



Recognizing the Sassanid Era of Varamin, Archaeological Evidence and Historical Geography

Narges Zahedi

PhD student, Department of Archaeology, Islamic Azad University Science and Research Branch, Tehran, Iran

Morteza Hessari

Associate Professor, Department of Archeology, Research Institute of Cultural Heritage and Tourism, Tehran, Iran

Mosayeb Amiri

Associate Professor, Department of Archeology, Research Institute of Cultural Heritage and Tourism, Tehran, Iran

Hassan Derakhshi

Assistant Professor, Department of Archaeology, Faculty of Humanities Science, Shoushtar Branch, Islamic Azad University, Shoushtar

Article Information

Doi: [10.30495/jaa.2024.708823](https://doi.org/10.30495/jaa.2024.708823)

Received Date: 05/10/2023

Accepted Date: 01/01/2024

Available Online: 01/03/2024

Abstract: In the east of Pahanvar Ray plain, we come to a fertile area (Pishwa/Varamin plain) which has provided suitable conditions for human habitation since the formation of human settlements until today. Due to the location of this plain in the north of the central desert and the border between the two cultural domains of the northeast and the center, the environmental condition and suitable altitude, which are the main factors for the formation of permanent settlements, and the possible existence of extra-regional connections of this area with the neighboring areas, a wide survey was conducted in this area of the plain. It was concluded that during this archaeological investigation, 61 ancient sites from the Sassanid era were found in the east of Varamin and south of Peshwa. It is most likely that Varamin is considered a part of Ray State and based on the available evidence, it is possible that it is the main center of Ray State as well. According to historical texts and archeological data, the state of Ray was one of the important areas of human settlement during the Sassanid period in Iran. Historical texts mention Ray in the Sassanid period, and the number of sites attributed to the Sassanid period in the geographical area of Varamin has not been found until today. Despite this, based on the prominent geographical location of the Varamin region and the references of the historical texts to the Ray state, this region was probably one of the important regions of the historical period in Iran. In the present article, an attempt has been made to describe the historical geography of Ray State in the Sassanid period, while using the archaeological data of the Sassanid period of Varamin, to draw a part of the archeology and historical geography of Varamin in the Sassanid period.

Keywords: *Varamin Archeology, Historical Geography, Ray State, Sassanid Era.*

* Corresponding Author

Email Address: m.hessari@richt.ir (Morteza Hessari)

Introduction

One of the areas that is a very rich area in terms of archaeology but has received less attention from archaeologists in the past is Varamin Plain. Therefore, this study aimed to conduct a systematic archaeological investigation of the sites located in this area. This survey covers the entire east of Varamin plain from the eastern border of Varamin to the political border of Semnan province, and its northern border is the Khorasan road and the south of it is the newly constructed freeway of Garmsar. From the problems and complexities of this research, first of all, it can be said from the dynamic environmental zones that depositional processes cause the disappearance of habitats related to this period and new deposits have covered the prehistoric environments and the period of historical action in particular. It is completely randomized and these places are placed under a few meters of deposits, and from the Sassanid pads like Iraj Castle, the lowest settlement layers are located on the floor of the current plain. Another issue in the lack or quantity of this period should be mentioned is the leveling of agricultural land damage in Varamin Plain, which has destroyed and scattered most of the plain areas. This operation was started by the Ministry of War in 1346 A.H. and is still being carried out by the farmers living in the plain. One of the natural issues that are involved in the complexities of research is the subject of constant change and transformation in rivers, and this continuous change and transformation is one of the principles governing any river, which changes and shifts in others along with the movement and flow of water and sediment in its bed. Is. Geometric river features are added. Based on historical texts and archeological data, the state of Ray is one of the most important geographical areas of Iran in the Sassanid era. Although the pre-Sasanian archeology in this region is not related to the abundant archaeological data related to the Sasanian period, the combination of these data with historical texts confirms this region before the Sasanian period. Based on what was said, this research includes:

- 1- Identifications belonging to the Sassanid period in this region
- 2- Preparation of the archaeological map of the Sasanian period of the region.
- 3- Studying the status of settlements and explaining the characteristics of Sassanid period settlements, and 4- Knowledge of Sasanian pottery in the region.

Research approach and method

Archeology uses various tools to know, analyze, and reconstruct history. One of these tools that can potentially lead the way to a better and more accurate understanding of the history of regions in the historical period is historical texts. Therefore, written texts on the same level as archaeological findings are important tools for reconstructing history in historical times. In this regard, the approach of the present article is the archeology and historical geography of Varamin (Ray province) in the Sassanid era, citing historical texts and archaeological evidence. All the archaeological evidence has been obtained in a series of field activities, and authentic documents and texts have been used to analyze the historical geography.

Background research

The oldest report related to the identification of ancient sites in the Varamin plain was recorded in 1909 AD by Diet. Diet was the chargé d'affaires of the French embassy in Tehran, who identified a number of works belonging to the Sassanid era in the Varamin region during his investigation (Vandenberg, 1961: 121). In the years 1912-1913 AD, the French delegation headed by Demorgan investigated this area. Schmidt also had activities in Chaltarkhan and Tepemil (Kabli, 1999: 16). Eric Schmidt continued archaeological excavations in Cheshme Ali, the results



of which have not yet been fully published except for brief reports (Schmidt, 1935). Regarding archaeological studies, the cultural materials of Cheshme Ali should be mentioned from the valuable work of Mrs. Yoland Maleki (Maleki, 1968). On June 22, 1936, Eric Schmidt started his activity in Chaltarkhan. The surface of the site was covered with Islamic layers, followed by Sasanian layers. Schmidt introduced these works as the remains of a Sassanid fortress (Schmidt, 1936: 137). Habibullah Samadi carried out excavations in the ancient site of Darus and dated the obtained works to the second millennium BC (Samadi,1995: 146-137). After that, it seems that in the early fifties, Houshang Azimzadeh conducted an archaeological investigation and identification in Karaj and Varamin, which has not been published so far and is mentioned by Iskandar Mokhtari in an article in the first gathering of archaeologists after the revolution in Susa (Mokhtari Taleghani,1994: 255) . After that, Yahya Kothari started a general survey for the identification of ancient places in 1975-76, and he published part of the results in the Munich Congress (Kothari, 1355: 81). These investigations led to the identification of the Podjak hill and Sadegh Melkshamirzadi started his archaeological exploration there years later, which finally led to the identification of artifacts from the Cheshme Ali culture and the Islamic era (Malek Shamirzadi,1997), also in an accidental discovery of Melkshamirzadi, a stone scraper They have found in Masila Plain, during which it was proved that the history of Varamin Plain's settlement dates back to the Middle Paleolithic period (Malek Shahmirzadi, 1994). In 1957, Burton Brown excavated in Qara Tepe Shahriar and found pottery very similar to the pottery of the second Silk period. Also, the survey of Varamin governorate was done by Khalatbari and Hatami (Khalatbari, 2001). Among the surveys of Varamin and Pishwa plains in the years 2007 to 2011 were carried out by Hessari. He has conducted extensive surveys in Varamin plains (Hessari et al.,2014: 107). Among the latest archaeological activities in Varamin and Peshwa area are the investigations and excavations carried out by Morteza Hesari. including survey of Dashtvaramin and Pishwa in the years 2007 to2011, three seasons of exploration in the Shagali area in the years 2005-2007-2012, seven seasons of exploration in the terracotta area between the years 1386 to 1396 and two seasons of stratification of the Moin Abad area in2010-2013. Most of the contents of this research are based on Morteza Hesari's investigations and explorations in Varamin plain (ibid.).

The geography of research in the east of Varamin plain (overview)

Dashtvaramin, whose favorable ecological conditions are due to the branches of Jajroud, is a part of the vast area of the central plateau of Iran, which has attracted the attention of humans for a long time. The soil of Varamin is so fertile due to the sediments of Jajrud that the dominant occupation of the people of this area is agriculture and animal husbandry, and due to the quality of its soil and of course the prosperity of agriculture, it is an area for immigration, and the proof of this can be seen in the patterns of human distribution, as well as the weather of the Varamin area. As a rule, due to latitude, altitude and proximity to the sea, it should be moderate, but due to its location, which is close to the central desert on one side and the slopes of the Alborz mountain range on the other, it changes, so that in the summer season due to the local winds. It exceeds 40 degrees Celsius and it is extremely cold in the winter season, and it has pleasant weather only in spring and autumn. Varamin plain is located in the south of Alborz mountain range. Also, this plain is actually the cone of the Jajorud River. Jajroud is a permanent river that originates from the Alborz mountains in the northeast of Tehran, and after entering the plains of Varamin, in the axis of the alluvial cyclone, the Jajroud river has turned into several branches and as a result The sediment carrying capacity decreases. For this reason, coarse sediments are located in the axis of the cone, and by moving away to the sides and the end of the plain, the



sediments gradually become thinner. The presence of abundant sand and sand mines around the Jajroud river is a sign of the high thickness of coarse-grained sediments in the axis of the cone projection. The terraces of snowy soils have semi-deep to deep soils with heavy texture, which can be seen abundantly along the path on the banks of the Jajerud River. Pebble-shaped fan-shaped deposits are settled in small areas in the north and in the form of a large area in the middle of the watershed, which are often covered with pastures and seasonal pastures for livestock. This is from the point of view of the river of the river, from the good to the vera and the river, which is along the Karaj River, and from the flow of the riverbank. The River has been limited -131).

The studied area extends from the north to Sharifabad on the Khorasan road, from the south to the Javadabad plain to the Shur river, from the west to the Ray plain, and from the east to the central desert and Semnan province. The average height of this range is about 950 meters from the sea level, which starts from the northernmost point at about 1050 meters, and its height gradually decreases towards the south and reaches 830 meters (Figure 1).

In fact, the slope of the studied boundary is zero to three degrees and the northern parts include the southern wall of the central Alborz. The heights and high peaks of this area feed the rivers that originate from these heights throughout the year as a permanent catchment center. Therefore, this plain always has reliable water sources during hot and dry seasons. The mountains of this area are Bibishahrbanu, Namek, Sepayeh, Al Qadr and Hassan Abad. In the southern part of Dashtvaramin, there are lakes called Qom Lake and Hoz Sultan with an area of approximately 2400 square kilometers, and its size and shape vary according to the import and amount of rainfall in different seasons of the year. The rivers that join these lakes are generally from the north and west. These lakes are connected to the desert from the east and have no import. Their northern imports are the rivers that collect the waters of the southern slopes of Alborz, come together by digging wide valleys in the plains in the south of this plain, and enter these lakes in the vicinity of each other. The most important of these rivers include the Shur, Jajrud, Hablerud, Damavand and Qarasu rivers (Badiei, 1983: 10-14). The climate of this region is dry and has cool and very short winters. The average annual rainfall is between 140-150 mm and the average temperature is around 18 degrees Celsius. Dominant physiography in the region includes alluvial pebble fan-shaped lands, alluvial pebble-shaped fan, slope plains and floodplains (Studies of the master plan and revitalization of agricultural development and water resources of the Central and Hamadan watersheds (1989-1992).

The historical geography of Ray in the Sassanid period

As the historical texts try to provide a relative understanding of the history of Ray at the same time as the Sassanid period, this area is considered as one of the important and main areas of Iranshahr. Mentioning Ray and the people of Ray while describing the military conflicts of Ardeshir I (224-224 AD) with Ordvan IV (216-224 AD), (Ferdosi,1960 , 12:438; Mostofi, 1982:104; Gardyezdi, 1984: 65; Adib Esfahani, 1934: 126), mention of the name of Ray as a part of the territory of Iranshahr, in Ardeshir Babkan's career (Faravashi,2003: 4: 14), and referring to the name of Ray as Ray Ardeshir (Ansari-Damshqi,2003: 290) and Ram Ardeshir (Gardyezdi, 1984: 65) in the written texts of the Islamic period, implicitly indicate the presence of this region in the history of the early Sassanid period, at the same time as Ardeshir I.

The mention of Aštād Razi as one of the influential court secretaries of Shapur I (241-272 AD) in the Zoroastrian Kaaba inscription (ŠKZ, IV. IV-V; Huyse 1999: 175-176), numismatic evidence has also been able to show the history of Ray in the early Sassanid period. The minting of the

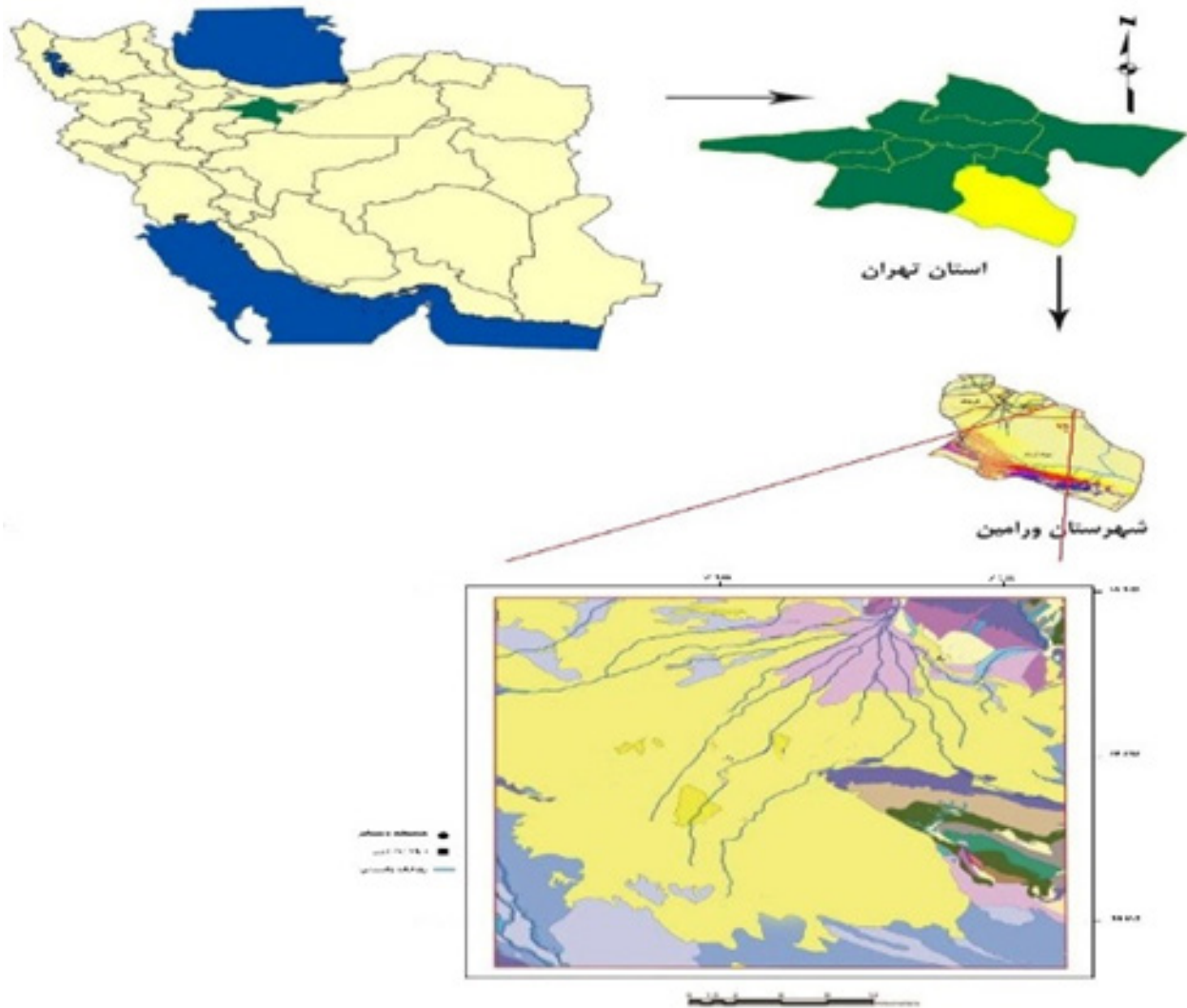


Figure 1. Geographical location of the Varamin plain.

name of the mint on the coins of the early Sassanid period, until the time of Bahram IV (388-399 AD), was limited only to the mints in the east of Iranshahr, from Saxistan to Balkh and Merv (Ghislan and Mariya, 2013: 41; Amini, 2009: 84 -74). However, the name of Ray mint (marked as *ld* or *ldy*) can be seen on the coins of Bahram II (276-293 AD) and Hormuz II (302-309 AD) (Ghislan and Mariya, 2013: 38). This is despite the fact that from Narsi (293-302 AD), the king between Bahram II and Hormuz II, no coins with re-mint have been obtained (ibid.: 40-41). From all these evidences, Ghislan and Mariya have concluded that a political event took place in Ray, at the same time as Bahram II, and they believe that the Mehran family, one of the prominent Parthian families living in Ray, played a central role in this event. According to these two, the minting of Ray's name on the coins of Bahram II and Hormuz II was done with the aim of stabilizing their political position in the region of Ray; The position that was challenged during Narsi's time and the mint of this city was closed as a result of this political event (Ibid.: 36-41).

Given that minting the name of the mints in the early Sassanid period was done only with

the aim of stabilizing the political position of the Sassanids in the eastern regions of Iranshahr (Ghislan and Mariya, 2013: 41), the minting of the name Re on the coins of Bahram II and Hormuz II probably indicates a The political event during the time of these two kings; An event that so far we have not been able to obtain information about its exact quantity and quality; However, the political influence of the Mehran family in Ray during the Sassanid period strengthens the hypothesis of the connection of this possible event with the Mehran family. It shows part of the importance and position of Ray in the political relations of the early Sassanid period. Historical texts also mention Ray in the middle of the Sassanid period. Referring to Ray as the place of military conflict between Pirouz and Hormuz, the children of Yazdgerd II (438-457 AD), (Ebn Athir,2005: 473) and subsequently changing the name of this region to Piruzabad (Balami,1999: 997 and 954) and Ramfirouz (Ebn Balkhi , 1995: 218; Yaqut Hamavi,2004: 598) which was also confirmed by sealology evidence (Ghislan and Mariya,2013: 45) and archeology (Rante, 2010), is another part of the historical geography of Ray at the same time as the middle of the Sassanid era. More extensive historical information is available from this region at the end of the Sasanian period. Ray is also mentioned in the military conflicts of Qabad I (488-496 AD and 499-531 AD), Khosrow II (590-628 AD) and Yazdgerd III (632-651 AD). There is more information about Ray in the late Sassanid period. Tabari and Balami point out that Qubad, with the help of Espahbad Shapur from the Mehran family, captured and killed Sukhra from the Qaran family and one of the rulers of Sistan (Tabari,1983: 639; Balami,1999: 675). Masoudi also mentions the breaking of the idols of Atashkade Ray by Khosrow I (531-579 AD): "Anushirvan threw out the idols." They say that when Anushirvan left, there was a big fire there and he moved it to a place known as a pond" (Masoodi,1991: 604).

During the reign of Khosrow II (628-590 AD), the written texts cover more of the events of Ray. According to some writers of the Islamic period, including Dinuri, Balami, Nizam al-Molk, Masoudi, Gardizi, Ya'qoubi and Ibn Khaldun, Bahram Chubin of the Mehran family besieged Tisfon and ruled over this city during the reign of Khosroparviz. Khosroparviz confronted him and, while expelling Bahram Chubin from Tisfon, captured and destroyed Rey and entrusted the governance of the region to Bandavi and Bastam, his uncles, along with Gerkan and Khorasan.

Based on the above cases, which are introductions to the historical geography of Ray State in the Sasanian period, in this regard, it is tried to use the archaeological data of the region in order to better understand the historical geography of Ray State in this period of Iran's history. Overview of the Sassanid era sites in the east of Varamin plain and the influence of environmental and geographical factors in their formation

out of the total of 250 sites investigated in the east of Varamin plain, 61 sites contained Sassanid era artifacts (figure 2, Table 1), out of which four sites had larger dimensions than other sites and the appearance and evidence showed a difference. These areas included Iraj Castle, Khali-dabad 5, Hesarsokh. In the field surveys of the settlements in the studied area, the prerequisites for the central location were examined and the analytical results showed that the three areas of the studied area had the main role of the central location, which will be explained.

Iraj Castle

Iraj Castle is considered one of the most important historical sites in Iran. This area has an area of 190 hectares. Some have considered this area to be the same as Verne Chahargosh Vendidad (Etemamad Aldol-Saltaneh, 1932: 179-181). Kleiss also called this area Parthian-Sasanian, which continued until the patriarchal period (Kleiss, 1987: 189-307). Khalatbari also attributes this castle to the Islamic period (Khalatbari,2001: 399). Structurally, this area consists



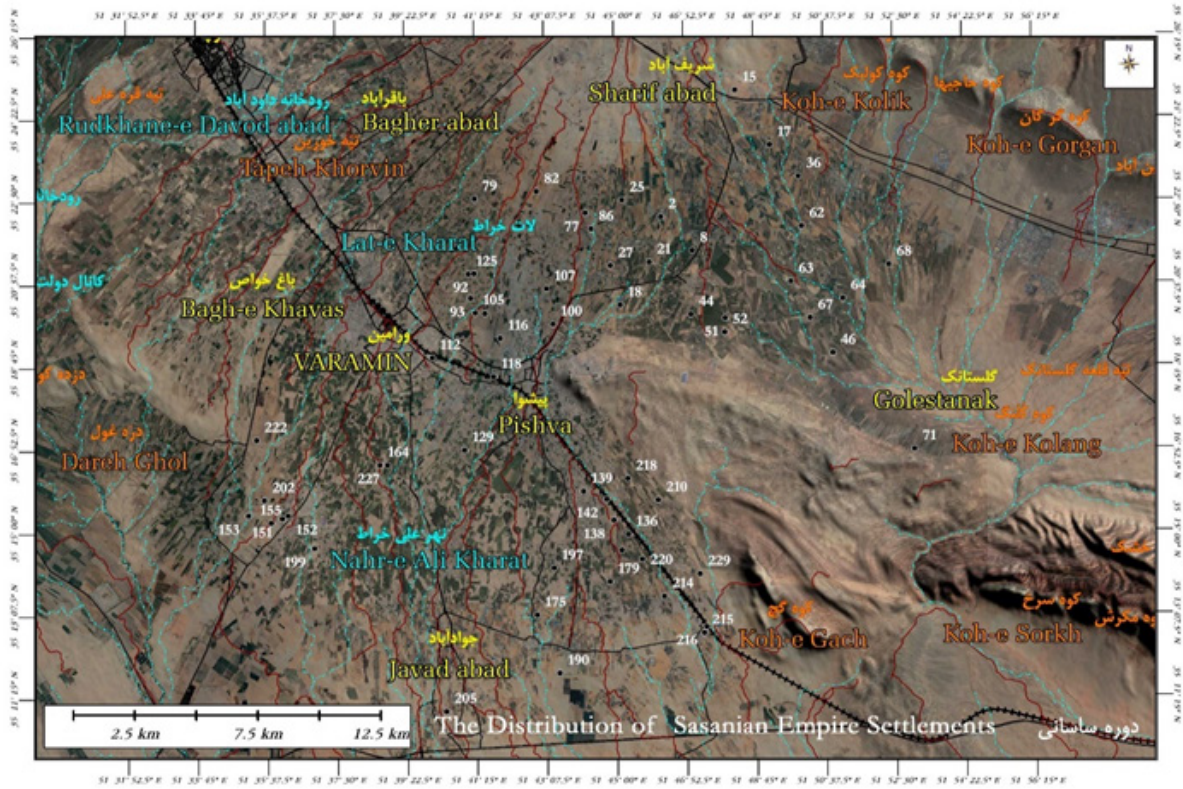


Figure 2. Distribution of Sasanian sites (Authors, 2022).

Table 1. Sassanid sites of Varamin Plain

the period	code	name
Neolithic, Cheshme Ali and Sasanian	129	Moin Abad
Neolithic / Middle and Sassanian Copper Age	034	afaren
Middle Neolithic, Sasanian and Middle Islamic	067	Old Mahmoudabad
New Copper Age, Sasanian and Late Islamic	071	Shurqazi
New and Sasanian Copper Age	105	iraj Castle
New Copper Age, Ahan 2, Sassanid	112	City lands
New Copper Age, Iron 2, Sasanid and Late Islamic	116	Sin Castle
Sassanid Late Islamic	002	Jamkaran Castle
Iron 2, Late Islamic Sasanian	008	South Yam
Sassanid Middle Islamic	015	Sharifabad 2
Sassanid Middle Islamic	017	West of Sharifabad Castle
sassanid	018	North Nojamkaran
Middle Sassanid and Islamic	021	Saleh Abad 2
Iron 2, Sasanian and Middle Islamic	025	Aliabad 4
sassanid	027	Aliabad 5
Sasanian and late Islamic	036	Qaragol Castle
Middle Sassanid and Islamic	044	Qiyasabad
Parthians and Sasanians	046	Jalil Abad 2
Sasanian and late Islami	051	Mahmoud Abad No 3

Table 1. Sassanid sites of Varamin Plain

Middle Sassanid and Islamic	052	Mahmoud Abad No4
sassanid	063	Mehtar fence 3
Middle and late Sassanid and Islami	064	Mandekan Castle
Sasanian and late Islamic	068	red hill
sassanid	077	Shushabad
Sasanian and Parthian	079	Saeed Abad 2
sassanid	082	Shoaibabad 3
sassanid	086	North of Aliabad Shuran
sassanid	092	North of Iraj Castle
sassanid	093	east of Iraj Castle
Sassanid and Ahan 2	094	Behind the ranching safari
Sassanid and Ahan 2	107	Qaleh Hossein
Sasanian, Iron 2 and Middle Islamic	118	Northeast of the castle
sassanid	125	Iraj Castle
Iron Age 1 and 2, Sasanian and Middle Islamic	136	Tahir Abad 2
Iron Age 1 and 2, Sasanian and Middle and Late Islamic	137	Hossein Abad Castle
Sassanid and early Islamic	138	Water engine
sassanid	139	Mohammad Abad Arabs1
Sassanid and early Islamic	142	Mohammad Abad Arabs4
sassanid	151	Khalid Abad1
sassanid	152	Khalid Abad2
sassanid	153	Khalid Abad3
sassanid	155	Khalid Abad5
Sassanid and early Islamic	229	Nizar Hill
sassanid	164	Taghiabad 3
sassanid	175	Hesar Beyk Castle
sassanid	179	red fence
sassanid	190	Zavarehvar Castle 1
sassanid	197	Zavareh Var castle
Sassanid, Middle Islami	199	Gabri Castle, Damzabad
Sassanid, Early Islamic	202	Kavir Abad 3
sassanid	205	Nazar Abad hill
Middle Sasanian-Islamic	210	Mustafa Abad hill
sassanid	214	Javadabad of the Arabs
sassanid	215	High Castle 3
Middle Sasanian-Islamic	216	High Castle 4
Sassanid, Early Islamic	218	Salmanabad 2
sassanid	220	lordly land
sassanid	222	Ganjtepe Nashadia
New Copperstone, Old Bronze, Sasanian and Late Islamic	100	South side of Phil Qala
sassanid	227	Taghiabad 5
Late Islamic, Sassanid	62	Khalifabad
Copper Age, Iron Age, Sassanid and Safavid	105	East of Iraj Castle



of two layered and clay parts, and its fence is between 15 and 22 meters wide and between 6 and 7.5 meters high based on the topography of the land. 148 circular towers are also built on the fence. The remains of four arches can be seen between each tower. Corridors have been installed between the towers, which shows their usability. There were probably 814 rooms of the same size around the enclosure wall. Apparently, the main destruction and filling of this fort coincided with the defeat of the Sassanid army from the Islamic army, and its construction was related to the time when political calm reigned in the region, a calm that is well reflected in its huge arches and long fence. This fort housed a population of about 3000 people at the time of settlement. Apparently, based on its lofty architecture and the rooms inside the fence and the lack of architecture inside the enclosed enclosure, this castle probably had the role of providing regional security, preventing possible rebellions, training the military force for battle, military training of soldiers, and a resting place for trained troops (Mousvinia and Nemati, 2017: 202-190).

Hesare Sorkh

Hesare Sorkh should be mentioned as one of the prominent and possibly religious sites. This huge hill is located in the south and west of the road of Hesarsokh village and attached to the village is a large area in the north width of 52.13 35 and the east length 44.49 4.51 at an altitude of 855 meters above the sea level. The appearance of the area is like a rectangular castle, each side of which is about 100 meters long and wide, and its height from the level of the plain is about 15 meters. The slope of the hill is high and the lowest point is about 45 degrees. The area is surrounded from the east side to the village of Hesarsokh and from other directions between agricultural fields. In every square meter, about 5 pieces of pottery belonging to the Sassanid period are found, of course, the pottery of the late Islamic period can also be seen among the Sassanid works. Almost all the finds on the surface of the hill belong to the Sassanid period, and the new finds are related to the villagers who scattered on the surface and around the site. This area has a slight deviation to the right and its degree of deviation is less than ten degrees. Its dimensions, shape and degree of deviation are very similar to fire temples of the Sassanid period. Huge works of architecture can also be seen on the grounds. Architecture in the form of arches that revolve around a square area. According to the author's review of the studied works, apparently, this magnificent hill must be a large fire temple.

Fire temple means a Zoroastrian place of worship where the fire is located in a special place and the most important religious rituals are performed in it and in front of the fire. The time of the beginning of the construction of the fire temple is not known. In Avesta, there is no term for fire temple. The first mention of fire (known and special) in Zoroastrian literature is from the third century AD. Apparently, the Zoroastrians started building temples in imitation of the people of Mesopotamia from the 4th century BC onwards. Before that, their religious ceremonies were held in the open air, especially on the heights. Our information about fire temples is mainly from Sasanian and Islamic period. The fire temples of that era were usually a domed cube building, which was called four arches. The most sacred part of each fire temple, where the fire is kept, is a small cubic or rectangular room called Gonbad (in Iranian Zoroastrian terms), or Atashgah (in Indian Zoroastrian terms). The term dome in this case is also common in the Pahlavi language.

Ray fire camp has been mentioned in some sources (Christiansen,1999: 191). Masoudi writes in *Moruj al-Zahb* that Ray's fire temple was built near Ray by order of Anushirvan (Massoudi,1991). In her description of Ray, Yaqut mentions the fire pits that were recently destroyed



by the Tatars until 617 AH (Yaqut Homvi, 2013). After the exploration and restoration of the Tepemil building, this building was attributed to Ray's fire temple, but from the appearance of the building, it is clear that the building cannot be a fire temple and probably the Hesarsoekh fire temple is the same as Ray's fire temple.

Khaled Abad 5

5 sites make up the Khalidabad complex, four of which are related to the Sassanid era, and one of these hills is bigger than the rest. The larger enclosure has an adobe wall and architectural works can be seen in every corner of it. The height of the area is not so high and it is a maximum of four meters. The guard towers of the fence of this area are still visible. The architect in one corner of the site is much taller than the other places and apparently has two floors. The entire surface of the area is full of pottery, most of which belong to large storage containers. These pieces usually belong to containers with closed mouths. The fence of this area is not a complete square and the direction of the area is from northeast to southwest. According to the ground-level works found and the available evidence, it seems that this area is one of the main places of the plain, and the presence of large lidded jars in some of the rooms strengthens the opinion that it was a strategic building for economic affairs.

Among the other areas that can probably be called among the main places are Mahmood Abad (67) and Shurqazi (71). In the surface survey, these areas did not provide many works for evaluation and conclusion, and from their dimensions, they can be called part of the main place. Of course, the architecture of Shurqazi is very similar to Iraj Castle, but with smaller dimensions, which was probably a guarding castle and overseer of the communication routes of the region. Varamin Plain is a relatively flat plain with low elevations in some places. These heights barely reach 20 meters, the height difference between the highest point and the lowest point is less than 200 meters, and this small difference in height did not have much effect on the way the people of the Sassanid period chose places in the Varamin plain, the slope analysis of the region indicates that. The degree of slope of the plain and the position of the enclosures relative to it also depends on the height of the plain so that there is no significant difference between the height classification and the slope of the enclosures. The provision and ease of access to water resources has long been considered as one of the most important effective factors in choosing a place and forming a settlement. It should also be noted that some of the surface water sources that are branched from the Jajrud alluvial fan have changed over time, and this change of direction can be seen in the subsurface layers, and it is possible that with the change of the flow of water, the continuity of habitats will also be affected. and the reason for the current distance between surface water sources and Sassanid settlements is this important factor. In some areas, water has apparently been brought into or close to the area by means of irrigation and canalization. However, 19 sites are up to 200 meters away from water sources, and there are 29 sites from 200 to 300 meters away. Between 300 and 500 meters, 10 enclosures have been created, and from 500 meters to 800 meters away from the permanent water source, there are 3 enclosures. Soil is one of the other potentially effective factors in the formation and dispersion of Sassanid settlements in the Varamin Plain. According to the soil classification, no site is located in Badland region, only Nazarabad is located in Namaki region, and all 61 sites are located in Eridisal and Anticell regions. Examining the importance of roads is to such an extent that the cultural level of each region, its level of development, description and analysis of settlement patterns, the extent and clustering of settlements, investigation of economic, political, cultural issues and population estimation can be done according to its distance or proximity to communication routes. Appointed. Twelve settlements out of a total of 61 settlements of the Sassanid

era in Varamin Plain are located within a hundred meters, forty-two settlements are located between 100 and 500 meters, and seven settlements are located between 500 and 1500 meters from the main and secondary roads of the Varamin Plain. Land use and vegetation is the result of the combination of human activity and the capabilities of the place. Land use and vegetation is the result of the combination of human activity and the capabilities of the place. Although land use is actually the result of the population's activities, it is in a way a proof of the existence of capabilities and the possibility of using the capabilities of the natural environment. Out of a total of 61 ancient settlements of the Sassanid period in the Varamin Plain, 59 settlements are located in the boundaries of agricultural lands. Geological features and the presence of alluvial sediments of the plain, suitable slope and access to water sources in the past as well as today, had provided the necessary conditions for agricultural activity. Two settlements are located on the border of bare lands. All 61 sites of the Sassanid period in the Varamin Plain are located in areas under the control of irrigated agricultural lands, even two sites that are bare. The agricultural lands that are currently used by the residents of the region have been of interest to the ancient tribes in the past as well, and the claim is that all the ancient settlements of the Varamin Plain are located in these areas. Among the other components of the environment, we can mention the shape of the land or the morphological structure of the natural environment of Varamin Plain. Out of a total of 61 sites, 57 sites in the region were created on these sediments. Access to water and underground aquifers, gentle and suitable slope, the presence of fine and rich sediments and the availability of conditions for agricultural and pottery activities in this area are among the reasons for the creation of ancient settlements in these sediments. Only one ancient settlement from the Sassanid period has been established in the clay and salt zone, and two settlements are located in gray conglomerate with marl cement. Another influencing factor is the environment on the formation of the climate settlement. Almost most of the settlements are located in hot and dry climate, which shows the role of climate in flat plains that contain fertile agricultural lands. The point that should be noted about settlement patterns is that settlement conditions are measured based on today's climate. A climate that can affect water resources by decreasing and increasing rainfall and may have dried up some of today's springs or rivers due to low rainfall or vice versa.

Typology of Sasanian pottery of Varamin Plain

Nine types of pottery specific to the Sassanid period were found in the Varamin plain, which we will describe below.

A: A delicate type of Buff ware

This species has provided us with the largest number and most diverse edges of containers. This type includes pottery that is usually simple and rarely has parallel lines near the bottom of the body, and the additive used in them is of mineral type, which appears in the form of protrusions on the internal and external surfaces of all parts, and this is one of the characteristics. The characteristic features of this type are pottery (Figure 3).

B: Medium type of Buffware

They include mostly simple pottery, the added material of this type of pottery is mineral and vegetable, whose mineral type is usually fine white limestone, and in some pieces, there are small particles of crushed straw both in the cross-section and on the body in the form of voids. It can be observed with the naked eye, these types of pottery are more simple and some pieces are made by hand, and some other pieces of parallel lines resulting from the rotation of the pottery wheel can be seen in a completely regular manner on the pottery (Figure 4).



Picture3. Image and Design of Buff Ware

C: Delicate Kerem Pottery

The remnants of this subspecies are brighter than other subspecies and almost milky in color. Chamotte is a small mineral of one millimeter in size. This type includes pottery that is usually simple and rarely has parallel lines near the bottom of the body, and the additive used in them is of mineral type, which appears in the form of protrusions on the internal and external surfaces of all parts, and this is one of the characteristics. The characteristic features of this type are pottery (Figure 5).

D: Coarse Ware

In this subspecies, the coating is thick, and its colors are varied and limited to cream and pink. Chamotte this species is as a mineral as a millimeter grinder, and their cooking is excellent. It consists mainly of simple and rare pottery with parallel clay lines near the floor or body the additive used in them is of the mineral type which is formed as a highlight on the inner and outer surfaces of all parts and this itself is a distinctive feature of this type of pottery (Figure 6).

E: Red Ware

This type includes simple and sometimes carved pottery that can be seen on the body and near the edge, and in this type, the added material used in them is of mineral and vegetable type, which mineral type is fine sand and in pieces of crushed straw seeds. which is often seen on the pieces and on the cross-section of pottery (Figure 7).

And: Medium Red Species

The remains of this subspecies are red, brown, and pink. Its chamotte is a type of fine sand, along with which there are also plaster particles that are completely spread inside the paste and are visible. The dishes of this subspecies are made in small dimensions and their edges are turned outside. Sufficient and in some cases too much heat has been given to this species (Figure 8).

G: Glazed ware

From the Varamin Plain, nine types of pottery were discovered from this era. These ceramics

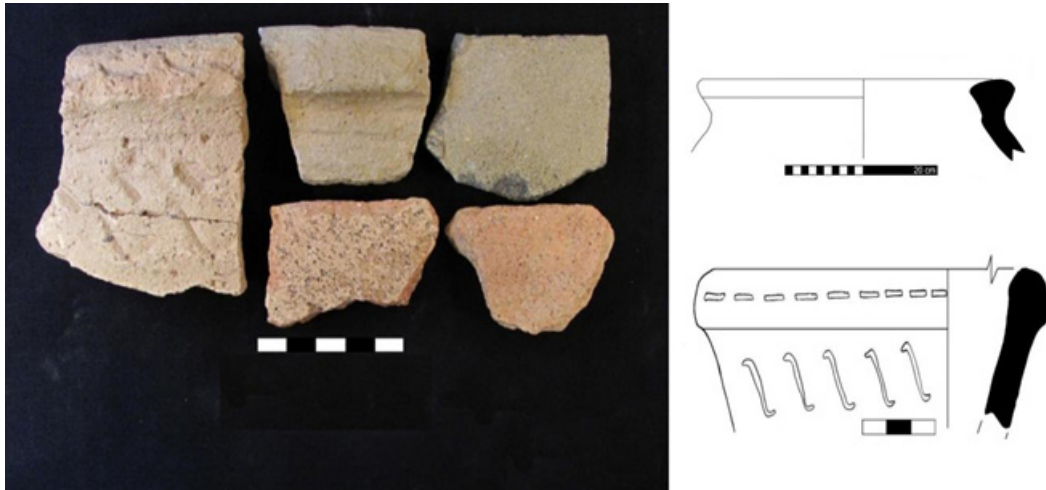


Figure 4. Image and Design of Buff Ware Medium



Picture 5. Image and Design of Ceram Pottery



Figure 6. Image and Design of Coarse Ware

are often referred to as Sasanian-Islamic pottery because they maintain the tradition from the Sassanid to the Islamic period, making it challenging to assign them to a specific era. One distinctive type is pottery with an blue-green glaze and extra motifs, found in various areas of the Varamin Plain that were surveyed (Figure 9).

H: Sealed pottery

The importance of studying and researching the pottery found in ancient sites from the time of making pottery to recent centuries is considered as data with continuous life and great abundance. Knowing the appearance characteristics of pottery and its description can be considered as the first step in the typology of pottery. In the investigations carried out in Varamin Plain, pottery pieces belonging to different historical and Islamic periods were obtained. Part of the pottery belonging to the Sassanid period and the early centuries of Islam had stamped designs or stamped designs. This group was chosen because it is less abundant among other types of pottery. In this type, the pottery is finely made and their thickness varies from 15 mm to 5 mm (Figure 10).

I: Gray pottery

This gray paste clay, consisting of thirty pieces, mainly contains simple pottery with added material of small mineral particles less than two-tenths of a millimeter. A distinctive feature of this clay is the consistently smoothed external surface of all its parts. The potter uses clean, sifted soil with a uniform and stable texture, indicating thorough kneading. This type of clay demonstrates its quality by producing a clear sound upon impact (Figure 11).

Conclusion

Based on historical texts and archeological evidence, the state of Ray has been one of the most important states of Iran in the historical period. Although the archaeological evidence does not show such historical diversity in the Median and Achaemenid periods, the prominent geographical location of Ray and the abundance of historical references to this area potentially show that Ray has always been considered one of the important regions of Iran's historical period. It is probably because of such rich history that Rey is mentioned in Vendidad as one of the first regions created by Ahuramazda. In addition, signs of this historical richness of Ray can be seen in the Assyrian, Median, Achaemenid, Seleucid and Parthian periods, Jewish religious texts and classical texts related to this area. In addition to this, the archaeological evidence scattered before Sassanid in Ray should be added, which was briefly mentioned in a separate topic. Based on historical texts and evidence of seal and numismatics, the state of Ray was one of the most important states of Iran in the Sassanid period. The presence of this region in the political events of the early Sassanid period from Ardashir I to Hormuz II, the presence of Ray in the political events of the succession after the death of Yazdgerd II, which subsequently led to the reconstruction of Ray by Pirouz and changing its name to Piruzabad and Ram Firouz, and the prominent presence of Ray in the events of The politics of the late Sassanid era at the same time as Qubad I, Khosrow II and Yazdgerd III, potentially shows the importance and prominent position of Ray State in the history of Iran during the Sassanid period. Nine types of pottery have been obtained from this plain, and it seems that some types with the same quality were made and used in the Islamic period. Approximately 56 enclosures found in this survey are related to villages with agricultural and animal husbandry economy, and four enclosures are related to religious and military enclosures.

Conflict of Interest: The authors declare that they agreed to participate in the present paper and there is no competing interests.



Figure 8. Medium Red Species

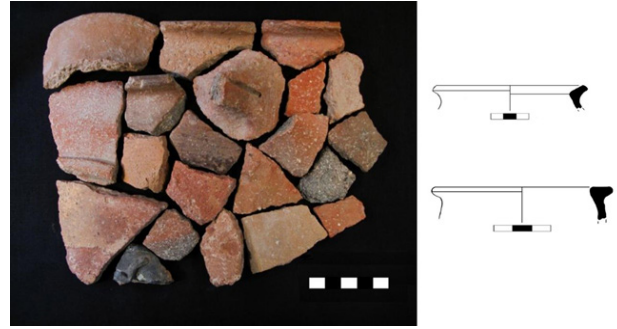


Figure 7. Red ware

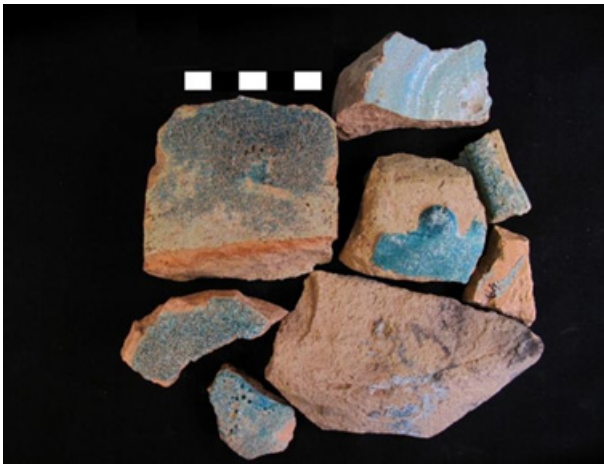


Figure 9. Glazed Ware



Figure 10. Sealed pottery



Figure 11. Gray pottery

Bibliographical References

- Adib Isfahani, M.H., 1934., History of the Sassanid Sultans, Bina. [in Persian]
- Ansari Damashqi, Sh.M., 2003., Al Dhar Phi Aja'ib Albar and Al Bahr. Translation by Dr. Seyed Hamid Tabibian. Tehran: Mythology Publications.
- Amini, A., 2009., Sasanian coins. Tehran: Pazineh. [In Persian]
- Balami, M. M., 1999. History of Tabari (History of Swallowing), J2. Tehran: Soroush. [in Persian]
- Badiee, R., 1983, Detailed geography of Iran, Tehran: Eqbal. [in Persian].
- Christensen, A, 1999, Iran Sous les Sassanides, Translaitiob: Rashid Yasami, Publisher, Sedaye Moaser.
- Etemad al-Saltaneh, M.H., 1932., Adaptation of Old and New Geographical Vocabulary of Iran, Appendix to Volume III of the Book of Darr al-Tijan Fi History of the Bani al-Ashkan, Stone Print, Tehran. [In Persian].
- Ebn Athir, E 2005. Complete History, J2, Translated by Dr. Seyed Hossein Rohani. Tehran: Mythology. [In Persian]
- Ebn Balakhi, 1995, (based on text by Majoh Lestrangle and Nicholson). Explanation and Explanation of Dr. Mansoor Reastgar-Fasai. Shiraz: Persian Studies Foundation. [In Persian]
- Faravash, B, 2003, Ardeshir Babakan Schedule, Tehran, Publisher: Tehran University. [in Persian]
- Ferdowsi, A., 1960., Shahnameh, by the Institute of Orientalism of the Soviet Academy of Sciences, Moscow.
- Gardyezdi., A.S., 1984., Zein al-Naqshid, correction of Abdolahi Habibi. Tehran: The World of Books. [in Persian]
- Gislen, R. and Marine, T., 2013.,. "Ray in the Age of the Sassanids According to Basic Sources", Iran-nameh, Year29, Numbers 2:48-36.]
- Hessari, M., Akbari, H., Moradsoltan, M., and Ghasemi, S., 2014, Systematic Survey of South Peshwa, Javadabad District, South Varamin. Reports of the 13th Annual Symposium of Iranian Archaeology, Tehran: ICAR, 107-109.
- Huyse, P. 1999. Die dreisprachige Inschrift Šabuhrs I. an der Kaba-i Zardust (ŠKZ). (Corpus Inscriptio-num Iranicarum, Pt. III) 2 vols. School of Oriental and African Studies, London.
- Kaboli, M., 1999. Qomrud archeology survey, Tehran: ICAR. (Persian).
- Khalatbari, M, R., 2001, Survey report of Varamin city, Tehran: Archeology Research Institute Document Center (unpublished).
- Kleiss, W., 1987. Qaleh Gabri bei Veramin, AMI (Archaeologische Mitteilungen aus Iran), band 20, 289-308.
- Kothari, J., 1995. "Government Capital Ray". CAPITALS OF IRAN, Edited by Mohammad Yosef Kiani Tehran: The country's cultural heritage organization. [in Persian]
- Masoudi, A.H., 1991. Marooj al-Zahab and Moadan-ul-Johar, J3, Translation by Abolghasem Payandeh.

Tehran: Scientific and Cultural. [in Persian]

Malek Shahmirzadi. S., 1994. A Middle Paleolithic scarper from the Masile basin near Tehran. *Paleorient* 20, 123-125.

Malek Shahmirzadi. S., 1997. Preliminary report of the Excavation of test pits in Poinak Varamin, *Archaeological Reports* 1, Tehran: Icar, 39-49. [in Persian].

Maleki.Y.,1968. Abstract Art and Animals Motif among the ceramists of the Region of Tehran. *Archaeology Viva* 1, The Iran Bastan museum. Tehran

Mokhtari Taleghani, E., 1994, Statistical analysis of archaeological investigations in Saveh region, *Memoir of Susa Archaeology Symposium*, Tehran: ICAR, 253-294.

Mostoufi, H., 1982., *Date excerpted*, by Guy Lestrang. Tehran: The World of Books. [in Persian]

Mousavinia, S, M., and Nemati, M, R., 2017, Archaeological Survey of Qaleh Iraj, Dating and Function, *Journal of Archaeological Studies* 14, 189-208.

Rante, R. 2010. "Ray i. Archaeology", in: *Encyclopedia Iranica*. www.iranica.com.

Samadi, H., 1955. Brief information about some open dishes in Shamiran lessons, (Persian).

Schmidt .E. F., 1935. Excavations at Ray. *Bulletin of the University Museum* 5/4 25-27

Schmidt, E. F., 1936. Ray Excavation, Log Books Studies on the comprehensive plan and revitalization of agricultural development and water resources in the central and Hamadan watersheds, 1989-1994, Volum III. Water resources, deputy plan and program of the Ministry of Agricultural Jihad.

Tabari, M.J., 1983., *History of Tabari*, c. 2 and 5, Translation by Abul Qasim Payandeh. Tehran: Mythology Publishing. [in Persian]

Vanden Berghe, L. 1961., *Archelogie de L'Iran ancient*, Leiden: Brill.

Yaqut Hamoui, E.A., 2004., *Mo'jam al-Baladan*, c. 1 and 2, translated by Ali Naghi Vaziri. Tehran: Cultural Heritage Organization of the country.[in Persian]

