained intact.

at present with a surface survey isn't obvious though. However, two reasons are assumed by the authors.

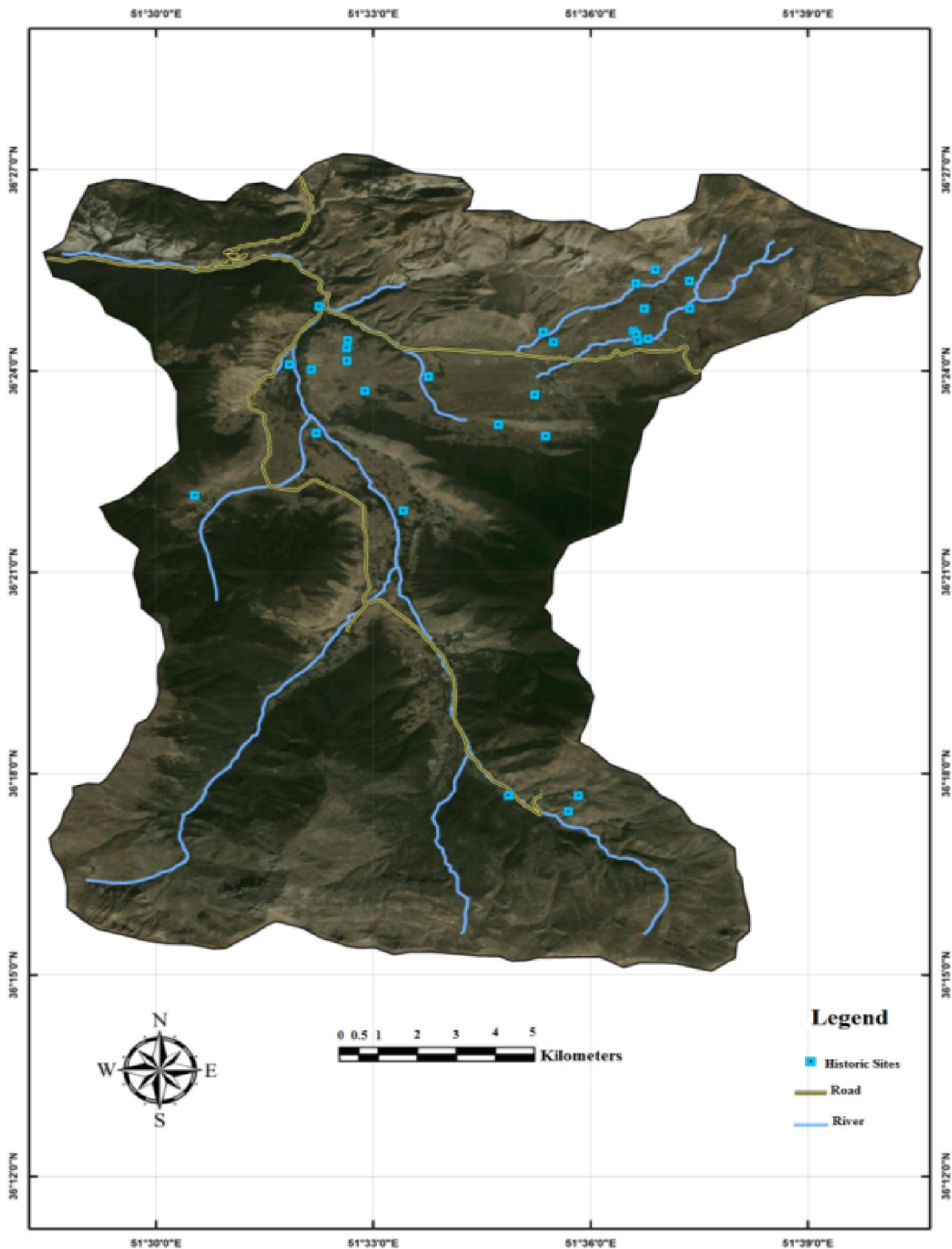


Fig. 6. Historical sites central Part of Koujor Region

Its large proportion is in accordance with the decrease in the sites. At Iron Age for the first time the wood lands in southern valley were occupied by humans (Diarak site), its actual reason

First, population pressure that is obvious in the number of the sites in comparison with previous periods (8 sites) and second progress in technology or both. At historical periods with the increase in the number of the sites and population pressure and

also with the shortage in farming lands some new places were occupied by people which were not occupied before this period (Fig. 6).

Fozieh Khazaie, Kobra Khazaie, and Leila Khazaie for their help during the survey.



Fig. 7. Water Chanel remains around some of historical sites in central Part of Kojour

Conclusion

Our study is done in a small area but with careful precision. However, for more accurate conclusions more space in adjacent areas is needed, especially for the debate on similar changes in other intermountain plains of Alburz. About the change in the location of the sites more archaeological excavations are necessary for discussing technology development as well as interior factors in settlement pattern changes. We are sure that suitable soils for agriculture and accessible water sources were the most important factors for choosing a place for residency. Astanakrod 2 has the best situation and consequently it was settled at least at the beginning of the Parthian period. After this period the site moved to about 300 m to the east but wasn't destroyed completely. At Parthian and Sassanid periods a change in subsistence is possible. That could be because of using sites located in high elevation with grassland for cattle grazing at the time. If it was correct then it was the result of agricultural lands being scarce. In addition, some lands of the Lactour plain were used for occupation and this could be because of aqueducts dug in the southern valley that conveyed the water to the lands. These canals are used at present by the aboriginal people of the region and the remains of these channels are around some of the mounds (Fig. 7). An interesting fact that we found was that although most modern villages were located in the southern valley (Zanos valley) for their various natural resources, at prehistoric periods this valley wasn't occupied until the Iron Age.

Acknowledgment

We wish to express our gratitude to Prof. Frank Hole from the Department of Archaeology at Yale University and to Dr. Hassan Fazeli from Tehran University and Dr. Hamid Khatib Shahidi from Tarbiat Modares University for their help and advice. Our thanks go to Mr. Ezatollah Khazaie who encouraged us to do this survey in the Kojour region. Also, we would like to thankeyed Mohammad and Mahmood Hosseini and Mohammad Khazaie for their companionship in the field. We also thank

REFERENCES

- Amoli, Olia Allah. 1969. *Tarikhe Rouyan (History of Rouyan)*. Edited by Manuchehr Sotoudeh, Boniade Farhange Iran Publication, Tehran. (In Persian)
- Dark, K. R. 1995. *Theoretical Archaeology*, Cornell University Press, New York.
- Fazeli Nashli, H. 2006. *Socioeconomic Transformation of the Qazvin Plain: Excavation of Tepe Ghabristan Report 2006, Third Season*. Iranian Center For Archaeological Research, Tehran (In Persian).
- Ghirshman, R. 1938. *Fouilles de Sialk, Pres de Kashan, 1933, 1934, 1937*. Geuthner, Paris (in French).
- Ibn-Esfandiari, M. H. 1987. *Tarikhe Tabarestan (History of Tabarestan)*. edited by Abbas Eghbal. Second edit, Kalaleh Khavar Publication, Tehran (In Persian).
- Khazaie Kouhpar, M. 2012. *Full coverage archaeological survey in central part of Kojour Region, Mazandaran*. M.A. thesis of archaeology, Tarbiat Modares University. Tehran (unpublished; In Persian).
- Lazardosti, A. 2001. *Report survey on ancient sites of Kojour region, Mazandaran*. Cultural Heritage Organization (Unpublished; In Persian).
- Mar'ashi, Z. N. 1966. *Tarikhe Tabarestan va Rouyan (History of Tabaristan and Rouyan)*. With Mohamad Javad Mashkour' Preface, by Mohamad Housein Tasbihi, Shargh publication. Tehran. (In Persian)
- Mohammadifar, Y. 2005. *The Survey and Analysis of Parthian Relic and Settlements in Central Zagros*. Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Ph.D. in Archaeology. Tarbiat Modares University (unpublished; In Persian).
- Mousavi Kouhpar, S. M. 2008_a. *Mazandaran Province's archaeological survey and identification for preparing archaeological map. Final report Vol 17*. Tarbiat Modares University (unpublished; In Persian).
- Mousavi Kouhpar, S. M. 2008_b. *Report on archaeological excavations at Tappe Kelar, Kelardasht second season*. Iranian Cultural Heritage and Handicraft Organization. Tehran (Unpublished; In Persian).

- Mousavi Kouhpar, S. M., Abbas Nezhad R. 2004. Archaeological survey and identification in western Mazandaran, 2000-2004. Mazandaran University faculty of art and architecture (unpublished; In Persian).
- Mousavi Kouhpar, S. M., Abbas Nezhad R. 2007. Report on archaeological excavations at Tappe Kelar, Kelardasht First season. Iranian Cultural Heritage and Handicraft Organization. Tehran (Unpublished; In Persian).
- Mousavi Kouhpar, S. M., Heydarian M., Aghayari Hir M., Vahdatinasab H., Khatib Shahidi H., Naistani J. 2011. The Analysis of the Role of Natural Factors in Spatial Distribution of Archaeological Sites in Mazandaran Province. *Journal of physiography.*, No 75. pp 1-19 (In Persian).
- Rezvani, M. R. 1999. Settlement Patterns Change study on rural population (Reason and results), case study Semnan Province, *Journal of Tehran University Faculty of Literature and Humanities.* No 150. PP. 167-144 (In Persian).
- Schmidt, f. E. 1937. Excavation at TepeHissarDamghan, The University of Pennsylvania press, Philadelphia.
- Sheikh Ol-eslami, A., Yazdian, F., Kialashaki, A. 2007. Study on tree species and shrubs in in Kojour Region. *Journal of Pazhohesh va sazandegi dar manabe tabi'i.* No 74, pp175-184 (In Persian).
- Tofighian, H. 1998. Application Geographic Information System in Archaeology by Using Archaeological Data of Susiana Site. Thesis Submitted for Degree of Master in Archaeology, Tarbiat Modares University (unpublished; In Persian).
- Zarif Mo'azzam, M. S. 2009. The impact of sharpness and direction of slope on surface runoff and sediment in Kojour's forested watershed. MA thesis of watershed engineering, TarbiatModares University (unpublished; In Persian).
