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ANALYSIS OF SETTLEMENT PATTERNS OF THE UPPER ZARRINEH RIVER BASIN IN THE IRON AGE III

ABSTRACT

The archaeological site of Ziwiye in the upper Zarrineh River basin is considered one of the key sites for understanding the cultural and political developments of Iron Age III societies of the northwest Iran. However, despite years of excavation at Ziwiye, key questions about this area still remain unanswered. It seems that sites such as Ziwiye, Qalachi, Zandan-Soleimian, Rabat and Hasanlu indicate a widespread settlement pattern with a political centrality role in the northwestern Iran during the late Iron Age. The pattern in which the local states centered on these sites dominated the entire cultural and geographical area through regional interaction. Therefore, in the present research, with the archaeological survey of the Upper Zarrineh River Basin, focusing on the role and significance of Ziwiye in the political and cultural structure of this region, an attempt has been made to provide a model of regional-political development to understand the developments of the late Iron Age in this region. The studied pottery from the field survey indicates that Ziwiye was not an isolated castle and had an organized

cultural and political interaction with the surrounding archaeological sites. In order to understand the status of sites like Ziwiye in the geographical region of the northwestern Iran, in the first step it is necessary to determine its position in the more limited cultural area around it, in the Upper Zarrineh River basin, so that it is possible to recognize the status of Ziwiye in the area of complex cultural-political geography of northwestern Iran in the Iron Age III. Based on this, the study of the Upper Zarrineh River basin was undertaken. Although some studies had previously been conducted in this basin, to understand the settlement position of Ziwiye in relation to its surrounding sites, an archaeological survey around Hasanlu was carried out within a radius of 15 km in the mountains and 30 km in the plains, which is the same distance a horse rider could travel per day. The results of this research indicate that the Ziwiye site was the most important settlement in the upper Zarrineh River basin, which had political, military and cultural dominance over the surrounding area.

Key words: Zarrineh River basin, settlement pattern, northwestern Iran.

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АНАЛИЗ ПОСЕЛЕНЧЕСКОЙ СТРУКТУРЫ ВЕРХОВИЙ РЕКИ ЗЕРРИНЕРУД В РАННЕМ ЖЕЛЕЗНОМ ВЕКЕ (ПЕРИОД III)

АННОТАЦИЯ

Поселение Зивие, расположенное в верховьях р. Зерринеруд, является одним из ключевых памятников для понимания культурного и политического развития общества в третьем периоде раннего железного века (800–550 гг. до н. э.) на северо-западе современного Ирана. Тем не менее, несмотря на то что раскопки Зивие продолжаются уже долгие годы, многие ключевые вопросы, касающиеся данного региона, все еще остаются дискуссионными. Считается, что такие памятники, как Зивие, Галайчи, Зандан-Сулейман, Рабат и Хасанлу, демонстрируют широко распространенную на территории северо-западного Ирана на позднем этапе раннего железного века модель пространственной организации поселенческих центров. В рамках данной модели локальные государства с центрами в крупных поселениях полностью контролировали культурно-географический регион посредством системы межрегиональных связей. Для понимания основных направлений развития региона в этот период раннего железного века в данной статье делается попытка описания модели локального регионально-политического

развития на основе результатов археологических исследований памятников верховьев р. Зерринеруд. Основной акцент делается на роль поселения Зивие. Анализ керамической коллекции, полученной в результате полевых исследований, указывает, что Зивие не представлял собой изолированное укрепленное поселение и имел развитую систему культурных и политических связей с соседями. Для понимания статуса таких памятников, как Зивие, в рамках сложной культурно-политической географии северо-западного Ирана периода III раннего железного века, в качестве первого шага необходимо определить их положение в рамках более ограниченного культурного пространства бассейна верховий р. Зерринеруд. С этой целью мы провели археологические работы в окрестностях Хасанлу, в радиусе 15 км в горных районах и 30 км на равнине, что соответствует расстоянию, которое за день пути мог покрывать всадник на лошади. Результаты нашего исследования показывают, что Зивие был важным центром в верховьях р. Зерринеруд, который доминировал на окружающих территориях в политическом, военном и культурном отношении.

Ключевые слова: бассейн реки Зерринеруд, поселенческая структура, северо-западный Иран.

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INTRODUCTION

The accidental discovery of the Ziwiye treasure in the 20s led to the discovery of one of the important centers of the Iron Age in western Iran. Later many commercial and archaeological excavations were carried out in this area, which indicated the existence of

a fortress or a castle related to the Iron Age III. This castle with its defensive, ceremonial, and public facilities as well as its valuable findings apparently had a political and social function in the region, although a systematic study based on regional data has not been done in this field. In this article, an effort has been made to analyze the settlement pattern of the

area in the Iron Age III based on the data obtained from a field survey around the Ziwiye site located in the Upper Zarrineh River basin. The main question in this regard is whether Ziwiye fortress is the most important Iron Age III site in the region and whether it possessed political and social centrality in the adjacent area? Another one concerns the possibility that the Upper Zarrineh River basin was a part of a broader political-social structure in the northwestern region of Iran during the period. Basically, local states or powerful regional chiefs centered on castles and military-political structures dominated the villages and economic resources around them and had important role in a larger regional interaction with other chiefs or strong local rulers. Did they have political and military management over this entire region and northwest? To find the answers to these questions, one of the cultural areas of this region was examined and as an example. For this, in 2009, an archaeological survey focused on the Ziwiye site and the area with a radius of 15 km around it in the Upper Zarrineh River basin was conducted. This resulted to discovery of 24 sites belonging to the Iron Age III, which has provided the basis of the data used in this study.

GEOGRAPHICAL LOCATION OF ZIWIYE

One of the important archaeological sites of the Iron Age and the early historical period is the ancient site of Ziwiye. This area is built in the north of the village with the same name on a natural high bed. This mound is located 40 km east of Saqqez City in Kurdistan province.

THE BACKGROUND OF ARCHAEOLOGICAL RESEARCHES OF ZIWIYE

With the discovery of the treasure of Ziwiye, its archaeological findings were introduced to the antique markets by the traders of cultural artifacts and then to the museums and art collections of Europe and attracted the attention of many art history researchers and archaeologists. The first researcher who introduced and analyzed these objects referred as “the Treasure of Ziwiye” was Andre Godard, the

head of the Iranian Archaeological Organization at the time [Godard 1949].

Later various archaeologists and art historians worldwide began to study the style, origin and dating of these findings [Wilkinson 1975; Kantor 1960; Boehmer 1964]. In the meantime, doubts were also raised about the authenticity of the attribution of all the objects, which were not obtained through scientific archaeological excavations to Ziwiye [Muscarella 1977]. The result of this accidental discovery and global attention to its objects, unfortunately, not only did not lead to the beginning of archaeological excavations in this important area, but also led to a series of long-term commercial excavations between the years 1946 and 1953 in this site. [Naqshineh et al. 2011: 106]. Ironically, the discovery of the treasure did not lead to a scientific study of this site, but led to the massive destruction of one of the most important Iron Age settlements in western Iran. The first scientific archeological study of the Ziwiye site was carried out by Robert Dyson, the head of the archaeological team of the Hasanlu mound. In completing its investigations and field studies in the northwest and west of Iran, this team in 1956 and 1960 started to visit and examine surface materials at Ziwiye [Dyson 1963] and in 1964 also conducted a three-week limited excavation of the site [Dyson 1963; 1965]. These studies based on direct archaeological evidence showed that there are castle ruins of Ziwiye have at least three construction levels dated to the late Iron Age. After that, extensive archaeological excavations were carried out in the Ziwiye and the nearby Iron Age cemetery, Changbar, from 1976 to 1978 by Nusratullah Motamedi [Motamedi 1994]. These excavations continued with a relatively long break from 1994 to 1999 under the supervision of Nosratullah Motamedi [Motamedi 1997] and then from 1999 to 2002 by Simin Lakpour [Hasanzadeh 2012]. The last excavation at Ziwiye was carried out in 2008 by Kamyar Abdi with the aim of reviewing the previous excavations [Abdi 2012]. In addition to these researches, several field surveys and excavations have been conducted in the area and sites around Ziwiye. Saber Vafaei investigated Saqqez City in two seasons in 1997 and 1999 [Wafaei 1999]. In 2004, a delimiting

sounding was done by Abdolreza Mohajeri-Najad in 2012 [Mohajeri-Najad et al. 2014].

GEOGRAPHY OF THE STUDY AREA

The basins of Zarrineh and Simine rivers, which include the water resources of the northwestern regions of Kurdistan province, are considered to be the main drainage basins of Lake Urmia. Its most important River is Zarrineh, which originates from the heights of Saqqez City. The Saqqez River one of the main branches of Zarrineh River in the northwest of Saqqez City, flows in the east direction (fig. 1). This River originates from Talat and Dosara Mountains and after passing through the Saqqez City, it changes direction to the northeast.

These areas have high Mountains with sharp peaks and many deep valleys, where the source of the Zarrineh River, the main waterway of the region, is also from these heights [Qadri 1999]. The remarkable thing about the geography of the region, especially its geomorphology, is that this region does not completely have the characteristics of the central Zagros region with relatively open intermountain plains and relatively wide valleys, nor is it completely similar to the northern Zagros region which has sharp high Mountains and narrow valleys. Therefore, the areas

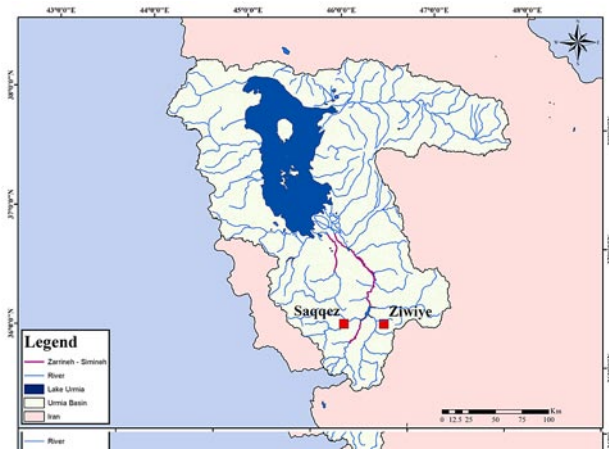


Fig. 1. Zarrineh River basin and Saqqez City, Kurdistan province

Рис. 1. Бассейн р. Зерринеруд и г. Саккез, провинция Курдистан

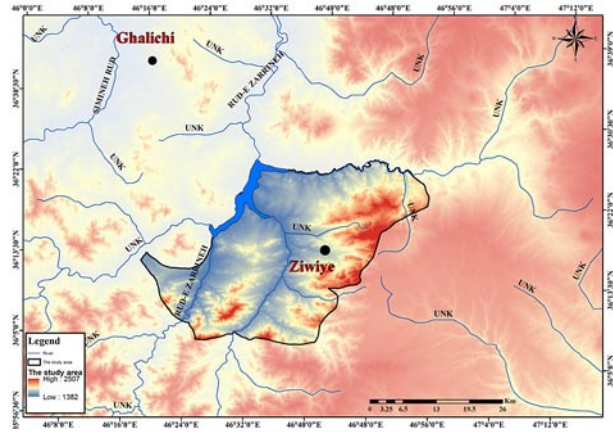


Fig. 2. Topographic map of the surveyed area

Рис. 2. Топографическая карта обследованной территории

adjacent to the Zarrineh river basin possess intermediate geomorphologic characteristics comparing to the central and northern Zagros regions (fig. 2).

OBJECTIVES AND METHOD OF SURVEY

Our criteria for determining the limits of survey are two variables: distance and accessibility factors. The distance factor delimiting the survey area is defined as the distance that a horse rider traveled in ancient times in one day. According to historical evidence, this distance is between 30 and 40 km in flat plains without natural obstacles [Faist 2006]. The access coefficient is the distance that can be traveled according to the natural obstacles that may reduce access from Ziwiye to another site.

Considering these two components and the topography of the region, a radius of 30 km in the plains and a maximum of 15 km in the impassable areas was comprehensively surveyed and the archaeological contemporary sites of the Ziwiye was recorded based on archaeological indicators. Our surveys were a combination of survey method, local information and based on topographic map 1:25.000. By walking on asphalt and dirt roads, we visited villages, cemeteries and water sources and discovered and recorded archaeological sites (fig. 3).

During this survey, 54 sites from different periods were identified and recorded. Of these, 24 sites were

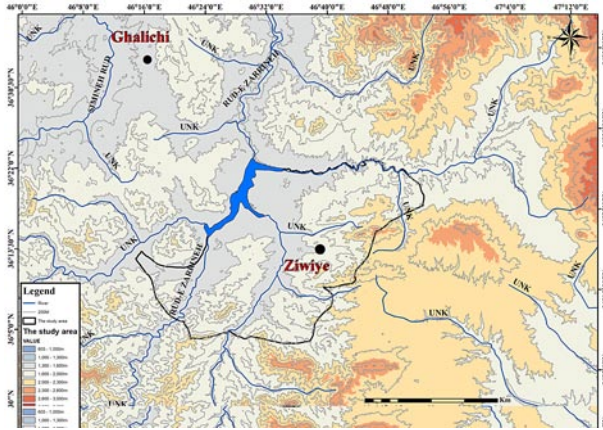


Fig. 3. The surveyed area and the location of Ziviye and Qalalichi mounds

Рис. 3. Карта обследованной территории и расположение холмов Зивие и Галайчи

related to the Iron Age 3, which is the basis of the present research. The cultural materials collected from the surface of the sites, after being described based on typological information and comparing them with the findings from the neighboring areas, were transferred to the pottery bank of the Ziviye research site.

THEORETICAL BACKGROUND

In the northwestern Iran, during the Iron Age, especially the Iron Age II, we are faced with a socio-political pattern that seems to be a part of a wider pattern of socio-political systems in the northwestern region or at least in the area of Lake Urmia and may even have been a part of a much wider pattern throughout the Zagros Mountain range from north to south during the Iron Age II and III. In this regard, one of the most important archaeological issues is what kind of political-social structure was going on in this region? Field researches, including survey and archaeological excavations, reveals variability in the size and shape of archaeological sites during the Iron Age in this region, so that it is possible to identify and introduce these sites based on their class or rank. In other words, in this region, the settlements of the Iron Age are classified according to their rank positions, and it seems that major

socio-political centers dominated the surrounding communities. Most of these sites have been introduced as the main centers of the Mannea culture, for example, see [Dyson 1962; Ivanchik 2001; Kargar, Binandeh 2009; Hasanzadeh 2009; Mollazadeh 2015]. In addition to these sites, which have revealed significant evidence of architecture and other material evidence related to political centers, several large cemeteries have also been identified or excavated in this area [Motamedi 1994; Naqshineh et al. 2011; Rezvani, Roustaei 2007; Mohajeri-Najad et al. 2014]. The set of these findings indicates the existence of large political centers in the region. In order to recognize the pattern governing the social and political structure of the Iron Age societies in the Zarrineh River basin, we refer to some of the approaches and theories presented regarding the socio-cultural development process of the societies.

In 1971, Elman Service based on a socio-political approach divided human societies into four categories in a frame of the evolutionary sequence: 1 — band; 2 — tribe; 3 — chiefdom; 4 — state [Service 1971]. It can be expected that the settlement pattern related to ordinary people, should be characterized by a relatively equal level of social and economical status and that there was no big difference in the amount and quality of cultural materials they left. Also it can be expected that the leaders of tribes are settled in the smaller centers, which may had a certain degree of difference from the ordinary people settlement, although these two types of settlements also may be inseparable in an area. In other words, these two types of settlement models can be closely incorporated in one quasi-unified settlement in which the architecture of the settlement of the leader of the tribe in a chiefdom system is different from that of other members of the society. It is noteworthy that in this case the material evidence may differ only slightly, while the political weight and social position of the head of the tribe may radically differ from other members of society.

Based on this, it can be assumed the settlement of chief and his entourage should have a different structure from ordinary people. The different architecture, size of the settlement, ritual, memorial

or economic centers related to it, and separation of houses, distinguish the place of chief settlement from others. This difference is evident in the burial tradition as well. Ethnographic studies indicate differences in the form of chiefdom societies in different parts of the world, and the material manifestations of chiefdom societies may not be the same everywhere, and the spiritual position of some generally eastern chiefdoms are different from those in South and Central America that rely on the difference in the material manifestations of the chief [Flannery 1972]. However, many archaeologists and anthropologists consider chiefdom societies as a form of socio-political system before the formation of the states and after the tribal system.

In the Service's classification, the most complex socio-political form of societies belongs to the state. Population density and the development of settlements related to governmental societies, the existence of a ruler with coherent administrative, political, military and economic organizations and the organization of relations based on governmental and generally non-relative mechanisms are among the most important characteristics of governmental societies compared to chiefdom societies [Wright 1977].

So far, many sociological and anthropological theories have been proposed regarding the backgrounds or factors of state formation [Carneiro 1970]. Regardless of these theories, it can be expected that in an adaptive evolutionary process, chiefdoms have changed to states as a result of social, economic, political and religious interactions. This process can develop as a result of invasion and domination of settlements and resources of other societies and the need for political control over this society [Spenser 1990]. It is even possible as a result of the domination of the accepted ideologies of a society over other societies, whether by the temple and religious centers or the dominant ranks of chiefdom [Flannery, Marcus 1976], or protecting the interests of the chief, nobles and their relatives against ordinary people. In any case, the political structure of the state has organized organizations under the supervision of the ruler, which dominates and supervises all the affairs of the society. Some other anthropologists such as

Morton Fried, with a social approach, divide societies into four categories: classless societies, ranked societies, simple classed societies and governmental societies [Fried 1967]. Considering the above theoretical assumptions in relation to the socio-political form of the society in the classification system, we investigate the settlement pattern in the target area based on archaeological findings and evidence.

THE STUDIED SITES IN THE UPPER ZARRINEH RIVER BASIN

As a result of this survey, 51 ancient sites were identified around Ziwiye up to a distance of 15 km, of which 24 sites belong to the Iron Age. Most of these sites have a small area and are rarely larger than 2 hectares. Their distance from Ziwiye is usually between 5 and 11 km (fig. 4). Surface findings from these centers are generally pottery (fig 5, 6) pieces and few chipped stones. The information on these sites is given below.

Hani Shahi

This ancient mound is located on a sloping surface and at the slope of one of the rocky heights near the Parsanian village, which forms the southern limit of this study — 22 km southeast of Saheb City. On the surface of the site, dry stone architectural structures and architectural piles of rubbles collected by the owners of agricultural lands are evident. The most important cultural materials on the surface of the mound are the typical pottery of the Bronze Age, Iron Age III and the historical period from Achaemenid to Sassanid.

Sufi Tepe Qaplanto

The site is located 1000 m south of Qaplanto village and 35 km north-east of Saheb City. From the north, it is bounded by Mount Khora Taw Kurd Kand, from the south to Mount Sangar, from the east to Mount Divan, and from the west to Mount Gaj Yaghi. The name of this site is derived from the name of the owner of the surrounding agricultural lands and for this reason it is called Haji Sufi Tepe.

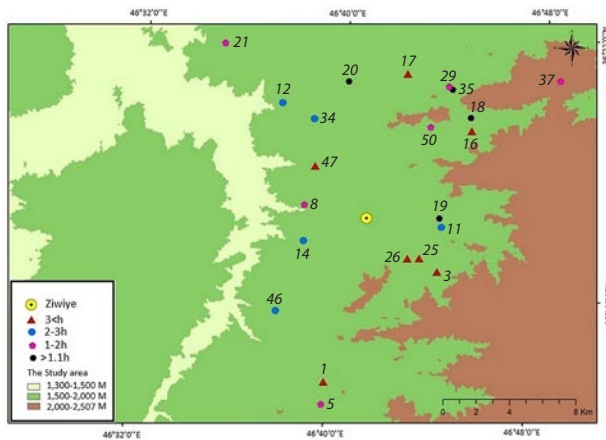


Fig. 4. The distribution of the Iron Age sites contemporaneous with Ziwiye in the studied area: Hani Shahi (1), Haji Sofi Qaplanto (3), Tala Tepe (5), Sharif Abad (8), Kurd Kand (11), Kawleh Kon (12), Giyah Ber (14), Kalkaweh Tepe (16), Hanjir (17), Qala Tepe (18), Qala Kisal (19), Buneh (20), Baharbandi (21), Qala Qaplanto Tepe (25), Mala Mcha Cemetery (26), Qalageh (29), Kani Charimo (35), Bardeh Qalish (34), Aliyar (37), Qala Qaranaw (47), Shahrzhzori (50)

Рис. 4. Положение некоторых памятников на исследованной территории, синхронных Зивие

Tala Tepe

It is located 22 km southeast of Saheb City. Mount Rash with a height of 1802 m and 2 km to the north and Mount Sang Yaqoub with a height of 2042 m and 3 km to the south of village, Mahmoud Sarvaleh valley is located 1 km south-east Parsanian village of and Gavlerah valley 2 km south-east of it. Due to the unauthorized excavations and the discovery of a number of cultural objects, this site is called Tepe Tala among the residence of village.

Sharif Abad Kohneh

In the village of Qareh Naw and within the boundaries of Sharif Abad farm lands, the Mount Quran with a height of 2 km in the southeast and the Mount Siyah with a height of 1817 m is located 2 km to the northeast of the city. This village is located 25 km northwest of Saheb City. Sharif-Abad site is called Ab Kohneh among the residents.

Kurd Kan Tepe

It is located 300 m south of Kurdkand village, the permanent River of Cham Salam passes through the vicinity of the south of the village, Barda-Charimo Mountain with a height of 1850 m is located 2 km north-west and Balut Mountain with a height of 1953 m is located 1 km south of the village.

Qalai Kawleh Kon

It is located 200 m west of Chermlo village and 25 km northeast of Saheb City, the permanent Khorkhore River passes 4 km southwest of village and Siyah Mountain with a height of 1817 m is located 3 km to the southeast. It is bounded from the north to the Posht

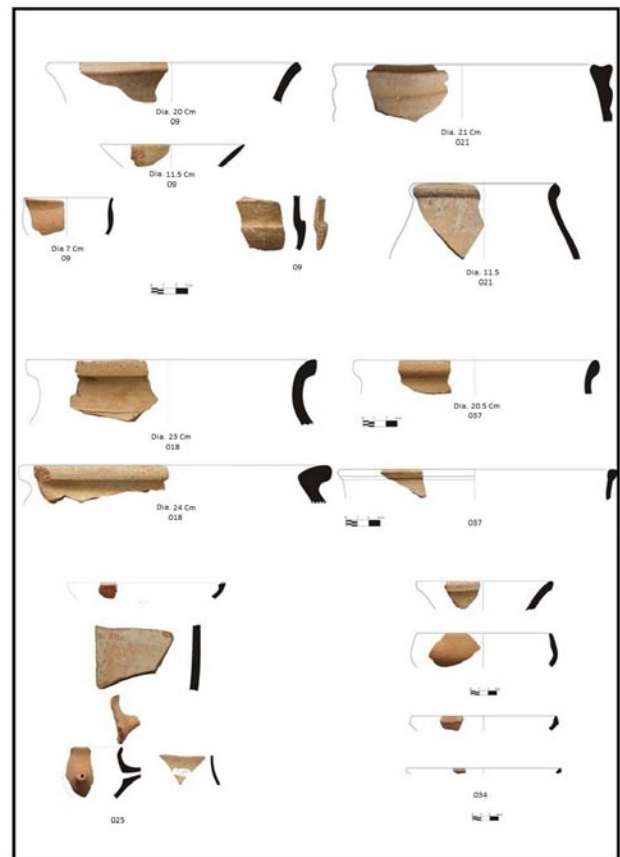


Fig. 5. Pottery of sites: Maghareh cemetery (09), Baharbandi (021), Qale Tepe (018), Aliyar (037), Qaplanto Tepe (025), Bardeh Qalish (034)

Рис. 5. Керамика отдельных памятников

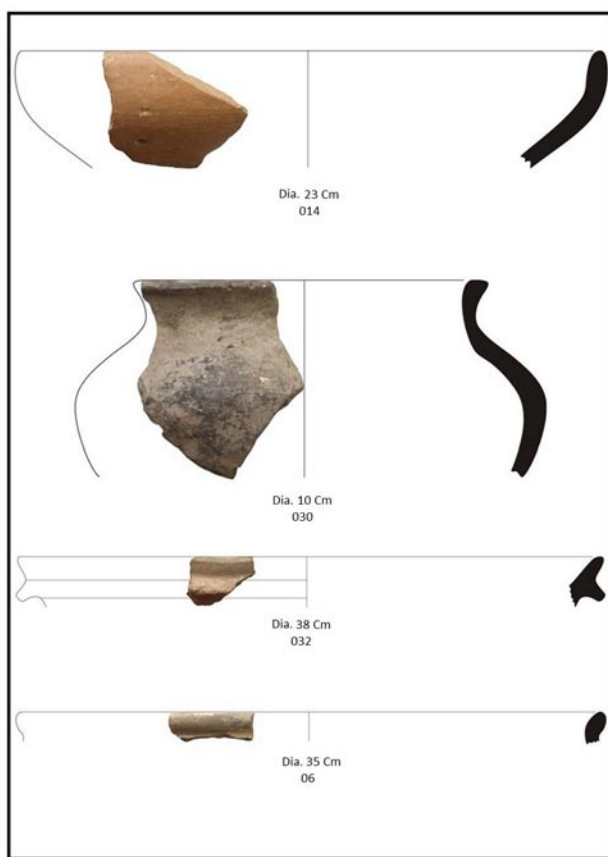


Fig. 6. Pottery of sites: *Giyah Ber (014)*, *Qeshlagh (030)*, *Changbar cemetery (032)*, *Mala Meche cemetery (06)*

Рис. 6. Керамика отдельных памятников

Howz mound, from the south to the Mount Kona Mar, from the east to the Mount Shah-weis, and from the west to the Badamak pass and Dulbagh road.

Giya Bor Tepe

The site is located 350 m west of Tikanlu village, and 29 km north-east of Saheb City. It is limited from the north to Mount Pir-Mikail, from the south to Kani Gora, from the east to Parchmer and from the west to Chi Tepe.

Kalkaweh Tepe

The site is located 1500 m west of Bash Bolaq village, the permanent Yurqol River of passes through the village, Mount Abdul-Razzaq with a height of 2464 m is located 2 km southeast and Mount Setad

with a height of 2155, 2 km north-east of the village. This hill is called Kalkavi among the villagers because of the stone piles collected on its surface and slopes and the remains of dry-stone architecture structures on its surface.

Hanjir Site

This site is located 2 km north of Rahim-Abad village and 40 km east of Saheb City, Mount Surwala with a height of 2115 m is located 2 km to the south-east of the village and Mount Kuchak-Charmo with a height of 2041 m, 2 km to the east of it. Since this site is located in the region of Hanjir it is called by this name.

Qala Tepe

This mound is located 1000 m west of Bashbolaq village, the permanent Yurqol River passes through the village, Mount Abdolrazaq with a height of 2464 m and Mount Setad with a height of 2155 m are located respectively 2 km south-east and north-east of the village. This site due to its location at the top of the mound is called Tepe Qala (mound castle) among the villagers.

Qala Kisal

It is located 250 m north of Kurd Kand village, 36 km north-east, permanent River of Cham-Salam passes through the southern of the village. Mount Barda Chermo with a height of 1850 m in 2 km to the north-west of village and Balut Mountain with a height of 1953 m in 1 km to the south. The presence of turtles in the site has caused it to be called Sala-Gisele, which means the site of turtles.

Buneh

The site is located 1500 m northwest of Assar Abad village and 37 km northwest of Sahib City. Mount Sorwale with a height of 2115 m is located 3 km to south-east, and Black Mountain with a height of 1817 m, 3 km southwest of the village. This name is derived from a spring that is located in the vicinity of the site.

Baharbandi Tepe

The area is located inside the Yazi Bolaq village. It is bounded from the north to Mount Nawtawaran, from

the south to Mount Barabar, from the east to Kani Kohne and from the west to Shirbag valley. The name of this mound is derived from the noble building built by the ruler of the village. This mound is inside the village and all its boundaries is enclosed in rural houses.

Qala Tepe

It is located on the northern side of Qaplanto village and 35 km north-east of Saheb City, Periman Mountain with a height of 1749 m in the north-west of village, Sherad Asiyab Mountain with a height of 2209 m in 3 km southwest and Mount Daranbod-mera with a height of 2200 m in 2 km south, Hanjir mound in the north and Mirvaj 1 km east of it.

Mala Meche cemetery

This site is located 250 m southwest of the village and 35 km northeast of Saheb City. Mount Periman with a height of 1749 m is located in the northwest of the village, Mount Sakht-Asiyab with a height of 2209 m, 3 km to the southwest, Daronbad Mera with a height of 2200 m 2 km south, Hanjir mound in the north and Mirvaj valley 1 km east of it.

Qalageh Tepe

This site is located 2500 m west of Kani Chermo village, and 46 km northeast of Saheb City. Mount Kuchak Charmo with a height of 2040 m is located 2 km southwest of village. This site is a small settlement that was formed on a natural mound and is called Qalageh, which means small castle.

Bardeh Qalish Tepe

This area is located in Chumlu village and 25 km north-east of Sahib City. Permanent River of Khorkhore passes 4 km southwest of village. This site does not have a special name and is called Barda Qalish (broken stone) among the villagers.

Kani Charmeh

It is located 2 km west of Kani Chermeh village and 46 km northeast of Sahib City. Kuchak Charmo Mountain with a height of 2040 m is located 2 km south-west of village. This site bounded by Khora-Taw-Gowra Mountain from the north, Kona Chalek

from the south, Barda Shawan from the east, and Hanjiran from the west.

Aliyar

This site is located 2500 m northeast of Aliyar village and 40 km northeast of Saheb City. Mount Sand Poshti with a height of 2155 m, Mount Abdul Razzaq with a height of 2464 m and Mount Zardkuh with a height of 2427 are located respectively 2 km west, 4 km southwest and 4 km southeast of village. Due to its location in the agricultural lands of Aliyar village this site is called by this name.

Golzar Sofla 2

This site is located 22 km southeast of Saheb City. Mount Rash with a height of 1802 m is located in 2 km to the north of village and Mount Sang Yaqub with a height of 2042 m 3 km to the south. The site is located 700 m north of Golzar village and it is called by this name due to its location among the agricultural lands of Golzar Sofla village.

Qalai Qareh Naw

This site is located 700 m east of Qaranav village. Permanent Quji River passes through the south of village, Mount Quran with a height of 2 km to the southeast and Mount Siyah t with a height of 1817 m are located 2 km to the northeast of village. Due to the formation of architectural structures at the top of a mound range, this site is called Qala Tepe among the villagers.

Shahrzori

This site is located 2000 m east of Yurqol village and 25 km north-east of Saheb City. The permanent River of Yurqol passes through the South of village. This site is called Charzouri due to its location on the top of a mound range above Yurqol village, which seems to be a cemetery from the Bronze Age.

Maghareh cemetery

This site is located 2000 m north of Gol Tepe village, and due to its location on the slope of a rock mass and its location in the Maghareh region, this cemetery is called Maghareh which means grave.

Changbar cemetery

Near the famous Ziwiye castle, there is a cemetery called Changbar. The cemetery, which according to the available evidence is contemporaneous with and related to Ziwiye Castle, is located in 1 km southeast of it, and considered as a one of the largest excavated cemeteries of the Iron Age in the western Iran. The archeological excavations in this cemetery have been supervised by Nosratollah Motamedi during the three seasons of excavations at Ziwiye castle. The exact size of the Changbar cemetery is not clearly known. However, based on the number of excavated graves, which reach several hundreds, it can be concluded that Changbar was a vast cemetery. The exact number and location of excavated trenches and soundings have not been reported by the Changbar excavators [Naqshineh 2011: 107].

FINDINGS ANALYSIS

One of the main aims of this study was examining the settlement patterns of the area around Ziwiye and their relations with the Ziwiye castle. Usually, advanced societies based on different models such as egalitarian, ranked societies and states develop in vast alluvial plains and are based on a strong agricultural system. However, these are not the case with the ecological conditions in Zarrineh River area and around Ziwiye. The area is geographically located in the northern end of Zagros (Northern Zagros) and is characterized by the landscape consisting of mounds and intermountain plains.

Two variables namely distance (relative to Ziwiye) and accessibility coefficient (to Ziwiye centrality) formed the criterion for determining the limits of the study. Distance is the area that a horse rider traveled in one day in ancient times. According to historical texts and documents, this distance is between 30 and 40 km in flat plains without natural obstacles. The accessibility coefficient includes the factor or factors that can be inhibiting or, on the contrary, accelerating access from one (for example, Ziwiye) to another point (surroundings).

Based on these two components and the topography, an area with a radius of 30 km in the plains and

15 km in the mountainous areas was comprehensively surveyed and the main focus of this investigation was on the archaeological sites contemporaneous with Ziwiye and the relationship of these sites with Ziwiye according to the definitions that were discussed above.

Taking in account that the above-mentioned rank-size systems (egalitarian, chiefdom and state) existed in the plains and environments with high agricultural potential, we were tried to consider the other systems as a default for this region (fig. 7).

In the conducted archeological survey based on indicators such as extent, surface features, distribution of surface cultural materials, geographical and strategic location, ecological facilities and other data, 24 sites from the Iron Age can be divided into three following categories: 1 — large cultural center of Ziwiye and Qaplanto; 2 — large regional center; 3 — villages or small settlements.

Basing on this scheme, we assigned each settlement under study to one of three categories. Strategic geographic position of Ziwiye and its influence over the region which is supported by monuments, prestigious goods, protected military buildings and a vast adjacent cemetery, from which more than 300 graves have been found (the most famous objects are related to Ziwiye) indicates the leading political position and central role of this site in this geographical area, compared to other sites of the region.

The above data set shows the administrative, political and military centrality of Ziwiye in the entire upper Zarrineh River basin. Being the highest rank settlement of this region, it dominated the social, political and economic system of the basin. In other words, Ziwiye, the political center of the Upper Zarrineh River basin within the radius of 15 km in studied area, hold political power over the entire basin, although it is also possible that its dominance and centrality spread over a wider area. To verify this assumption additional research and archaeological survey in the adjacent areas are required.

In this settlement ranking system, the second rank among sites in the studied area is assigned to settlements between 6 and 10 hectares, which includes the sites of Haji Sofi Qaplanto with 7.5 hectares, Qala

Qaplanto with 10.8 hectares and the cemetery affiliated with Qaplanto namely Molla Mostafa with 1.8 hectare and Qala Qaranaw with 6.75 hectares. The existence of the second rank settlements clearly shows that there are large centers in this cultural area, which took intermediate position between Ziwiye as the highest rank settlement and other lower rank sites. These settlements did not have the military and political dominance over the surrounding smaller sites, because the distribution of low rank settlements does not reveal the existence of center-surround model, which supposes that smaller settlements are formed around a larger center. At the same time these four sites are closer to the Ziwiye, and one of the reasons for their size and probably their high population may be related to this issue. Based on this, it seems that the mentioned sites are the places where the heads of the tribes settled in this cultural area, and it is possible that the proximity of these sites to the Ziwiye castle can be evaluated based on this.

The third rank includes sites that are abundant and between 0.5–4 hectares in size. The noteworthy point is that in terms of the spatial distribution, these sites are distributed in the logistically optimal radius around Ziwiye Castle and do not follow a unified or geometric pattern, but mostly depend on geographical and geological background.

CONCLUSION

According to the available evidence, the Mannea kingdom was the largest and most important state that came in reign in the northwestern Iran before the formation of the Median kingdom, and at least from the beginning of the first millennium to about the 7th century BC, it ruled over a large part of the northwestern Iran. Unfortunately comprehensive scientific research on Manneans has not been done yet.

The name of the state and tribes of Mannea was mentioned for the first time in the report of Shalmaneser III's campaign in 843 BC. This date is related to the first recorded encounter between the Assyrians and the Manneans. From this date onwards, the people and the state had a noticeable presence in the Assyrian texts. According to the Assyrian texts,

around 829 BC, Avalki was the king of Mannea and his capital was Izirto.

The survey carried out at Ziwiye and focused on analysis of the settlement patterns of the Upper Zarrineh River basin in the Late Iron Age, tried to define the social, cultural and the political structure of this site basing on archaeological data on the Ziwiye site, one of the key sites of Manneans.

In the study, two components, namely distance and access coefficient (both relative to the site of Ziwiye) were used, and the ideal distance of 30 km to the radius of Ziwiye was taken as the distance for survey. In the result the identification of 51 archaeological sites, among which 25 sites are contemporaneous with Ziwiye (Late Iron Age), was done.

Finally, by analyzing the obtained information, hypotheses and definitions, we assumed that Ziwiye was the center of a feudal system, which was the main ruler settlement, and 4 lower rank feudal sites (at distances of 5 to 10 km) were responsible for the economic provision of Ziwiye.

These four lower rank feudal centers were located in Kurd Kand, Giyah Ber, Bardeh Qalish, and Golzar Sofla and each of these feudal areas in turn also had a number of vassal's area around them, which included 20 sites located at a distance of 5 to 36 km from Ziwiye. At least according to the available evidence, Ziwiye did not have so many defensive outposts around it and there is only one site that can be referred to as an outpost (Haji Sofi Qaplanto) which, due to the distance, cannot be crucially important in the defensive system. The Iron Age sites were located between 1500 and 2000 m above sea level. Based on the collected surface findings, the sites can be classified into the Middle and Late Neolithic periods, Early, Middle and Late Chalcolithic, Middle and Early Bronze, Iron I, II and III, Urartu, Achaemenid, Seleucid, Parthian, Sassanid, Seljuq and Ilkhanid periods. In this article, we analyzed the data on 25 Iron Age III settlements. From the total number of ceramic vessels from the Iron Age sites, 48 pieces including the body, base, rim and handle of pottery were selected for drawing. The settlement pattern of the archaeological sites revealed and cultural materials found on them indicates the existence of the chiefdom system in this region in the Iron Age III.

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