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PHOTO: Patterned pottery from Tepe Mod B

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Guide for Authors

Preface

The ***Journal of Sistan and Baluchistan Studies (JSBS)*** is devoted to South-Eastern Iran and welcomes articles in various areas of the world with a Sistan and Baluchistan legacy, especially adjacent areas such as Afghanistan, Pakistan, India, Oman, the Persian Gulf, and Central Asia with a chronological span from Paleolithic to Modern times. Contributions must be original and have not previously been published elsewhere. Please be ensure that there are no conflicts between the authors before submitting. Before being published, manuscripts submitted to the ***Journal of Sistan and Baluchistan Studies (JSBS)*** are critically reviewed. The purpose of the review is to reassure readers that the papers have been approved by competent and unbiased professionals. Manuscripts should be written in English, with the use of one spelling style throughout the entire manuscript. Both British and American spelling will be accepted. The manuscript should be submitted only via the ***Journal of Sistan and Baluchistan Studies (JSBS)*** the Editorial System (http://www.jsbs.uoz.ac.ir/). All papers are available free of charge at the Journal's webpage.

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Short communication consists of title page, text, acknowledgments, and references with figure and table captions.

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The title page must contain the title that should be clear, intelligible to experts in different disciplines, and represent the substance of the article. Moreover, full name(s) of the author(s),

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Provide three – seven keywords, covering the most precise phrases in the article. They should explain the subject and results and should not be the same as the terms used in the title.

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State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

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Results should be clear and concise.

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Curtis, J. (2012). *The Oxus Treasure*. London: British Museum Press.

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Chapter in an edited book

Vidale, M. (2020). Chlorite Containers from the Oxus civilization between technical choices and iconographic codes. In: B. Lyonnet, and N. A. Dubova, (eds.), *The World of the Oxus Civilization*. London: Routledge, pp.293-332.

Journal paper (electronic)

Perrot, J. (2008). Jiroft iv. Iconography of Chlorite Artefacts. *Encyclopædia Iranica*, 14, pp.656–664. [Online]. Available at: https://www.iranicaonline.org/articles/jiroft-iv-iconography-of-chlorite-artifacts [Accessed 25 August 2021].

Journal paper (printed copy)

Sajjadi, S. M. S. (2007). Wall painting from Dahaneh-ye Gholaman (Sistan). *Ancient Civilizations from Scythia to Siberia*, 13(1-2), 129–154.

Jarrige, J. F., Didier, A. and Quivron, G. (2011). Shahr-i Sokhta and the chronology of the Indo-Iranian regions. *Paléorient*, 37 (2), 7–34.

Website

Shahr-i Sokhta - UNESCO World Heritage Centre. [Online]. Available at: http://whc.unesco.org/en/list/1456/ [Accessed 25 August 2021].

Thesis

Shirazi, R. (2008). *Etudes typologiques et comparatives des représentations humaines en terre crue, en terre cuite et en pierre de l'Asie centrale et de l'Iran oriental du Chalcolithique à l'âge du Bronze (4000-1800 av. J.-C.).* Ph.D. Thesis. Panthéon-Sorbonne University.

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following/s: f./ff.

centimeter/s: cm

meter/s: m

etcetera: etc.

circa: c.

videlicet: viz.

exempli gratia: e.g.

volume/s: Vol./Vols.

chapter: Chapt.

column: Col.

folio/s: Fol./Fols.

translator: transl.

second [II] century: 2nd century, etc.

century and millennium: never abbreviated

before Christ: BCE

after Christ: CE

plate/s: only when referring to author's plates within one's own text: Pl./Pls.

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fig./figs., pl./pls. in all other cases

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THE EFFECTS OF CLIMATE AND ENVIRONMENT ON THE FORMATION AND DEVELOPMENT OF ARCHITECTURE ON THE COASTS OF CHABAHAR AND KONARAK DURING THE ISLAMIC ERA

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Abstract: The diversity of climatic conditions has affected architecture and caused the formation of different types of architecture in Iran. The Makran area is a long plain on the northern shores of the Oman Sea and south of the Makran mountains in Sistan and Baluchistan province, which today includes two counties, Chabahar and Konarak. This area is considered warm and humid in terms of climate. In the present study, we investigate the natural and climatic causes affecting the formation and development of the architectural constructions on the Makran beaches, which appeared during the Islamic era. Therefore, in addition to the field method, documentary studies were used to collect information. First, the architectural samples of Makran beaches in the Islamic era were identified. Then thirteen instances were selected based on the building's architectural features, authenticity, and present condition. These buildings belong to the periods between the Seljuk dynasty and the late Pahlavi period. The questions are, what were the strategies used by the architects to deal with the risks and unfavorable climatic conditions and their environmental effects? What similarities and differences are there between the architecture of the Islamic era of the coasts of the Persian Gulf and Makran? How has been the architectural pattern(s) of Makran coasts influenced by climate? The results of the investigations indicate that Makran architects were fully aware of the limitations and considered climatic factors such as sunlight, wind, temperature, and humidity. In the construction of buildings, they have paid attention to choosing things such as the type of materials, the color of materials, the construction of the building on the platform, the orientation of the building, and the design of the plan in an extroverted manner. This has ensured the comfort of the residents. These architectural principles are more visible in residential and native buildings. However, in buildings with military and administrative use, probably due to the influence of political and cultural factors, such measures have been thought less.

Keywords: Islamic architecture, southeast of Iran, Makran coasts, environment.

چکیده: تنوع عوامل اقلیمی بر شکل‌گیری فضاهای معماری اثر گذاشته و سبب گوناگونی انواع معماری در ایران شده است. سواحل مکران جلگه طویلی در ساحل دریای عمان و جنوب کوه‌های مکران (استان سیستان و بلوچستان) است که امروزه دو شهرستان چابهار و کنارک را در بر می‌گیرد و از لحاظ اقلیمی جزء نواحی گرم و مرطوب محسوب می‌شود. در پژوهش حاضر به بررسی و شناسایی محرک‌های طبیعی و اقلیمی مؤثر بر شکل‌گیری و توسعه معماری در سواحل مکران در دوران اسلامی پرداخته شده است. بنابراین افزون بر روش میدانی از مطالعات اسنادی برای گردآوری اطلاعات استفاده گردید. ابتدا آثار معماری سواحل مکران در دوران اسلامی شناسایی شده و سپس از میان آنها سیزده بنا بر اساس ویژگی‌های معماری، اصالت و سلامت بنا انتخاب شده‌اند. این بناها براساس دوره‌ی زمانی طبقه‌بندی شده است و دوره سلجوقی تا پهلوی را شامل می‌شوند. پرسش‌ها اینست که راهکارهای مورد استفاده معماران به منظور مقابله با مخاطرات و شرایط نامساعد اقلیمی و تأثیرات محیط زیست چه بوده است؟ چه همسانی‌ها و تفاوت‌هایی میان معماری دوران اسلامی سواحل خلیج‌فارس و مکران وجود دارد؟ الگو یا الگوهای حاکم بر سازه در معماری سواحل مکران تحت تأثیر اقلیم چگونه است؟ نتایج بررسی‌ها حاکی از آن است که معماران مکران با علم به محدودیت‌ها و با در نظر گرفتن عوامل اقلیمی همچون تابش خورشید، باد، دما و رطوبت دست به ساخت و ساز بناها زده‌اند و در ساخت بناها به انتخاب مواردی همچون نوع مصالح، رنگ مصالح، ساخت بنا روی سکو، جهت‌گیری ساختمان و طراحی پلان به صورت برونگرا توجه داشته‌اند و همین امر سبب تأمین آسایش ساکنان شده است. این راهکارها در بناهای مسکونی و بومی بیشتر قابل مشاهده است. اما در بناهایی با کاربرد نظامی و اداری، احتمالاً به دلیل تأثیرپذیری از عوامل سیاسی و فرهنگی، چنین تدابیری کمتر اندیشیده شده است.

کلیدواژه: معماری اسلامی، جنوب‌شرق ایران، سواحل مکران، محیط زیست.

I. Introduction

Numerous factors such as the political, economic, cultural, and environmental conditions affect the formation of architectural spaces. Among them, one of the fundamental factors is climatic conditions. Architects are influenced by the conditions and materials arranged by their natural environment. They used them in the design and construction of the building. Architects use mostly local techniques, materials, and traditions.

The climate of an area depends on several major and minor factors. The main factors are sunlight, temperature, humidity, rainfall, and wind. The sub-factors are the latitude, altitude, and distance from the sea (Akhtarkavan *et al.*, 2012: 11). In terms of climate, Makran beaches are considered hot and humid. Due to

its proximity to the sea, it has high humidity in all seasons. During the long summers, scorching and humid weather, and mild winters, a low-temperature difference between day and night (Shahbakhsh, 2002: 49).

In Iranian archaeology, archaeologists pay more attention to the issue of climate and ecology, studying the formation of the settlements and architectural spaces to analyze the behavior of prehistoric cultures. It should be noted that the interaction between humans and their environment has been established from prehistoric times to the present. Due to the importance of the subject, the authors have studied the effect of climatic and environmental conditions on the formation and development of the architecture of two ports on the coast of the Oman Sea. The main purpose of this article is to explain the impact of the natural environment on architecture with the aid of climatic studies and the study of the natural environment. Another goal is to be aware of the solutions used by the architects of the region in adapting the architectural spaces to unfavorable and challenging environment. According to the objectives of this article, we seek to answer two questions; 1- What are the strategies used by architects to deal with hazards and adverse climatic conditions and environmental impacts? What are the governing factors influencing the formation of the architectural structures located on Makran beaches? The data collection method in this article is based on the field and documentary methods, and the research is prepared by applying the descriptive-analytical method. For this purpose, the field study was carried out only by the first author. To accomplish this task, first, the architectural features of the buildings of the Islamic era on the shores of Makran were studied and identified. Then, by recognizing the climatic characteristics of the region, the impact of these characteristics on the architecture was studied. To achieve this end, the study of architectural evidence left over from past eras could open the instigating way for researchers.

II. Background of the research

The majority of cultural studies on Makran have an anthropological and historical approach, and the relationship between climate and architecture in this area received less attention from researchers. In her master's thesis, Keikha studied the architecture of Makran beaches and explained the architectural features of this area (Keikha, 2015). Afshar Sistani, in his book "Chabahar and the Persian Sea" describes and explains the cultural features in the Chabahar region, and the basis of his research is the anthropological study (Afshar Sistani, 1993). In the book "The role of Chabahar in the coastal region of southeastern Iran" Afrakhteh has very effectively introduced Chabahar and its climatic characteristics along with the economic and social situation (Afrakhteh, 1996).

Although independent and specific research has not been done on the relationship between climate and architecture on the Makran coast, we can reach out to some studies on climate-friendly housing design in different parts of Iran. Among them, we can mention Kasmaei (2003), Razjouian (2010), and Ghobadian (2010) studies. In all of these studies, suitable climatic conditions and their relationship with architecture have been analyzed using appropriate climatic diagrams. Kaviani (1993) prepared a bioclimatic map of Iran and studied the climatic conditions using different methods. Alijani (1994) evaluated the role of climate in housing. In that article, by examining the angle of sunlight, he described the various methods for studying climate-friendly housing. Papoli Yazdi and his colleagues (2000) studied the traditional housing of the Turkmen tribes. Archaeological studies on Chabahar and Konarak basins were also carried out by Shirazi (2010) and Talesh (2009).

III. Geographical location

Baluchistan is a part of Sistan and Baluchistan province, which is divided into two regions: the northern region, including Sarhad, Khash, and Zahedan, and the southern region, also called Makran (Borghei, 1973: 4). The study area includes the cities of Chabahar and Konarak on the coast of the Oman Sea and south of the Makran Mountains (Fig. 1). Chabahar city, with an area of about 17,100 square kilometers and an average height of 8 meters above sea level, is located on the southeastern tip of Iran and next to the Oman Sea (Shirazi, 2010: 9). Konarak city, with an area of about 11569 square kilometers, is located on the coast of the Oman Sea and the Indian Ocean and about 30 kilometers distance from the port of Chabahar (Statistics Center of Iran, 2013: 60).

In terms of climate, Makran beaches have had a constant trend since at least 4700 years ago (Motamed and Gharib Reza, 2008: 77-78). This region has long and hot summers and short and temperate winters, with a slight temperature difference between night and day. The climate of the region will be warm from February, and this hot climate will continue until June. The months of July and August have a more balanced temperature than June and the temperature decreases until February. This month is considered the coldest month of the year on the shores of Makran (Shahbakhsh, 2002: 49). The relative humidity is very high throughout the year and varies at different times of the day and in the different seasons of the year. The average humidity is 50-70% in winter and 70-87% in spring and summer. Chabahar and Konarak rainfalls are mainly affected by monsoon winds and Mediterranean currents in summer and winter, and most of the winter

rainfall in the region occurs in January. Rainfall is usually heavy in the fall and spring and becomes little and ordinary during the winter. Snowfall and hail are rarely observed in this unprecedented area (Afshar Sistani, 1993: 98).

Figure 1. Geographical location of Chabahar and Konarak cities (Authors).

IV. Introduction of the studied constructions

Among the identified buildings of the Islamic era on the shores of Makran, thirteen buildings have been selected based on their architectural features, authenticity, and condition of the building. These buildings, according to the chronological division, are classified from the Seljuk to the Pahlavi period.

IV.1. Imamzadeh Seyyed Gholam Rasoul

Imamzadeh Seyyed Gholam Rasoul is located on the eastern side of Shahid Rigi Street in Chabahar. The tomb is attributed to a righteous Shiite man named Seyyedna Muhammad, who was extremely popular among Indian Muslims, to the extent that Indian architecture influenced the architecture of the tomb. This building has a special and unique architectural style, with its white dome, a height of about 11 meters, and belongs to the middle Islamic centuries (Seljuk, Ilkhani, Timurid) (Saadatian, 2013: 1). The tombs of the Ilkhans and Timurids were built in the common Azeri style and exhibit the extrovert design. The plan of the quadrangular tomb is executed in the east-west direction, and its dome is made of brick materials (Klanuri, 2005: 141). Also, it is a double-shell domed type and is in line with the design of onion-shaped domes. This type of dome is one of the main features of the Indian Timurid (Gurkanian) architectural style (Saadatian, 2013: 5 and 4). The tomb is located in the western part of the courtyard and on the plateau one meter high with a stand with four columns (Azadi, 1957: 3). The most important decorative element of the Seyyed Gholam-Rasoul tomb is its white limestone facade, which in addition to creating a beautiful shine and front, protects this structure from the extreme humidity of Chabahar. The materials used in this building are brick, lime, plaster, wood, thatch, and sandstone.

IV.2. Tis castle (Portuguese fort)

The Portuguese castle is located on a rocky hill to the west of the village of Tis, on the left side of the Chabahar-Konarak road, overlooking the Tis fishing pier at the entrance of Chabahar Bay. This castle belongs to the historical period (Parthian), middle and late Islamic centuries (Safavid period) (Shirazi, 2010: 22) and is located at the height of 28 meters above sea level. The plan of the fort is triangular or arrow-shaped, and

its axis of location is northwest-southeast. The structure of the building has different components, the main of which are as follows: 1- The four main walls of the castle (fence), 2- The six semicircular towers, 3- The eleven rooms around the central courtyard, 4- The right and left spaces of the entrance of the castle, 5- The basement, 6- The Alcove (Heydari, 2009: 38). The building materials are carcass stones and cut sand, clay, brick, and gypsum mortar.

IV.3. Gowatr Old Castle

The Gowatr old castle is located in the Chabahar city, Dashtyari district, Gowatr village. The height of this building is 25 meters above sea level, and its direction is east-west. Gowatr Castle is built on a hill 5 meters high, which belongs to the prehistoric period. The castle has three rooms with flat roofs and two courtyards, some of which are lined with white color. There is a watchtower on the eastern side of this castle (Mulazadeh, 2005: 5). The main building materials of the fort are sandy sedimentary rocks found in abundance along the shores of the Oman Sea.

IV.4. Old Gordim 2 building

The old Gordim 2 building is located in the Konarak city, south of the Gordim village. This building is located at a height of 18 meters above sea level. It was built for residential purposes in the Qajar period (Talesh, 2009: 813). This building has a rectangular extroverted plan, and its orientation is in the east-west direction. The rooms are perfectly symmetrical and have entrances, windows, and niches on the southern, western, and northern walls. The materials used are stone, brick walls, and roof trunks (Ibid. 814).

IV.5. Hotan Park Castle

Hotan Park Castle is located southwest of Konarak city and southeast of Chabahar city, in Jahlian village, and belongs to the Qajar period. The castle is positioned on hills filled with sand and river rocks in the middle of a forest growing native trees, and its height is 6 meters above the surrounding grounds and 34 meters above sea level. This castle is built with a rectangular extroverted plan on two floors, and its axis of location is in the east-west direction. The castle consists of interior space with several rooms. The ground floor is built on a platform one meter high and has three rooms with flat wooden covers and niches with truncated arches (Talesh, 2009: 296). The building materials are raw clay and mud mortar. The foundations of the walls were made of stone, and the inner walls of the building were covered with mud. The type of mud used in the building is made of white mud that is present around the building. It seems that this castle was rebuilt in different periods, considering the form of the materials and rooms.

IV.6. Delooshi house 1

Delooshi house 1 was built about 120 years ago by the sheriff of Tis village called Delooshi and with a residential function. The house has a rectangular extroverted plan, and the axis of the building is in the east-west direction. It is built with clay materials on one floor with a brick platform with a height of about one meter (Preliminary Report, the Registration proposal of Delooshi House 1, 2002: 8). The building consists of two rooms and a row of porches with the crescent-shaped arches in front of it. The roof of the rooms is flat, covered with wooden beams and long branches, then covered with thatch.

IV.7. Post office building

The post office building is one of the oldest stone constructions in Chabahar. According to the stone inscription on the facade of the building, it was built in 1869 AD, 1248 A.H., at the time of the Portuguese influence (Preliminary report, the post office registration proposal, 1998: 2). It has a rectangular extroverted plan executed symmetrically on two floors, and the axis of the building is in the north-south direction. The ground floor of the post office, where the administrative activities were carried out, is located on a platform of 60 cm in height. This floor consists of four rooms and a row of stairs leading to the upper floor and has rows of porticoes with crescent arches on the eastern and western fronts. All the rooms have a decorative crescent arch inside and two vents on the eastern and western fronts leading to the roof of the porches. The first floor, which is generally intended for staff accommodation, has two rooms with flat roofs. Materials such as sedimentary stone carcasses, thatch, plaster, and wood were used in this building.

IV.8. Hoseyniyeh Al-Rasoul

Hoseyniyeh Al-Rasoul is located on the Shahid Rigi Boulevard, near the Seyyed Gholam Rasoul tomb. This building was built in the Qajar period to hold religious ceremonies. In the inscription of the building, its construction is recorded by the Hyderabadi family. (Afsar, 2001: 9). This building has a rectangular plan built on one floor in the north-south direction and has a relatively large nave, a backyard, and a room on the northern side. The roof of the main nave rests on four wooden pillars with carved decorations. The constructing materials are sedimentary sandstone, thatch, and lime mortar.

IV.9. Governor's office building

The governorate building is located in the northern part of 22 Bahman Square on the eastern edge of Darya Street in the old part of the city and was built by the British architects during the Qajar period (Preliminary

report, the registration proposal of Chabahar governorate, 2004: 5). It is built on two floors with an irregular extroverted plan, and the axis of the building is in the north-south direction. The ground floor is built on a platform with a height of 1.5 meters. It has nine rooms and three entrances to the south, west, and east (Ibid. 7). The first floor has five rooms and a terrace surrounded by brick columns and wooden barriers. The roof of this part is made of wood, straw, and the date mat covered in the thatch. The total height of the building from the floor is about 10 meters, with materials such as clay and mud, brick, wood, straw, stone, palm leaf, and iron having been used in the construction of the building.

IV.10. Customs office building

The customs building is located in the east of Chabahar city, in the old part of the city, at a distance of about 100 meters from the fishing pier. It was built by British architects between 1882 and 1893 AD (Preliminary report, Chabahar customs registration proposal, 2001: 5). The old customs building with a rectangular plan is built on two floors and is located in the east-west direction. The ground floor is built on a platform with 2.5 meters in height and 14 stone steps. There are six rooms, a storage room and two corridors on this floor. Access to the first floor of the building is through the entrance and stairs in the eastern part of the building. The main materials used on this floor are clay, mud, wood, and especially sandalwood. The thickness of the walls on this floor is between 80 and 95 cm. The first floor was built with a height of 5.5 meters above the ground and had a terrace, three rooms, and a kitchen. The roof is made of wood, straw, and mats covered with thatch (Ibid. 6). The thickness of the walls on this floor is between 55 and 60 cm. The construction of this building is more in line with western architecture, principally the British style.

IV.11. Delooshi house 2

The Delooshi House 2 is located in the old part of Tis village on Masjed Noorani Street. This building dates back to the late Qajar and the early Pahlavi period. It has a rectangular extroverted plan with two floors, and its orientation is in the east-west direction (Preliminary Report, the Registration proposal of Delooshi House 2, 2004: 2). The ground floor is located on a platform with a height of 120 cm with the stairs on both sides. There are 18 rooms on this floor. Three of them are residential and open to the porch with crescent arches. The rooms on the northern front were used for storage and cookery, and access to them was from the western and northern sides, which are now abandoned. Access to the upper floor is through the two rows of stairs. One is located on the western side of the building and the other in the middle of the southern side. Walking to the upstairs, there are three separate rooms. All of them have a similar plan consisting of a room and a portico on the southern front. Each floor is about 4 meters high, and the materials of the walls are raw clay, sedimentary sandstone, and mud. The roof is formed using the trunks of the various trees, including the cactus, palm, turmeric, and poplar.

IV.12. Arian Old House

Arian House, the only building still representing the old quarter of Konarak city, is located at the western end of the Khatam Al-Anbia Street near the old Grand Mosque of this city in a dead-end street (Preliminary report, Arian's house registration proposal, 2002: 4). The plan is rectangular and extroverted, and its orientation is in the east-west direction. The building has two large rooms with a height of 3.5 meters, a large portico with truncated arches, and a staircase which can be seen in the western part of the building. It was built using materials such as clay, mud, straw, reed, palm, and stone.

IV.13. Moradbakhsh Daryanavard House

This house is located in the old part of Chabahar city, behind Hoseyniyeh Al-Rasoul, and was built by Pakistani architects. This house with a rectangular plan was built on two floors in the east-west direction. Its height is about 7.5 meters above the ground. The ground floor is located on a platform with a height of about 50 cm (Preliminary report, the registration proposal of the Daryanavard house, 2004: 15). This floor has two entrances, five rooms, and a corridor, and mainly the sandalwood and iron are used to cover the roof, and the ceiling height of the rooms is about 3.70 meters above the floor. Access way to the upper floor is through the stairs placed on the northern side, and the first floor has three rooms with a corridor ending in a lattice wall. In general, materials such as clay, mud, wood, straw, stone, iron, palm leaf, and cement have been used in their construction (Ibid. 17).

V. Discussion and analysis of the climatic factors affecting the formation of the architectural types on the Makran beaches

The knowledge of the climatic characteristics and their effects on the design and construction of the buildings causes human beings to create the desired shapes out of the architectural spaces in accordance with the climatic conditions, which in turn increases the comfort of residents and adaptation of the man-made spaces to the natural environment. From this perspective, in this study, the effect of climatic elements such as sunlight, temperature, humidity, and wind on the architecture is investigated.

V.1. Sunlight

The sunlight is one of the determining climatic factors in any region that has a great impact on the architecture of that region. Aware of this, architects apply all the relevant strategies to deal with the destructive effects of sunlight and take advantage of its beneficial effects. One of the common solutions to be considered is the orientation of the building, which can determine the amount of sunlight absorption to create a comfortable building. Its location should be designed to provide the best sunlight in the cold seasons and the best cooling within the indoor spaces in the warm seasons of the year (Kasmaei, 2003: 17). On the shores of Makran, the angle of radiation at noon on the first day of fall and spring, when the sun is at the equinox, is 64 degrees. The sun shines obliquely in the winter affecting the southern wall of the building, and in summer, it shines vertically, radiating mostly on the roof. Since at least nine months of the year, the temperature is higher than the comfort level, attention to radiation repulsion is more than its absorption (Saliqeh, 2004: 153-155). For this reason, in order to obtain the minimum radiant energy of the sun during the hottest time of the year, the plan of the building should be rectangular, and in the direction of the east-west axis, and the view of the building should be facing south (Ibid. 167). As seen in Table 1, most buildings' plan is rectangular, which absorbs the least amount of solar radiation energy in summer due to the location of the building. Another solution for architects to deal with the intensity of the sunlight in this area is to use light-colored materials with polished surfaces such as brick and stone, which absorb less heat and is an effective factor in repelling the light and heat. When the intensity of direct sunlight in summer is high, it absorbs only 10% to 15% of heat due to its polished surface and light color. Moreover, if the desired surface material is dark in color and has roughness, it retains up to 95% of light and heat (Zumrashidi, 1989: 2-5). If the materials of the case surface are dark, uneven, and rough, it retains up to 95% of light and heat (Zumrashidi, 1989: 2-5). Table 1 shows that both of the principles were observed in the facade of the constructions in the hot and humid climate of the Makran beaches, and in all the studied buildings, the color of the facade of the building is light with a polished surface. Because the roof of the building is the part that absorbs radiant energy more than other areas of the building, to prevent the sun's radiation, the wide and high porches on and around the building should be built by expanding the roof area more than the floor area (Kamal, 2011: 61). Also, the color of the external surface of the roof determines the amount of solar energy absorbed by the roof during the day (Ibid. 63). According to the given data in Table 1, in all the studied buildings, the roof has a light color, which reflects the sunlight and absorbs less solar energy, and most of the buildings have porches. Another solution for the architects is to use a window that has minimum radiation absorption in summer and maximum radiation absorption in winter. For this purpose, the building should be facing southward (Saliqeh, 2004: 154). Also, the height of the windows on the southern and northern fronts can be high, but placing windows in the eastern and western parts of the buildings is not recommended at all. Windows that allow light into the building must face south (Ibid. 155). Table 4 examines the openings of each building. As can be seen, all buildings on the southern side have tall windows that absorb the minimum radiation in summer and maximum radiation in winter.

V.2. Temperatures

As mentioned, Makran beaches have long hot summers and short, mild winters, and the region's hot season continues for more than nine months a year. Therefore, it is better to use materials with low thermal mass and do not store heat. Because too much heat is one of the climatic problems in the region and storing the heat of the day for the night is not precise. Also, the thickness of the wall prevents the heat from reaching the interior of the building. The main materials used in the construction of Makran beaches are generally sandstone, brick, clay, and wood. The wooden structure transfers heat slowly, and the stored heat remains on the surface of the wood during the day and, with the cool breeze at night, loses its heat (Ghobadian, 2010: 76). Also, the use of thick brick walls, due to the property of heat accumulation and its gradual conduction, acts as a capacitor to maintain heat or coolness inside the room (Tahabaz, 1995: 638). The piece of brick also has the role of thermal insulation that prevents heat and cold from reaching the interior of the building and even prevents the rainwater from reaching into the mud bricks used in the core of the walls (Daneshmand, 2014: 97). Sandy sedimentary rocks are porous and are very good thermal and acoustic insulators (Ghobadian, 2010: 82). Due to the thermal properties of materials used in this area, the thickness of the walls in the studied buildings is from 50 to 100 cm (Table 2). Another factor that is effective in cooling and heating the building is the height of the roof in the architectural spaces. In the past, maintaining the appropriate height of the habitable spaces was one of the effective factors in determining the temperature of the building. In this region, compared to other regions of Iran, the rooms have higher ceilings, so their height sometimes reaches up to 4 meters or higher. The warm air moves to the top of the room, whilst the cold air moves into the lower space of the room, and the hot air is ventilated by the windows under the ceiling. The coverings on the dome are also light thatched coatings, which is a very important factor in preventing the heat and cold from penetrating into

the roof. A side of these roofs is shaded at certain times of the day due to their arched shape, which is effective in lowering the temperature of the building. As presented in Table 2, the buildings on the shores of Makran have high roofs, working out a significant function as the vent system.

V.3. Humidity

The amount of humidity in Makran is very high, and the maximum relative humidity reaches up to 70%. Adjacent to the sea, the vertical rays of 12-14 hours of sunlight from spring to summer can increase the rate of water evaporation in the region (Akhtarkavan *et al.*, 2012: 103). This amount of humidity has a destructive effect on the architecture of this area. Considering the high level of groundwater, the presence of soil moisture has a negative effect on the buildings. Architects have taken some of the applicable solutions and measures to deal with the moisture in the building. They did not build basements. Instead, they built platforms using materials resistant to moisture. Materials such as crumpled sedimentary rocks, sand, and sandalwood (Table 3). Also, to deal with the air humidity, the enclosing walls of the building were shortened so that the building would be away from the stagnant or calm air on the ground and gain the moving upper airflow (Saliqeh, 2004: 158). Another way to deal with the humidity, as mentioned earlier, is the frequent use of openings and adding to the amount of the airflow in the rooms, which causes the humidity in the architectural spaces to disappear a while. As shown in Table 4, all buildings have multiple openings. In this area, sedimentary rocks and sand have been used in the construction of the platforms, and bricks have never been used in these constructions because bricks absorb the moisture causing corrosion in the construction (Daneshmand, 2014: 115).

V.4. Wind

The temperature in Makran is very high in summers, and one of the ways to cope with the hot climate is the current wind usage in such a way that the openings of the building face the pleasant winds. The main winds flowing in the region are the western, south-western, and southeastern winds. Western and south-western winds are the dominant winds in the region, driving from the last days of winter to the last days of spring. The source of these winds is the eastern and southeastern regions of the Arabian Peninsula, which help the temperature regulation in the humid region. Monsoon winds also blow from the southeast in summer from late May to mid-September. These winds are accompanied by rain, lowering the temperature, and air conditioning, and it can be considered the fortune wind in the region. In such a climatic situation, the form of the building should be such that it can easily direct the anticipated wind into the building. The elongation of the plan, open spaces, and the arrangement of the rooms in a row help the wind blow into the building (Saliqeh, 2004: 157). The position of the window in relation to the direction of the wind has a great effect on the condition of natural ventilation situated inside the building. The most important principle in creating effective and usable natural ventilation conditions is that the opening parts of the construction are placed on both sides, facing the wind and behind the wind. In addition to the large windows, the height of the window from the floor should be half to one and a half meters. (Kamal, 2011: 64). In Chabahar, the prevailing wind blows from the west and southwest in winters and the favorable wind from the southeast (monsoon winds) in summers. The worst weather conditions in the region occur in the hot summer season. The windows should be facing south and southeast to use the favorable wind in summers. Also, the placement of the window on the western and south-western sides has a great effect on the ventilation of the building in winters. According to Table 4, in all the studied buildings, openings have been installed on the southern and western fronts in order to make maximum use of both the desired winds and the prevailing winds.

VI. Conclusion

Conscious of the limitations and climatic conditions, the architects on the beaches of Makran, using appropriate solutions, have minimized the difficult natural conditions by providing the best solutions. Regarding the climatic factors, the most important features in most of the residential buildings on the shores of Makran include plans with an east-west orientation, extroverted design, openness and width of the plan, light color of the external walls, placement on the platform, flat roof and use of wooden beams, use of local materials, large and high porches, lack of basement, the height of rooms, and the tall and extended windows. Architectural features are deemed less prominent in official and military buildings. Because in these buildings, the influence of the political and cultural concerns is more than the climatic factors. Although these features are considered as the architectural model limited to the Makran beaches, generally, they indicate similarities with the Iranian architectural models. Thus, we cannot separate them from the Iranian architecture.

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Table 1. The sunlight effect on the architecture of Makran beaches (Authors).

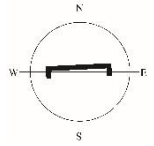
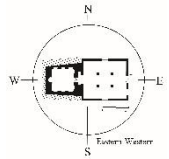
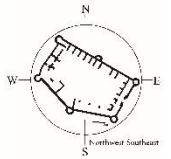
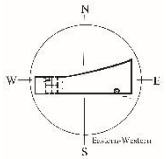
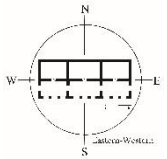
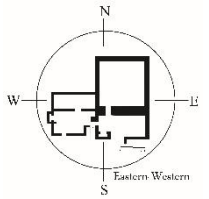
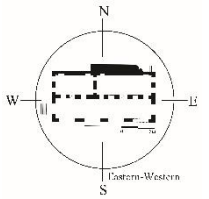
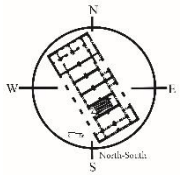
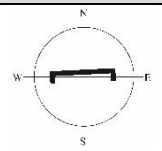
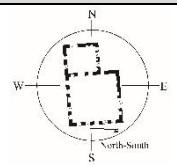
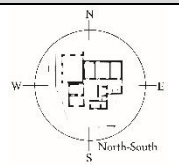
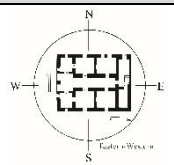
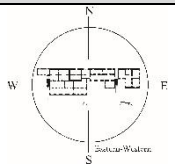
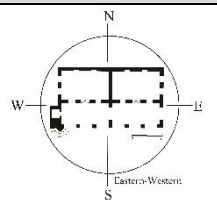
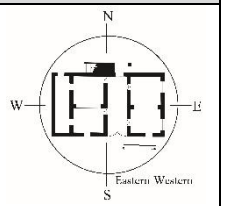
Suitable for this climate			Imamzadeh Seyyed Gholam Rasoul	Tis castle (Portuguese fort)	Gowatr Old Castle	Old Gordim building 2	Hotan Park Castle	Delooshi house 1	Post Office
Impact on the plan orientation									
Impact on the materials	Type	-	Lime	sediments	sediments	Mud bricks	Mud bricks	Mud bricks	Sediments
	Color	Bright	White	Light brown	Light brown	Light brown	Gray	Light brown	White
	Texture	Polished	Polished	Polished	Polished	Coarse	Coarse	Coarse	Polished
Impact on the coverage	Type	Arched & Flat	Arched	-	-	Flat	-	Flat	Flat
	Color	Bright	White	-	-	Light brown	-	Light brown	White
	Texture	South	-	-	-	South	-	South	East-West
Suitable for this climate			**Hoseyniyeh Al-Rasoul**	**Governor's office building**	**Customs office building**	**Delooshi house 2**	**Arian Old House**	**Moradbakhsh Daryanavard House**	-
Impact on the plan orientation									
Impact on the materials	Type	-	Lime	Cement	Mud brick	Mud brick	Cement	Cement	-
	Color	Bright	White	White	Light brown	Light brown	White	Gray	-
	Texture	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	-
Impact on the coverage	Type	Arched &Flat	Flat	Flat	Flat	Flat	Flat	Flat	-
	Color	Bright	White	Light brown	Light brown	Light brown	Light brown	Gray	-
	View	South	-	S&N&W	-	South	South	-	-

Table 2. The effect of temperature on the architecture in Makran (Authors).

Site	Material	Thickness cm	Roof Height cm
Imamzadeh Seyyed Gholam Rasoul	Brick, Gypsum, Lime, Thatch, Wood	50-100	Arch11, Flat5
Tis castle (Portuguese fort)	Sedimentary stone, Brick, Clay, Gypsum mortar	60	4
Gowatr Old Castle	Sedimentary rock, Mud mortar, Lime mortar	60	4
Old Gordim building 2	Stone, Clay, Wood	60	3/5
Hotan Park Castle	Stone, Raw clay, Mud mortar, Wood, Mat, Turmeric	40	7
Delooshi house 1	Brick, clay, wood, thatch	50	4
Post Office	Sandalwood, Sandstone, Thatch, Gypsum	70	8
Hoseyniyeh Al-Rasoul	Wood, Sedimentary rock, Thatch, Lime, Gypsum	60	3
Governor's office building	Clay, Brick, Wood, Straw, Stone, Palm leaf, Iron, Plaster, Thatch	60	10
Customs Office	Clay, Brick, Sandalwood, Straw, Stone, Palm leaf, Plaster, mat, Thatch	55-95	9
Delooshi house 2	Raw clay, Wood, Cement, Mat, Plaster, Sedimentary Sandstone	55	8
Arian Old House	Clay, Straw, Wood, Stone, White cement	60	3/5
Moradbakhsh Daryanavard House	Clay, Sandalwood, Bamboo straw, Stone, Iron, Palm leaf, Cement, Mat, Thatch	65	7/5

Table 3. The effect of humidity on the architecture of Makran beaches (Authors).

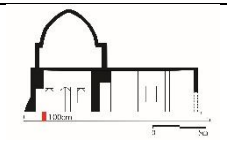
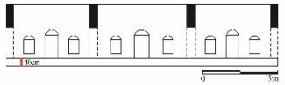
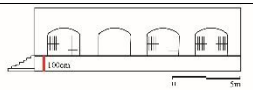
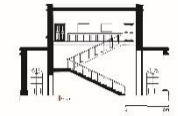
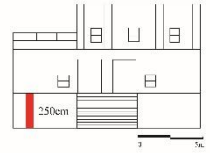
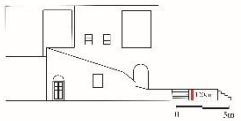
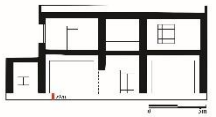
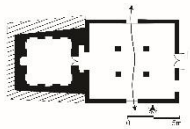
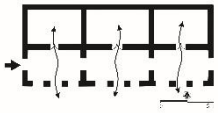
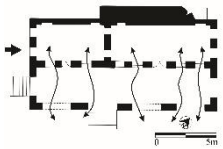
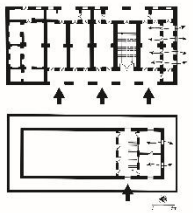
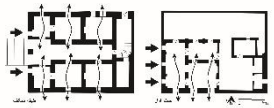
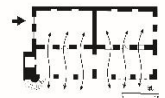
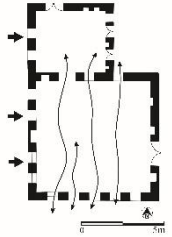
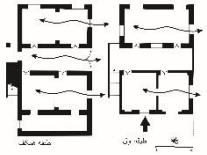
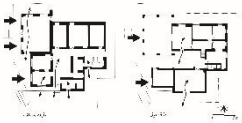
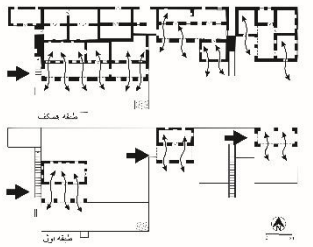
Site	Imamzadeh Seyyed Gholam Rasoul	Tis castle (Portuguese fort)	Gowatr Old Castle	Old Gordim Building 2	Hoseyniyeh Al-Rasoul	Delooshi house 1	Post Office
Ground Connection	Platform	Natural rocks	Hill	platform	Ground	Platform	Platform
Platform height	100	-	500	40	-	100	60
Platform material	Sediment	Sediment	-	Sediment	-	Brick	Sediment
Floors	1	1	1	1	1	1	2
Barrier	+	-	-	-	-	-	-
Section		-	-		-		
Site	Governor's office building	Hotan Park Castle		Customs Office	Arian Old House	Delooshi house 2	Moradbakhsh Daryanavard House
Ground Connection	Platform	Hill		Platform	Ground	Platform	Platform
Platform height	150	600		250	-	120	50
Platform material	Brick	Sediment		-		Sediment	Sediment
Floors	2	2		2	1	2	2
Barrier	+	+		+	+	+	-
Section		-			-		

Table 4. The Effect of Sun and Wind Radiation on the Architecture of Makran Beaches (Authors).

Site	Gowatr Old Castle	Hotan Park Castle	Imamzadeh Seyyed Gholam Rasoul	Old Gordim Building 2	Delooshi house 1	Post Office	Customs Office
Orient	-	-					
Pic							
Site	**Tis castle (Portuguese fort)**	**Arian Old House**	**Hoseyniyeh Al-Rasoul**	**Moradbakhsh Daryanavard House**	**Governor's office building**	**Delooshi house 2**	
Orient	-						
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PRELIMINARY REPORT OF AN ARCHAEOLOGICAL SURVEY IN SARBAZ COUNTY (CENTRAL AND PISHIN PARTS)

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Abstract: This paper is the result of the report of the Sarbaz Archaeological Survey (Central and Pishin parts), which has been done based on license No. 81/208/862 of the Archaeological Research Institute of the country and the support of the General Directorate of Cultural Heritage, Handicrafts and Tourism of Sistan and Baluchistan Province. Sarbaz County with an area of 4900 km² is one of the newly established cities in Sistan and Baluchistan province. This county, next to the Sarbaz River, is one of the most important rivers in the Baluchistan region of Iran, which passes through the Makran Mountains of Iran and eventually flows into the Sea of Oman. During the study of the southern parts of Sarbaz, several sites have been identified, from the prehistoric era to the present. Studies in the southern parts of Sarbaz County showed that from the third millennium BC until now, two factors have been more effective than other factors in the formation and expansion of the area. First, it is the general factor of the natural environment that has acted as a deterrent in this region. In large parts of the Sarbaz River, especially in the central and southern parts, it has shown its impact on the area of the sites, the thickness of the ancient layers, and the quality of cultural materials on the surface of each site. The second factor is interregional trade in a large area of southeastern Iran, which during the third millennium as a dynamic factor in the whole region from Kerman to Sistan and Baluchistan has acted positively, and wherever there has been a relatively favorable natural environment, it has led to the creation and expansion of settlements in the region. On the southern bank of the Sarbaz River on the border between Iran and Pakistan, this factor has acted as an influential factor and has established relatively large sites. The diversity of cultural materials on the surface of some of them is remarkable. Recent studies in this area show that, during the third millennium, this area has been one of the dynamic areas in establishing prominent connections between the central regions of Baluchistan, Iran on the one hand and Makran Pakistan, and the southern margin of the Oman Sea and the Persian Gulf on the other. Currently, this region is on the transit route of goods from the very important port of Chabahar, located on the bank of the Makran Sea and it is trying to return to the important position and role of its economic and cultural relations as in the past. The above-mentioned archaeological study was performed with two important purposes: First, to identify and specify the scattered sites in this county to prepare an archaeological map, which is one of the important policies of the Cultural Heritage, Handicrafts, and Tourism Organization. Second, identify and reconstruct the commercial role and regional and trans-regional cultural interactions based on archaeological evidence.

Keywords: Sarbaz County, Baluchistan, prehistoric era, historical era, Islamic era.

چکیده: این مقاله حاصل گزارش بررسی باستان‌شناسی سرباز (بخش مرکزی و پیشین) است که بر اساس مجوز شماره ۸۶۲/۲۰۸/۸۱ پژوهشکده باستان‌شناسی کشور و حمایت اداره کل میراث فرهنگی، صنایع دستی و گردشگری استان سیستان و بلوچستان انجام شده است. شهرستان سرباز با ۴۹۰۰ کیلومتر مربع وسعت یکی از شهرستان‌های تازه تاسیس استان سیستان و بلوچستان است. این شهرستان در کنار رودخانه سرباز یکی از رودخانه‌های مهم منطقه بلوچستان ایران است که از میان رشته کوه‌های مکران ایران می‌گذرد و در نهایت به دریای عمان می‌ریزد. طی بررسی قسمت‌های جنوبی سرباز، محوطه‌های متعددی از دوران پیش از تاریخ تا به امروز شناسایی شده است. مطالعات انجام شده در بخش‌های جنوبی شهرستان سرباز نشان داد که از هزاره سوم قبل از میلاد تا کنون دو عامل بیش از سایر عوامل در شکل‌گیری و گسترش منطقه موثر بوده است. اول اینکه عامل اصلی محیط طبیعی است که به عنوان یک عامل بازدارنده در این منطقه عمل کرده است. در بخش‌های وسیعی از رودخانه سرباز، به‌ویژه در بخش‌های مرکزی و جنوبی، تأثیر خود را بر مساحت محوطه‌ها، ضخامت لایه‌های باستانی و کیفیت مواد فرهنگی در سطح هر محوطه نشان داده است. عامل دوم تجارت بین منطقه‌ای در گستره وسیعی از جنوب شرق ایران است که در طول هزاره سوم ق.م به عنوان عاملی پویا در کل منطقه از کرمان تا سیستان و بلوچستان مثبت عمل کرده و هر جا که محیط طبیعی نسبتاً مساعدی وجود داشته است، سبب ایجاد و گسترش سکونتگاه‌ها در منطقه شده است. در کرانه جنوبی رودخانه سرباز در مرز ایران و پاکستان، این عامل به عنوان یک عامل تأثیرگذار عمل کرده و سکونتگاه‌های نسبتاً وسیعی را ایجاد کرده است. تنوع مواد فرهنگی در سطح برخی از آنها قابل توجه است. مطالعات اخیر در این زمینه نشان می دهد که در هزاره سوم ق.م، این منطقه یکی از مناطق پویا در ایجاد ارتباط برجسته بین مناطق مرکزی بلوچستان ایران از یک سو و مکران پاکستان و حاشیه جنوبی دریای عمان و خلیج فارس از سوی دیگر بوده است. در حال حاضر این منطقه در مسیر ترانزیتی کالا از بندر بسیار مهم چابهار واقع در کرانه دریای مکران قرار دارد و در تلاش است تا مانند گذشته به جایگاه و نقش مهم روابط اقتصادی و فرهنگی خود بازگردد. مطالعه باستان‌شناسی فوق با دو هدف مهم انجام شد: اول شناسایی و مشخص کردن محوطه‌های پراکنده در این شهرستان برای تهیه نقشه باستان‌شناسی که یکی از سیاست‌های مهم سازمان میراث فرهنگی، صنایع دستی و گردشگری است. دوم، شناسایی و بازسازی نقش تجاری و تعاملات فرهنگی منطقه‌ای و فرامنطقه‌ای بر اساس شواهد باستان‌شناسی.

کلیدواژه: شهرستان سرباز، بلوچستان، دوران پیش از تاریخ، دوران تاریخی، دوران اسلامی.

I. Introduction

Sarbaz County is located in the southern half of Sistan and Baluchistan province. This county is bordered by Iranshahr County from the north, Pakistan from the east, Chabahar County from the south, and Nikshahr County from the west (Fig. 1). Sarbaz area is one of the mountainous areas of the province, which is known for its dense Makran mountain range. This compaction in this area is much higher than in other areas and continues to Dashtyari plain from Chabahar County in the south of the county (Seyed Sajjadi, 1995: 86). The density of mountains in this part has become one of the obstacles to the formation of large human settlements during different times in the region. Despite the permanent Sarbaz River, it has again had an increasing impact on the environment and geography, and how they are established (Fig. 1).

The Sarbaz River is the most important water source in the region and originates from the Khash Mountains in the north. The River flows through large parts of this county from north to south, to the southern part of the Pishin region, on the border of Chabahar. Then in this part, the density of mountains is reduced and the amount of flat land is increased. In this region, the seasonal River Lashar originates from the west and the valleys of Nikshahr (Soltani, 2010), and after its path to the east, it joins the Sarbaz River in this part and flows its way to the southeast. The River flows into the Sarbaz in the Hodar region of the Pishin section southwest of the county center (Fig. 1). This River crosses the mountains of the Sarbaz region and merges with the Kajo River, which also originates from the Nikshahr mountains in the west of Sarbaz, and takes a path to the southeast. Then, under the name of Bahu Qalat, it flows in the flat plain and fertile sediment of Dashtyari and finally flows into the Makran Sea (Oman) near Goater Bay in the east of Chabahar and the border of Iran and Pakistan (Fig. 1). This study was carried out as a survey along the Sarbaz River and collecting surface cultural materials from the sites has been randomly done. Based on what has been said and the authors' regional observations, the southern half of the Sarbaz River can be divided into three parts or geographical areas according to the existing Bronze Age settlements:

1- The central region of the Sarbaz River, has dense mountains, the highest density of which is seen in the area of Sarbaz castle, and then in the central region or the central part, this density is slightly reduced and the amount of flatlands is increased. In this section, the bed of tributaries that flow from the east and west to the Sarbaz River can be seen (Fig. 2).

2- The southern part of the Sarbaz River, starts south of the town of Rask and continues to the Pishin basin. This basin has flat rocky lands on the banks of the Sarbaz River. Most of these flatlands are very high from the Riverbed, and only in some places is easy to access the Riverbed. In this section, the seasonal Ashar River in the Hodar region reaches the Sarbaz River and at this point forms a fertile agricultural area (Fig. 3).

3- The third region is geographically the southeastern region of the county on the border of Pishin and Pakistan. Unlike the central part, this region has flatlands, which are bordered by Chabahar County from the south, and flatlands of the Dashtyari region. This region is the end basin of the Sarbaz River. This area has more flat land and the water flow in it is softer and of course more controllable. In the southern part of this part, especially in the agricultural area along the Sarbaz River, flat lands with suitable water have helped to form human settlements in the prehistoric era. We are facing the highest density of prehistoric sites in this area, and even some of these monuments are hill-shaped and with a significant protrusion from the surface of the flat land. 121 ancient sites were identified, including mounds, grounds, cemeteries, and buildings in the two central parts and Pishin. Due to the large volume of findings, we try to deal with them briefly in two parts the Bronze Age, and the historical, and Islamic eras (Fig. 4).

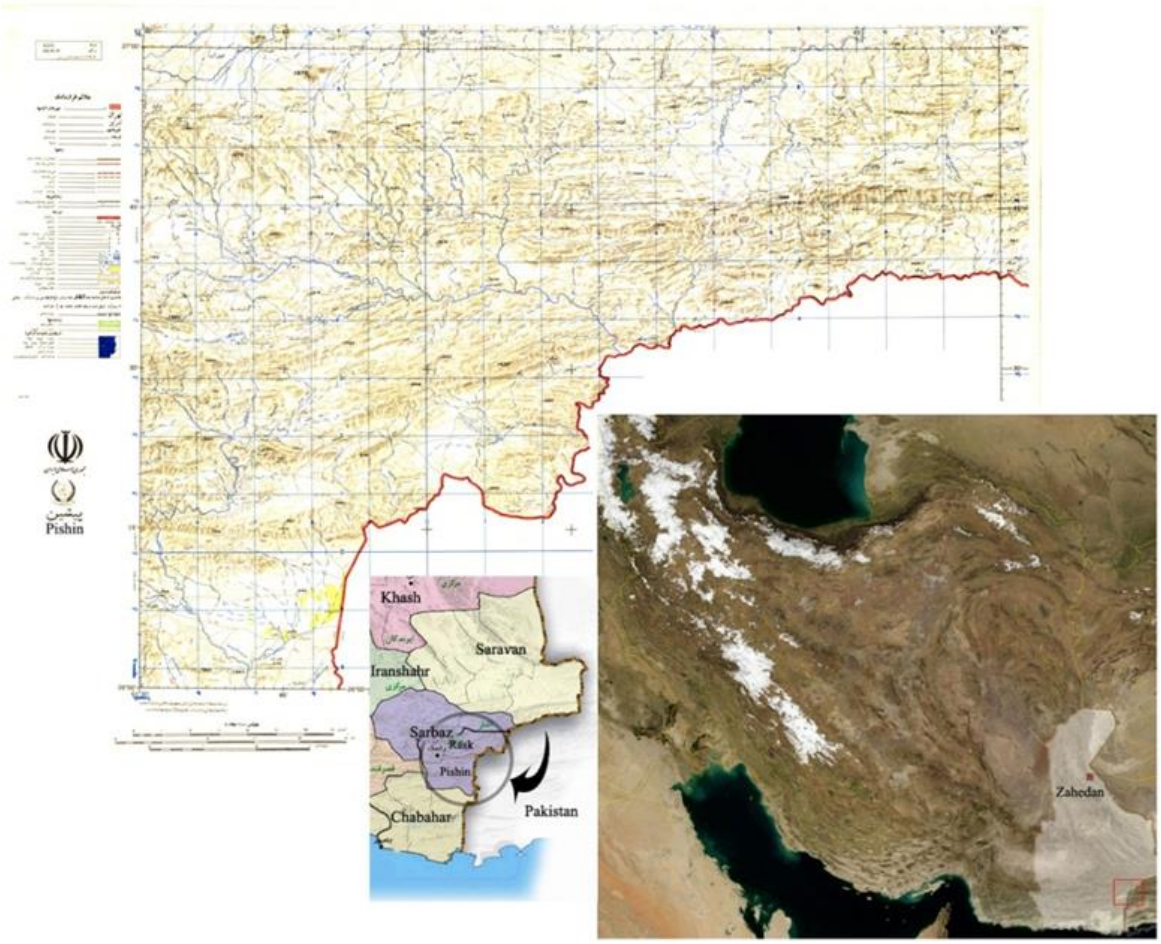

Figure 1. Satellite image of Iran and the study area along the Sarbaz River in Sistan and Baluchistan Province with a map of 1/250,000 of the Geographical Organization of the Army of the Islamic Republic of Iran.

Figure 2. Density of mountainous texture in the central part of Sarbaz River.

Figure 3. The deep bed of the Sarbaz River in parts of the southern basin.

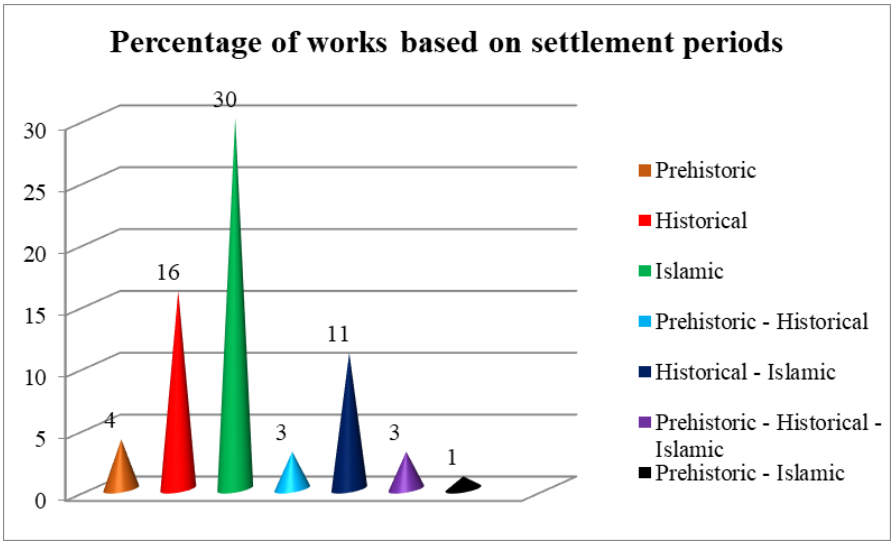

Figure 4. Percentage of scattering of cultural and historical monuments in the central part of Sarbaz County.

II. Bronze Age sites along the Sarbaz River

Based on environmental characteristics, the concentration of Bronze Age areas along the Sarbaz River can be examined in two different areas, one is the Rask and Parud area or the central part of the Sarbaz County and the other is the Keshari area (Sarhaddi-Dadian, 2021) or Mola Abad area.

1. Rask and Parud areas (central part)

This part has flat and rocky lands on the banks of the permanent Sarbaz River. Most of the flatlands are very high from the Riverbed and only in some places easy access to the Riverbed is possible. Perhaps, the constant flow of water has caused another area for the formation of Bronze Age settlements along the Sarbaz River, but not with much concentration in this area (about 4 sites) (Sarhaddi-Dadian & Moradi, 2008). This part has dense mountains with a rocky slope and except on the River bank, there is no flat land for farming. Prehistoric settlements have been formed on the terrace of the Sarbaz River (Seyed Sajjadi, 1995: 86). Here, unlike the central area, there are flat lands for agriculture.

Hashem Abad site: This site is located on the eastern bank of the Sarbaz River, 2 km south of Hashem Abad village (Fig. 5). On the ground, the remains of rooms made of large rubble in a regular quadrangle are quite visible, whose existing height is not more than a few centimeters, and they are comparable with the settlements on the outskirts of Mashkid (Moradi, 2007) and the center of Afghanistan (Davis & Dupree, 1997: fig.7). The dimensions of this area are about 50 × 50 m and simple gray and red wares are scattered on its surface. A piece of stone tool (a large black stone scythe) was also obtained from this area. Other available cultural materials include contemporary red-ware related to nomads.

Forest (Jangal) site: This area is located on the eastern side of the Sarbaz River, 300 m south of Hashem Abad village. The dimensions of this area are 100 × 200 m and on its surface, stone ridges can be seen like the margin of Mashkid. Surface pottery is mostly red and gray wares. A piece of pottery with the role of nesting triangles comparable to Bampur I-IV was obtained (DeCardi, 1970: fig.20). In the southern corner of this site, there is an Islamic cemetery that belongs to the nomads of the region (Figs. 6 and 7).

Figure 5. Hashem Abad site, western view and along the Sarbaz River.

Figure 6. Forest site, along the Sarbaz River in the central area.

Beris site: This site is located 25 km north of Rask City and on the east side of Peshamag road. On the southern front is a valley that flows into a tributary of the Sarbaz River. The area consists of an impressive ridge 4 m high and 20 m in diameter. On the surface of this mound, there is evidence of stone architecture with mud mortar comparable to Shah Tomp and Miri Qalat (Besenval, 2005: figs. 5-6). In addition, there are fine and patterned red and gray wares belonging to the third millennium, whose geometric patterns with Miri Qalat IIIb pottery (Didier 2007: fig. 30) and the goat motif with the Bampur IV style are comparable (DeCardi, 1970: fig. 30). Dambi tombs belonging to the Parthian period can be seen in and around this area (Fig. 8).

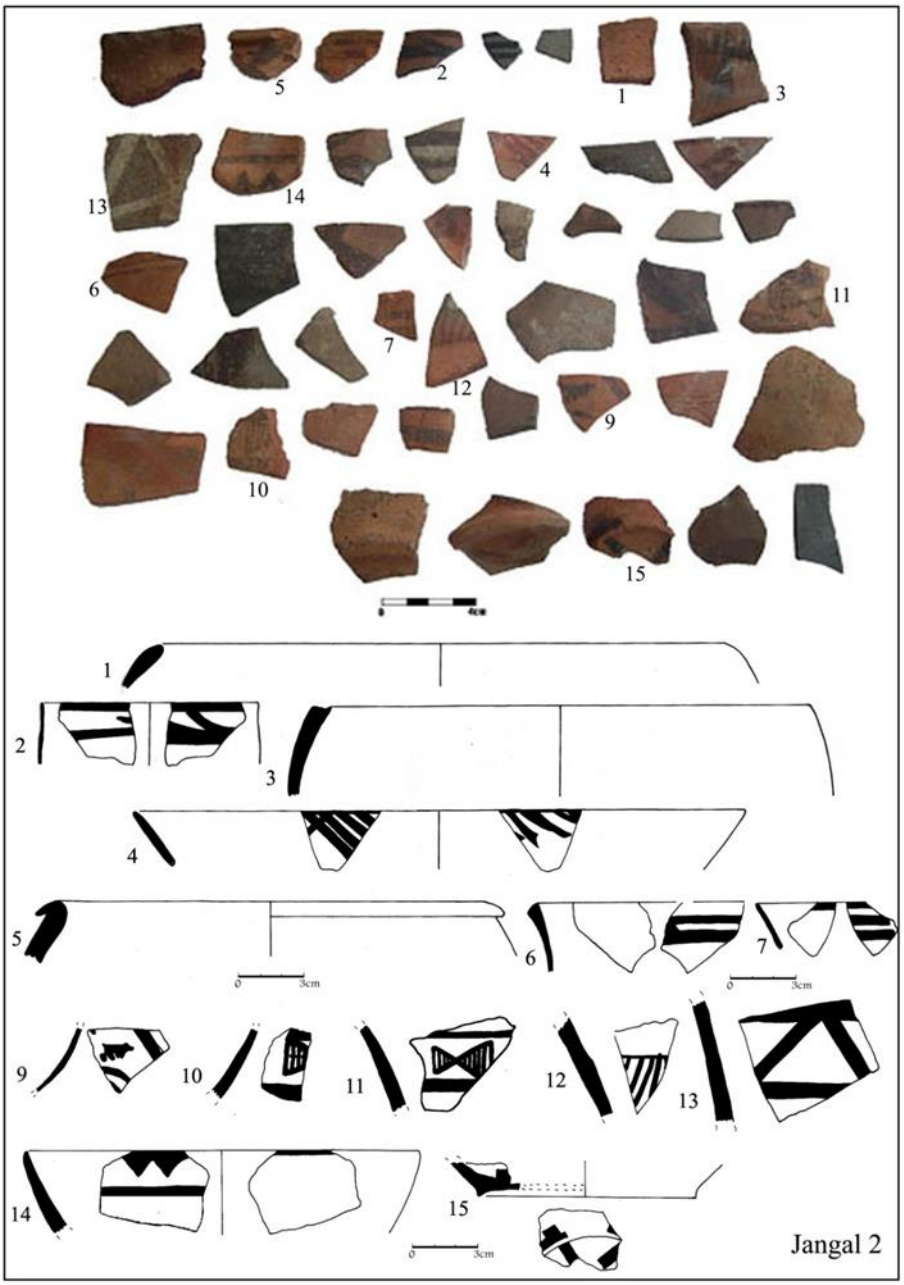

Figure 7. Surface pottery from the Forest site.

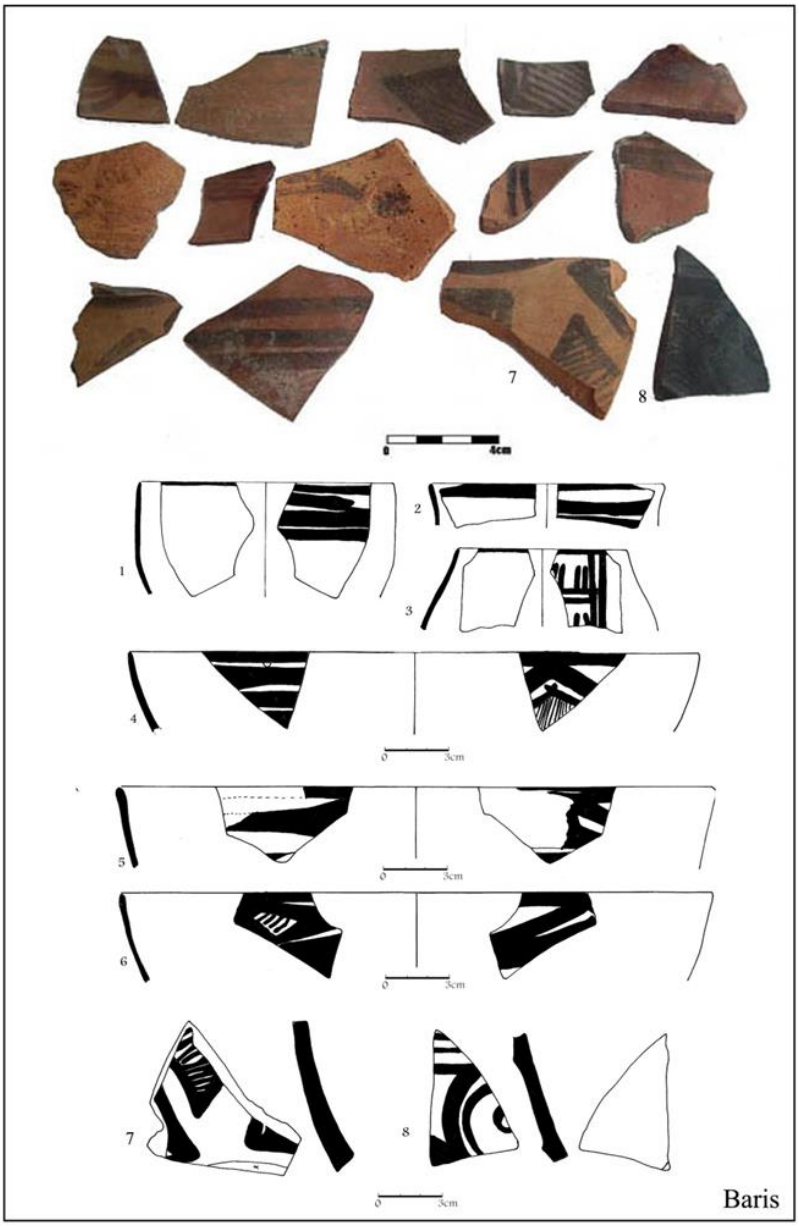

Figure 8. Surface pottery from the Beris site.

2. Pishin and Keshari areas

Pishin is one of the most important points of the province on the border with Pakistan. In fact, due to the flat plain, the border is one of the points and centers of trade with Pakistan. Evidence suggests that this plain is thought to have been a gateway for the exchange of goods and culture with the civilizations of the Indus Valley and Baluchistan among the impassable Sarbaz Mountains and that it played an important role in the past, especially in the Bronze Age (Sarhaddi-Dadian et al., 2020).

Keshari area is bordered by Chabahar County from the south and the flatlands of Dashtyari region and borders with Pakistan from the east. It is the end basin of the Sarbaz River in the mountainous region. In the Keshari region along the Sarbaz River, flat lands with suitable water have helped to form human settlements in the prehistoric era, and we have the highest density of prehistoric sites (about 12) (Sarhaddi-Dadian & Moradi, 2008; Sarhaddi-Dadian, 2021) in the face of this area (Fig. 9). As mentioned before, all these conditions, in addition to the proximity to the sea, have led to the formation of Bronze Age settlements in this area, and in some cases, even in other places, have a significant advantage.

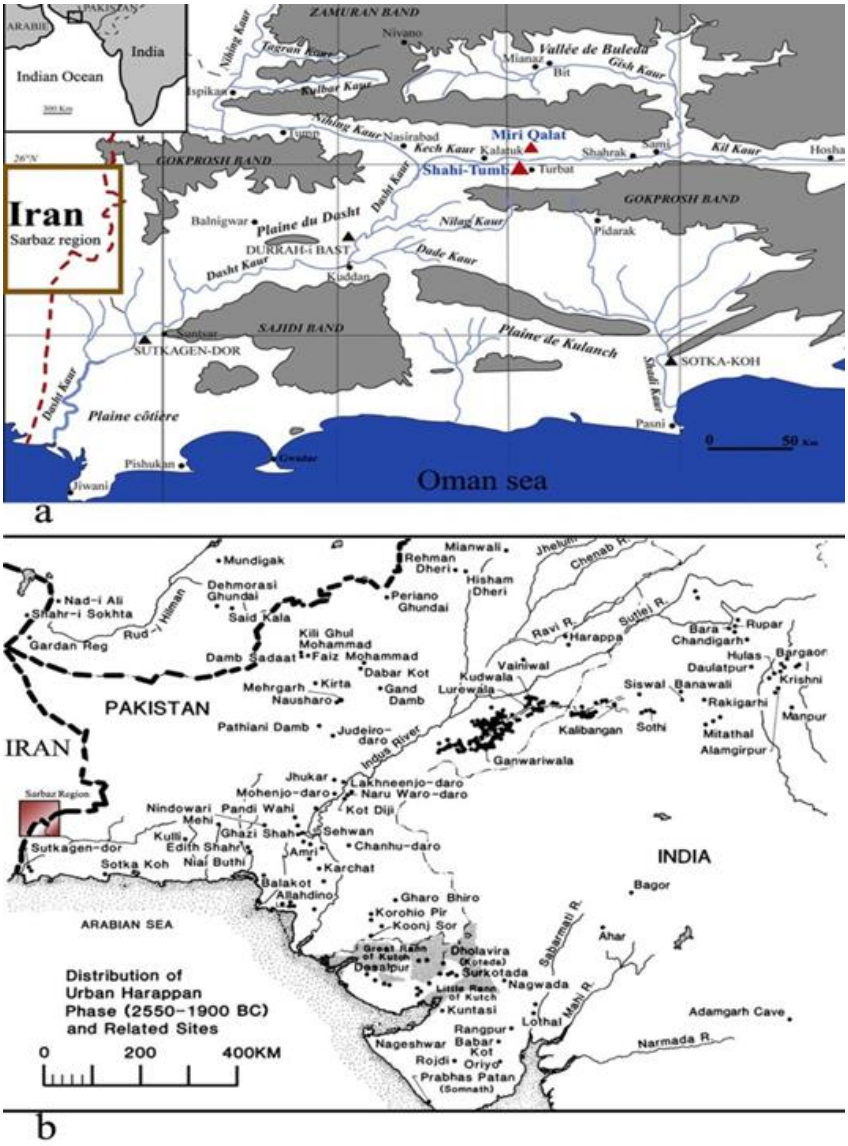

Figure 9. The distribution of important sites in the Indus Valley and Baluchistan of Pakistan along with the location of the basin has been studied; a: (after Besenval and Didier 2005: fig.2 and Didier 2007), b: (after Posshel 1998: fig.2 / 1).

Tepe Keshari (Hassan): This site is located in the Keshari plain (present Mola Abad) between two sedimentary mountains with a small height above sea level. This mound has a significant protrusion from the surrounding land surface. On the surface of this area, there is a scattering of red and gray pottery, plain and painted, and stone tools, including small blades and blades, as well as marble utensils and shells in abundance (Fig. 10) (Sarhaddi-Dadian, 2021). The pottery of this area is red and gray with geometric patterns including hatched triangles and triangles with parallel zigzags and opposite triangles, which is more comparable to Miri Qalat IIIb (Didier, 2007). On the other hand, it shows the similarities of clay with Bampur, although to a lesser extent (Fig. 11). On the surface of this area, pieces of marble utensils, two pieces of soapstone vessels, and stone tools can be seen. The stone tools of this area include red stone blades for harvesting agricultural products, which are mixed tools (Fig. 12).

Tepe Keshari 2: The height of this mound reaches about 3 m and its surface is covered with anxious stone ridges. Most of the available pottery is red and decorated with geometric patterns. The pottery motifs include wavy bands, and horizontal and vertical parallel bands that are comparable to Miri Qalat IIIb. The surface of the mound is covered with anxious ridges as well as architectural works. Further, architectural works including rooms with a right corner can be seen, which seem to be comparable to the royal architecture of Shahi Tomp and Miri Qalat.

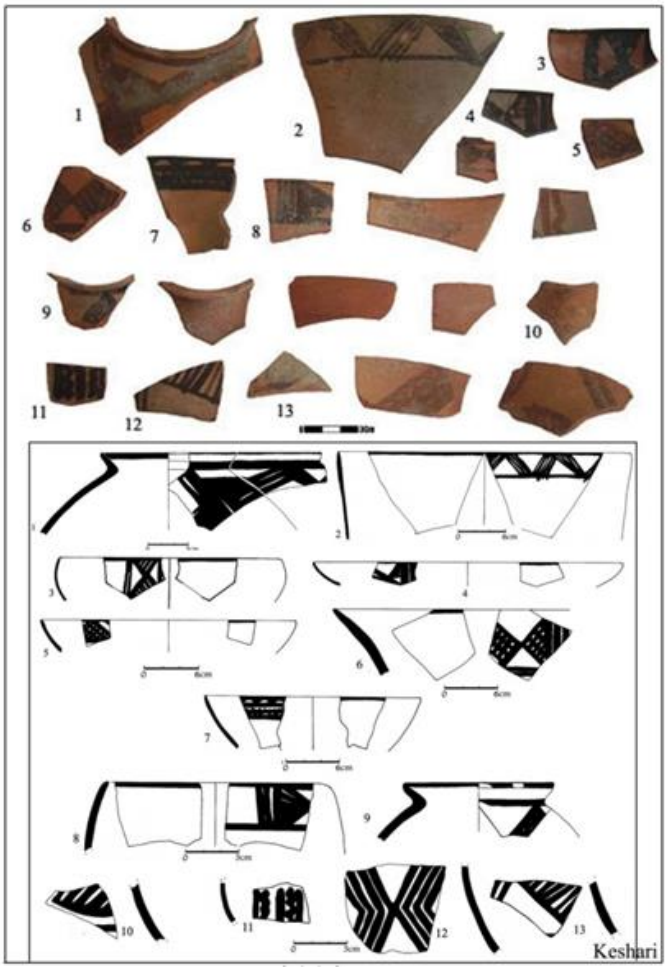

Figure 10. Surface pottery from the Keshari site.

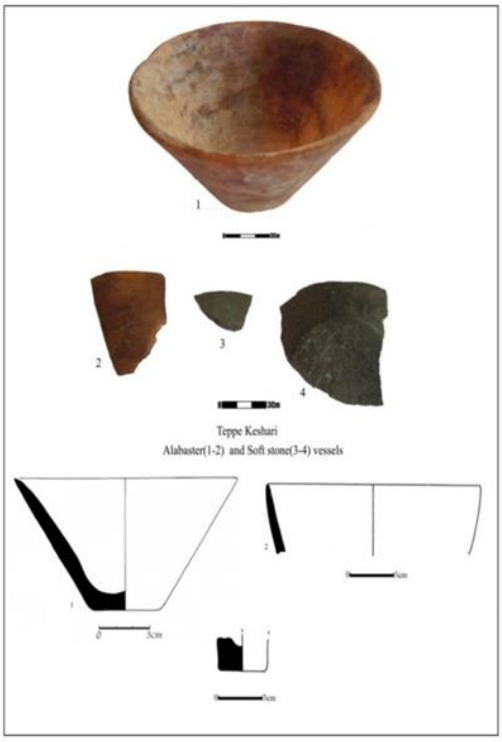

Figure 11. Marble dishes and soapstone obtained from the surface of Keshari site.

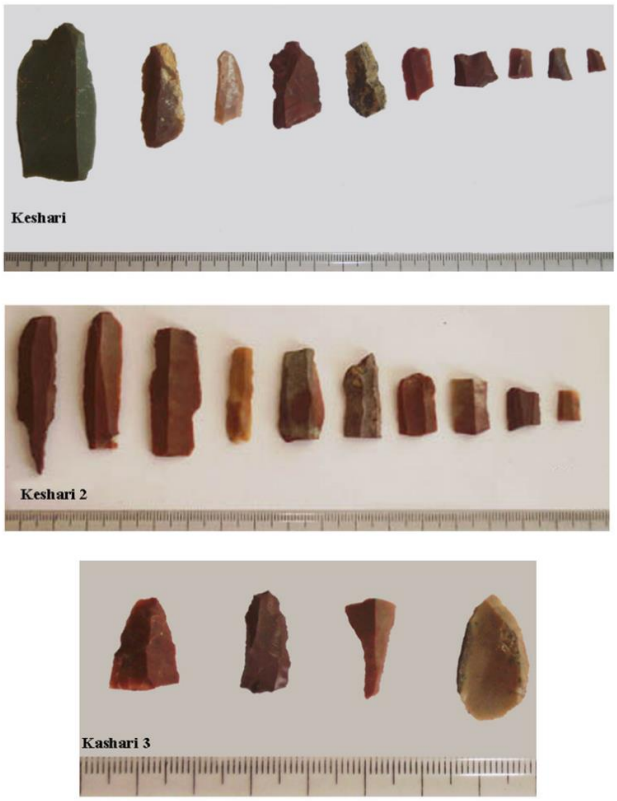

Figure 12. Stone tools of Tepe Keshari.

Tepe Parud Qalat: This mound has a significant retreat from the surrounding land surface and its surface is covered with anxious rock ridges (Fig. 13). On the surface of this area, scattered red and gray pottery can be seen in abundance and painted in abundance, and in fact, they are composed of two protrusions, which were one part in the past, but are now divided into two mounds due to the construction of agricultural land. Architectural works such as stone walls can be seen on this mound. The pottery on this site is in two ranges of plain gray and patterned and simple red and patterned with simple geometric patterns such as hatched edges and parallel oblique lines around the edge (Fig. 14). Architectural works such as stone walls can be seen on this mound. The pottery on this site is in two ranges: plain gray and engraved and plain red and engraved with simple geometric patterns such as hashed edges and parallel oblique lines around the edge (Fig. 14).

Figure 13. The Parud Qalat site, south view of Sarbaz River and Keshari site.

Figure 14. Surface pottery from the Parud Qalat site.

Tepe Qalat Pishin: This site is located on a sedimentary and earthen bed in Pishin County. This site is a circular mound with dimensions of 50 × 50 m and is one of the few mounds in Sarbaz County, which is noteworthy due to its location on sedimentary land with agricultural potential. The surrounding vegetation is also relatively green and palm and reed bushes can be seen. On the surface of this mound, local red pottery with perforated motifs and also painted motifs that belong to the late Islamic era can be seen. Prehistoric pottery is found on the edge of the mound, especially in the cuts. The pottery of this area is painted red and gray, and the pottery pieces show the dual effect of the Indus Valley and Bampur. A piece of gray pottery with the head of a cow was also seen, as in the case of Mehy and Coli (Jarrige & Lechevallier, 1979: fig. 24.6) (Fig. 15).

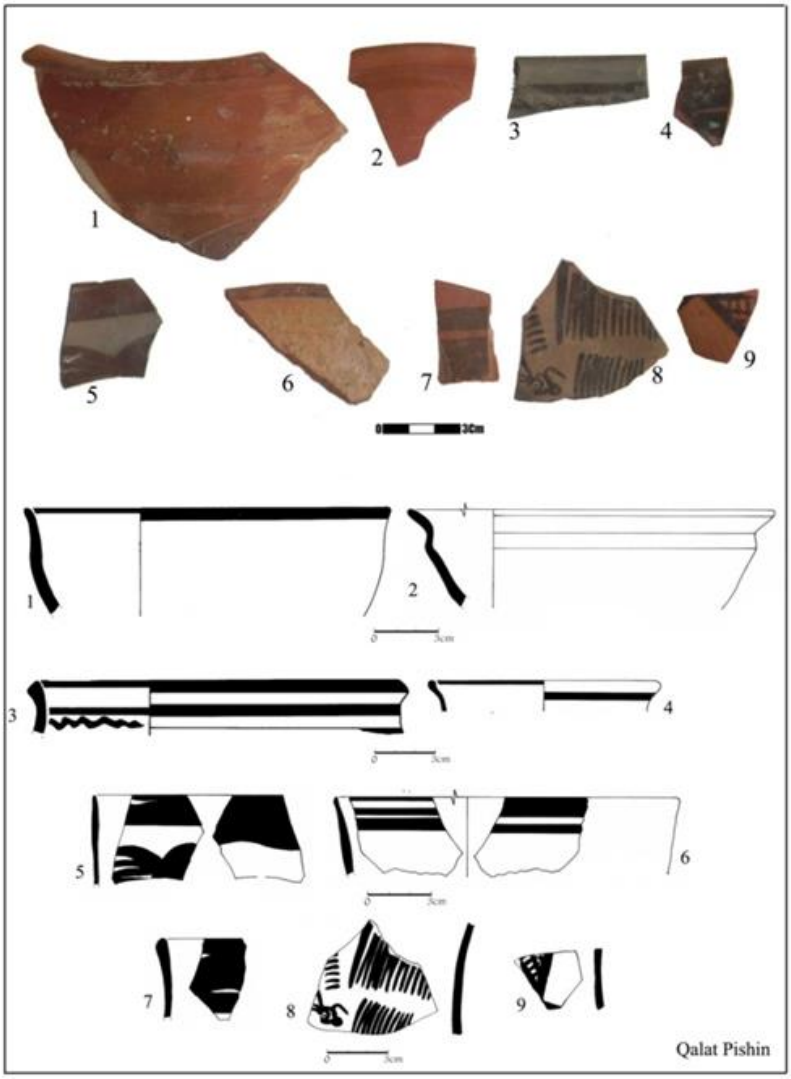

Figure 15. Surface pottery from Tepe Qalat Pishin.

III. Historical and Islamic sites of Sarbaz County

Historical and Islamic sites, like the prehistoric era, are located along the Sariaz River or its catchments, which show the importance of this River in creating human settlements in different historical era. The tomb called Dambi, first named by Aurel Stein, is found in some places scattered in the highlands, most likely belonging to nomadic groups. Here some of them will be briefly discussed.

Dambi Beris 2 Cemetery: This cemetery is located in Parud village, 32 km north of Rask City, with a longitude of 61 22 421 and a width of 180 23 26 with an area of 5000 m^2. The surface of the cemetery consists of 6 to 7 dumb ridges, which according to the evidence, the number of dumb-shaped tombs in the past was more than today, which is probably due to the smoothness of this part and the reuse of dumb ridges by nomads in later periods. Has suffered from severe surface erosion (Fig. 16). The artifacts collected from the surface of the area include pottery, which is simple except for one piece called nomadic pottery. The pottery has red paste and mineral chamotte. Jar and bowl forms are the most common type of pottery. Also on the surface of this area, architectural works can be seen, which include a very simple stone wall (Fig. 17).

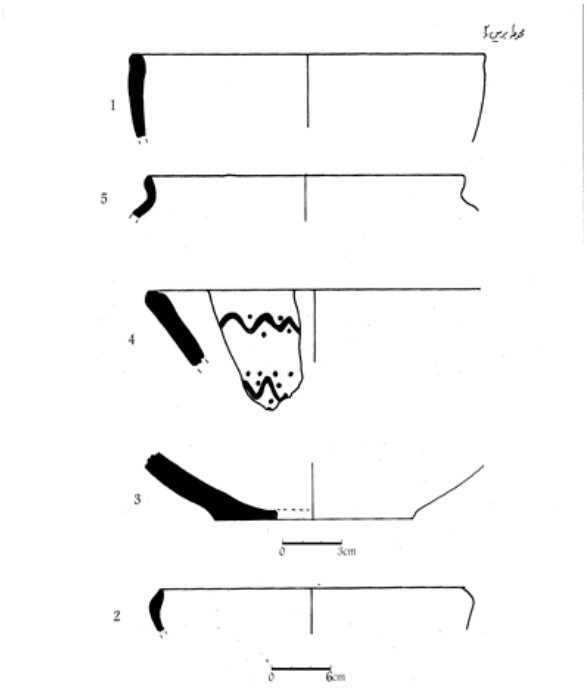

Figure 16. Surface Pottery from Dambi Beris 2 Cemetery.

Figure 17. Dambi Beris Cemetery.

Dambi Hashem Abad: This site is located in Parud district, 25 km north of Rask City, with a longitude of 61 21 278 and a latitude of 180 19 26. The number of Dambi in this area is 7 to 8. The Dambi of this area, like other Parthian Dambi sites in this area, have been destroyed due to atmospheric and human erosion in later periods, and only their plan can be seen on the ground (Fig. 18).

The materials collected from the surface of the site include a piece of furniture that 4 pieces were selected for the design. They have one piece of buff paste and the rest of the red paste. There are various decorations on the pottery. For example, one has added decoration and the other has carved. Besides, the grooved decoration can be seen on one piece. Glazed pottery can also be seen in this collection, on which black patterns can be seen. Pottery fireclay mortar is a mineral and has good cooking (Fig. 19).

Figure 18. Dambi Hashem Abad Cemetery.

Figure 19. Surface pottery from Dambi Hashem Abad Cemetery.

Sirjan Site: This site is located 25 km south of Jakigur village and 1 km east of Sirjan village on the western edge of Lashar Kahi River terrace and in length: 61 19 377 and latitude: 26 11 105. On the surface of the area, pottery from the historical (Parthian) period is very little scattered. Of course, it should be noted that this area has been inhabited for two periods, because apart from the pottery of the historical era, late Islamic pottery can be seen, which shows the resettlement by local tribes. Parthian pottery, although slightly scattered on the surface of the area, according to their designs are the leading species of Londo pottery. This area is located on a bed of black pebbles. There is no vegetation on the surface of the cemetery (Fig. 20).

Figure 20. The Sirjan site, view from the north.

Description of findings:

The artifacts collected from the surface of the area are basalts that can be divided into two groups.

A- Simple pottery includes 1 piece of wheel buff ware with fireclay mortar mineral and sufficient baking that is part of the bottom of the dish.

B- Engraved pottery includes 4 pieces of the body with red paste and sufficient baking that has fireclay mortar mineral. On three pieces of pottery, patterns are drawn in black and in one case in brown. Except for the design of one of the potteries, which evokes animal branches in the mind, the rest are geometric patterns (Fig. 21).

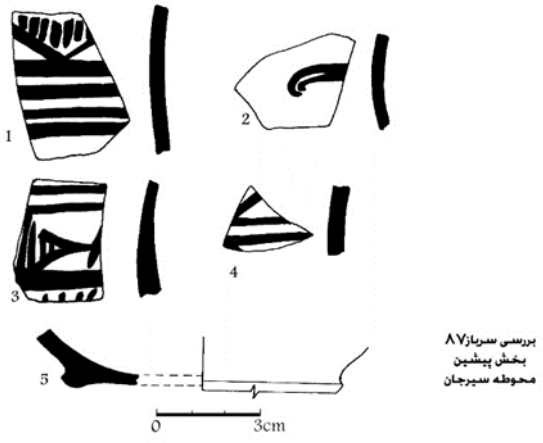

Figure 21. Surface pottery from Sirjan site.

Hodar Dambi 1: This site is located 30 km south of Rask, 3 km west of Hodar Banda village, and 300 m north of Hodar Castle at longitude: 61 26 339 and latitude: 26 09 280. This cemetery should be in a historical complex with an Islamic castle and cemetery. Considered. This cemetery, which is located on the edge of the Ashar River, has a large number of Dambi, the plan and prominence of some of which are visible. There are two types of graves on the surface of the cemetery in terms of appearance: A: Graves with rectangular masonry, a significant percentage of which have a rectangular arrangement. B: Circular tombs that are very few in number and structurally similar to other Dambi in the region. Also on the surface of this cemetery, the remains of architectural works of stone walls with a right-angle plan can be identified, which indicates the establishment in the Islamic era, because several new Islamic tombs can be seen in the northern corner of the Parthian cemetery (Fig. 22).

Figure 22. Dambi Hodar 1 Cemetery.

In this cemetery, the scattering of pottery of the historical era (Parthian) can be seen, especially the type called Lundo pottery, which contributes significantly to the history of this cemetery, but in general, the discovered pottery can be divided into two groups, which are as follows:

A- Simple: It consists of 2 pieces of red edges with mineral chamotte that have the shape of a bowl and their surface is covered with a thin slip and they have enough cooking.

B- Engraved: Consists of two pieces of red body with black geometric patterns consisting of parallel horizontal and vertical lines and wavy lines drawn on them (Fig. 23).

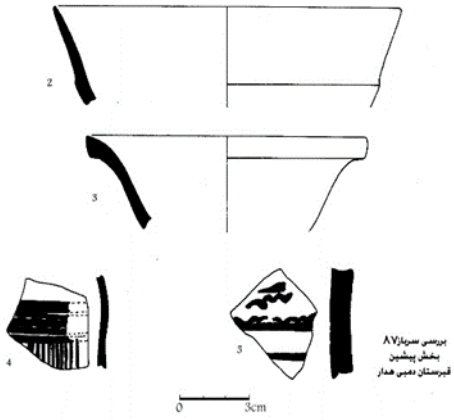

Figure 23. Surface pottery from Dambi Hodar 1 Cemetery.

Gurshun Cemetery: This site is located 55 km southeast of Rask, 3 km north of Pishin, at 61 44 189 longitude and 26 82 650 latitude. This 7000 square meter cemetery is one of the largest cemeteries in Pishin district. There are about 80 graves in this cemetery, according to studies and physical evidence, two types of graves can be identified, which are as follows:

A: Tombs with landmarks, this type of tombs are made of two stones that are buried longitudinally on both sides of the grave and the distance between the two landmarks varies from 40 to 100 cm depending on the appearance of the tombs.

B: Stone ridge tombs that are very few in number. These tombs have a circular shape (Fig. 24) and the boundaries of the tombs are marked with natural rectangular stones. The ridges and crevices of these tombs are also so low that only the boundaries of the tombs can be identified.

Figure 24. Gurshun Cemetery surface.

No cultural items such as pottery were discovered on the surface of the cemetery to provide an accurate history. However, according to the tombstone of sign stone, type A, which is a common tradition in Baluchistan today, the history of this cemetery can be attributed to the late Islamic era.

Kuhe Gerde site: The Kuhe Gerde site is so named because it is located on a rocky mountain attributed to Gerde. This site is located 500 m south of Hodar, Jakigur village, along the length of 61 26 484 and the width 26 08 307 and the height of 1242 meters above sea level (Fig. 25).

This site is a large group shelter with an area of 30,000 m^2 on a mountain with an incomplete conical peak, the top of which can be seen as a flat surface. At the top of the mountain, a very large area can be seen, which is covered with single stone rooms, all of which are built in a very simple and rectangular shape without any mortar, and no care has been required in their construction. The complex of this building does not show any geometric order that indicates a previous plan for construction and can be seen on the edge of the mountain in the eastern part of the stone fence, which was built to increase the safety of the complex. In addition, access to the site is very difficult and tedious. This mountain is very significant in terms of security due to its natural structure. Scattered pottery on this site is probably all storage containers due to its roughness, and no delicate utensils such as bowls, glasses, and painted plates were found. Due to the natural defense structure of the complex and the presence of rough storage pottery, it can be concluded that this area was used in emergencies such as war and conflict. Existence of similarity between the rough brick pottery of this area with most of the nomadic settlements of the region that belong to the late Islamic era can be considered as dating to the late Islamic era.

Figure 25. North view of Kuhe Gerde.

Ziyarate Baftan Cemetery: This site is located in Jakigur village, 25 km south of Rask, on the south bank of Sarbaz River, length: 61 30 134 and width: 26 74 140. This cemetery with different grave structures is naturally divided into two parts, west and east, by a dirt road, which is the way for the residents of Baftan village to travel to the groves. Due to the structure of the tombs and the erosion created in the tombs, the western part is older than the eastern part. The tombs in this section are located in the form of ridges and sign stones on both sides of the tomb in the west-east direction, and the border of the tomb is separated from the surrounding area in the form of an elliptical circle. The eastern part of the cemetery is bounded by a stone strip with a height of about 30 cm. The tombs of this section have a better structure than the western section due to their newness. In this part, the tombs are almost similar to the tombs in the western part, with the difference that in some tombs, the stones arranged around the tombs in two or three rows in an oval shape indicate the area of the tomb. This section was probably used as a family tomb. In this cemetery, no significant cultural relics are observed in the area and according to the structure of the cemetery graves, its antiquity can be attributed to the late Islamic era (Fig. 26).

Figure 26. The western part of Baftan Cemetery.

Hut Abad Cemetery: This cemetery with an area of 20,000 m² and about 500 graves is located in Jakigur village, 16 km south of Rask, 1 km from Hut Abad village and length 61 27 256 and latitude 26 84 410 84, which is one of the largest cemeteries in Pishin County Sarbaz of Sistan and Baluchistan province. The tombs are similar to other Islamic tombs in the area, surrounded by a circular or oval stonework, with two vertical stones on either side. One of the most important features of this cemetery is the existence of inscribed tombs, which is unique in this county. The year of death and the name of the deceased and sometimes several poems have been engraved on them. Two tombs have been built inside the cemetery, which first created a square building with an entrance on the east side, inside which is a tomb. It is noteworthy that in the western corner of the cemetery, an anxious Dambi tomb can also be seen (Fig. 27). There are also several Parthian pottery pieces on and around Dambi's tomb, which are probably Lundo pottery. The works collected from the surface of the area are pottery that can be divided into two general parts:

A- Simple: Includes a simple piece of pottery with red paste and mineral chamotte that is relatively well baked.

B- Engraved: Includes an edge piece with brown patterns on both sides and a body piece with black patterns. Parallel and checkered lines form the patterns on the pottery (Figs. 28 and 29).

Figure 27. Hut Abad Cemetery.

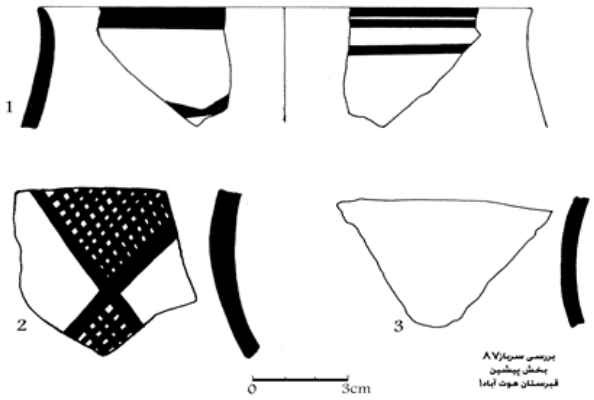

Figure 28. Surface pottery from Hut Abad Cemetery.

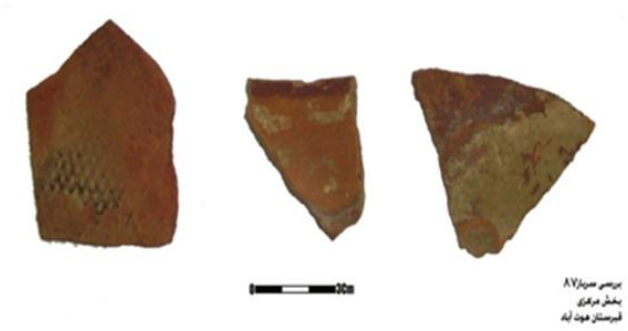

Figure 29. Surface pottery from Hut Abad Cemetery.

Jakigur Cemetery: This cemetery is located 25 km southeast of Rask and on a natural bed with a height of 5 m next to a small waterway with an area of 20,000 m² in length: 51 27 158 and latitude: 26 84 310 geographical. The north to the heights and the south to the River are limited. The southwestern part of the cemetery is heavily eroded, and the northern part is bounded by a stone wall. The tombs on this cemetery, like other tombs of the Islamic era, are simple tombs with stone carvings around the grave. A unique feature of this cemetery that distinguishes it from other cemeteries in this area is the presence of inscriptions on the sign stones, which indicates the existence of literacy among the residents of this section (Fig. 30).

Figure 30. Inscribed tombstone, Jakigur Cemetery.

IV. Conclusion

Sarbaz River is one of the most important Rivers in Baluchistan, which has water in all seasons. However, this constant flow of water, unlike Bampur, has not led to the formation of significant human settlements with abundant archaeological evidence such as Tepe Bampur, and the dispersion of prehistoric sites in these areas is very small and can be seen only in these two areas.

The biggest cause of this event should be sought in the geological context of the region. Sarbaz region has a hot and humid climate due to its proximity to the Chabahar region and yet it is one of the mountainous parts of Baluchistan (southern Makran) (Seyed Sajjadi, 1995: 86). The ratio of flat to the mountainous terrain in this area is very small and the land has a rocky texture. Although in some places like Pishin, this ratio changes slightly, in most county areas the situation is more or less as described. In the northern part of the Sarbaz River, the geological context has influenced the formation of prehistoric settlements in a different way. This area is limited to the Bampur Valley from the north and has not had much contact with the cultures of Baluchistan, Pakistan, from the east. This has led to the lack of expansion and development of the settlements of the third millennium BC in the region, where trade has been one of the important factors for their development and prosperity (Baluchistan 1979: 80-84). This issue is taken from the cultural materials found in the areas, especially in Parud. They are limited to simple pottery and painted pottery with simple geometric patterns (Fig. 31).

In the southern regions of the River, and especially in the Keshari Plain, the proximity to the sea as a regional commercial center on the one hand (Porada, 1971: 291-338), facilitating communication with the more eastern regions of Pakistan through the flat Pishin plain. In addition, the existence of flat and arable lands through easy access to the water of the Sarbaz River have been three very important geographical factors in the formation of settlements in this region. On the mounds of Keshari plain, the variety of antiquities can be seen well. Near Pishin on Tepe Qalat, a piece of pottery with the design of the famous cows of Mehrgarh VI (Jarrige & Lechevallier, 1979: fig. 24.6) was found.

The latter hypothesis is confirmed by the following findings: (1) The existence of several pieces of soapstone container (Fig. 10). Mines of this stone are available in Kerman. Chlorite vessels are considered a key commodity in studying interregional trade in the second half of the third millennium BC (Baluchistan et al., 1978: 464; Baluchistan, 1979: 62-68). (2) The presence of many pieces of marble utensils and even a sample of a complete marble container (Fig. 10) as other Characteristics of interregional trade or transregional trade (Casanova, 2008: 380). (3) The various geometric patterns of pottery that are comparable to Miri Qalat IIIb (2700-2000 BC) and other cultures of the Indo-Iranian border.

As we know, a large part of materials and commercial objects were brought to the southern coasts from the Iranian plateau (Beals, 1973: 136-140). Regionally organized trade made Tepe Yahya an important place in the third millennium and found a

more direct connection with Mesopotamia (Lamberg Karlovski 1972: 227). There is little evidence of the marine trade in raw materials and luxury goods with Mesopotamia during the Yahya IV. At the beginning of the second millennium BC, Yahya's role in trade diminished and the centrality of this trade shifted to the shores of the Persian Gulf (Alden, 1982: 627-628), which was faster, less risky, and less expensive. In Bampur VI, the greatest impact is seen between the southern regions of the Persian Gulf and Bampur (Potts, 2003: 7-8) and it seems that the sea route is one of the largest routes for the transfer of raw materials and materials from Iran to Mesopotamia during the third millennium BC, especially the second millennium BC. (Alden, 1982: 627-628) (Fig. 31).

In Oman, Bahrain and the UAE, many sites of the mentioned examples have been excavated. The most important of which are Umm Al-Nar (Ferifelt, 1979), Ras Al-Janiz (Cleuziou & Tosi, 2000), Haley (Cleuziou & Tosi, 2007), etc. These sites are cemeteries with large circular mass graves (Cleuziou & Tosi, 2007: 139-146). Burial objects include pottery and gray cube-shaped jars with palm tree motifs similar to those of the Bampur VI (Potts, 2003: 7-8). Besides, pottery with motifs of the Indus Valley Culture (Cleuziou and Tosi, 2000: 48, fig. 9) is one of the most important cultural materials. This evidence indicates the extensive connection of these areas with northern regions such as Baluchistan, Makran, the Iranian plateau (Ibid: 26), and the Indus Valley and Mesopotamia (Cleuziou, 2003: 147). The extent and variety of cultural materials indicate the existence of commercial activities and the presence of merchants in these areas who in the last centuries of the third millennium transported their goods to Mesopotamia by sea (Alden, 1982: 627) (Fig. 32).

The evidence of the historical and early Islamic era in this region is very weak. The historical era mainly includes Dambi-shaped tombs, which according to studies by Aurel Stein are related to the Parthian period and have different shapes circle, oval, square, and rectangle. Their height from the ground fluctuates between 30 to 50 cm, which rarely reaches 1 meter in some graves. It seems that this kind of burial tradition in Baluchistan lasted even in the Islamic era. With a slight change in the Islamic era and its integration with the teachings of Islam, this type of burial structure has been used. In the Islamic era, tombs have a special structure and are in the form of stonework with east and west orientation with markers on both sides, which facilitates the identification of tombs of the historical and Islamic eras. One of the unique features of the Islamic tombs of this county is the presence of inscriptions on the sign stones in Hut Abad and Jakigur cemeteries, which distinguishes it from other cemeteries in this area. It is a sign of literacy among the residents of this section that the year of death and the name of the deceased and sometimes several poems have been written on them.

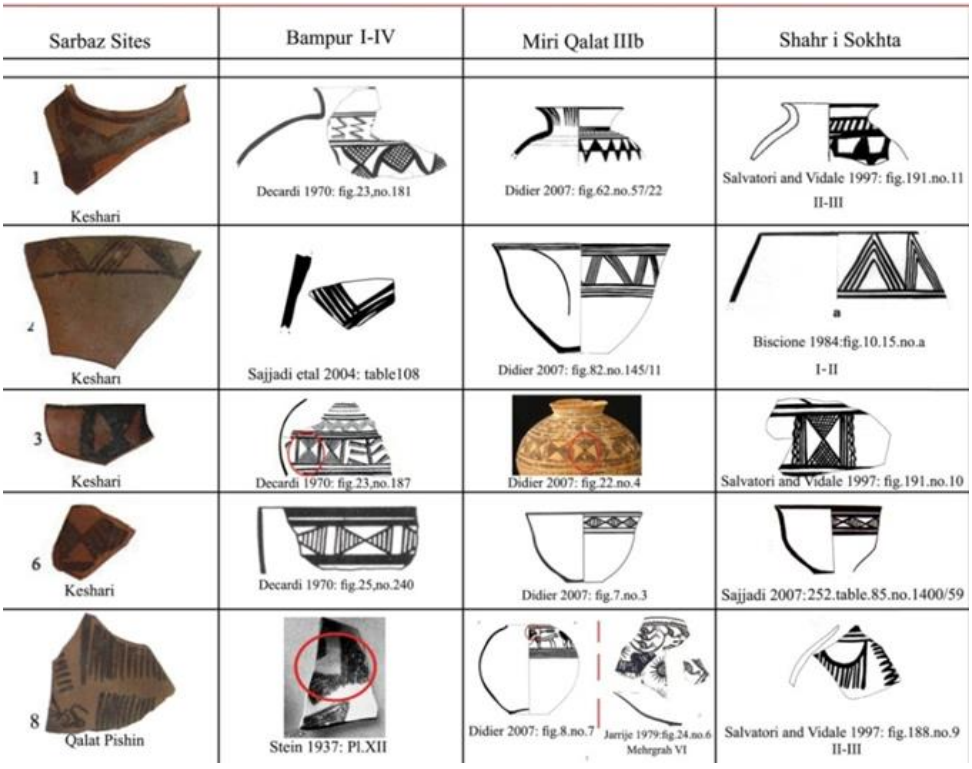

Figure 31. Table comparing the typology of Pishin and Keshari pottery with well-known sites.

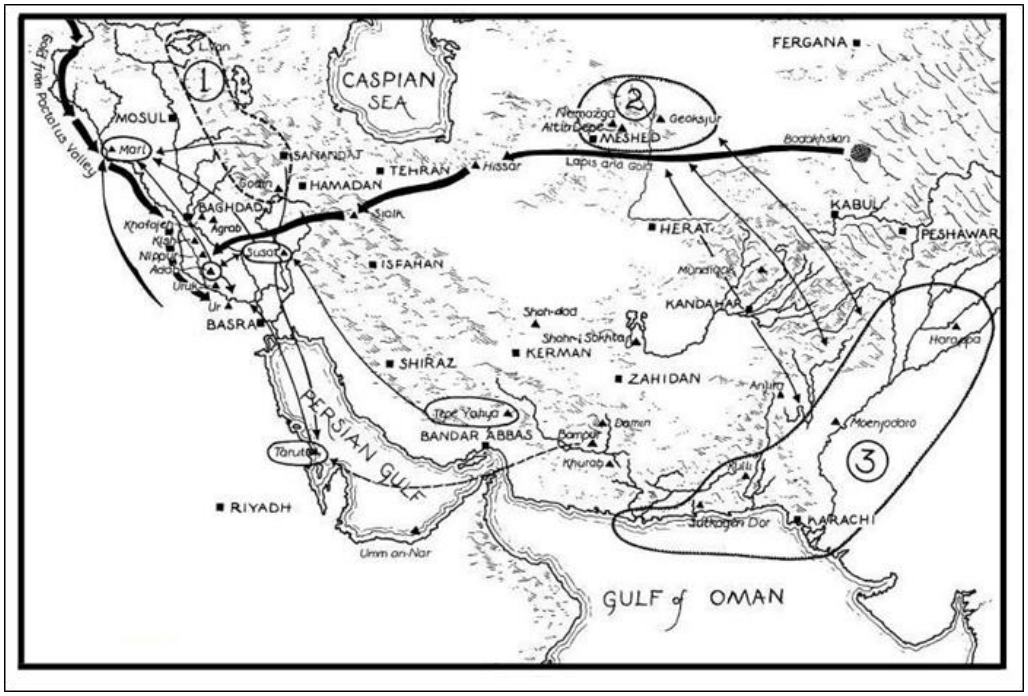

Figure 32. Map of Iran and areas of regional interaction in Iran based on trade relations (After Baluchistan, 1979).

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INVESTIGATING THE CULTURAL INTERACTIONS BETWEEN IRAN AND CHINA IN THE SAFAVID PERIOD (CASE STUDY: BLUE AND WHITE POTTERY FROM HOWZDAAR CITY, SISTAN)

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Abstract: One of the main ways to understand the interactions and cultural relations of societies in different historical eras is to analyze and compare cultural materials with each other. The cultural connection of the Sistan region, especially the historical city of Howzdaar in the south of this plain, with the neighboring areas and other cultural regions, and the similarity of the artworks of different areas in certain periods, shows the economic, social, and cultural relationship between those regions. As an element related to art and daily life, pottery expresses cultural relations and commonalities between different regions. The Sistan plain includes the northern parts of Sistan and Baluchistan province, now divided between Iran and Afghanistan. This plain is where humans have constantly interacted with the natural environment. This area has always housed a significant population due to its suitable and unique environmental features. On the other hand, due to its strategic and military location, it has been the focus of various governments in the past. During the archaeological field studies in this area, a site/city belonging to the Islamic era was discovered. From this site, called Howzdaar City, 237 potsherds known as blue and white pottery were identified, recorded, and studied. Blue and white pottery is one of the most famous pottery made in China. The production of this pottery started during the Tang period and continued until the Qing period. In the Tang period, this pottery made its way to the court of caliphs and then to other markets. The peak of the use of this pottery in Iran was during the Safavid period. Iran's location on the Silk Road route and the expansion of cultural and commercial relations between Iran and China caused the influence of Chinese art on Iranian works of art in such a way that in this century, the production of pottery influenced by the pottery of the Ming period was noticed by the Safavid kings. The research aims to introduce, classify, and typology the blue and white pottery of Howzdaar City. Further, the connections of this region with China and Iranian cities such as Kerman, Neyshabur, Samarkand, and Tabriz located on the silk trade route are examined. Documentary studies and field surveys were the basis of the methodology of this research. The results showed that the blue and white pottery of Howzdaar City in the Safavid period has many similarities with samples produced simultaneously in China and the areas mentioned above along the silk trade route, which indicates extensive cultural relations between these regions.

Keywords: blue and white pottery, Howzdaar City, Sistan, China, cultural interactions.

چکیده: یکی از راه‌های عمده درک برهمکنش‌ها و روابط فرهنگی جوامع، در دوره‌های مختلف تاریخی، تجزیه و تحلیل و مقایسه مواد فرهنگی با یکدیگر است. ارتباط فرهنگی منطقه سیستان، به طور اخص شهر تاریخی حوض‌دار در جنوب این دشت، با مناطق همجوار و دیگر مناطق فرهنگی و مشابهت آثار هنری مناطق مختلف در ادوار مشخص، بیانگر ارتباط اقتصادی، اجتماعی و فرهنگی میان آن مناطق است. سفال به عنوان عنصر مانوس با هنر و زندگی روزمره می‌تواند بیانگر روابط و مشترکات فرهنگی میان مناطق مختلف باشد. دشت سیستان بخش‌های شمالی استان سیستان و بلوچستان را در بر می‌گیرد که اکنون میان دو کشور ایران و افغانستان تقسیم شده است. این دشت منطقه‌ای است که انسان در آن دائماً در کنش و واکنش با محیط طبیعی قرار داشته است. این منطقه به علت برخورداری از ویژگی‌های مناسب و منحصر به فرد محیطی، همواره جمعیت قابل توجه‌ای را در خود جای داده و از سوی دیگر به علت موقعیت استراتژیک و نظامی، مورد توجه حکومت‌ها و دولت‌های مختلف در ادوار گذشته بوده است. امروزه در بخش کوچکی از این سرزمین که در ایران قرار دارد، شهر تاریخی حوض‌دار واقع شده است. طی بررسی‌های باستان‌شناسی در پروژه بررسی و گمانه‌زنی جهت تعیین عرصه و پیشنهاد حریم محوطه‌های موجود در منطقه حوض‌دار به سرپرستی نگارنده اول در تیر ماه سال ۱۳۹۸ که منجر به شناسایی و بررسی شهری از دوران اسلامی گردید، از این شهر تاریخی تعداد ۲۳۷ قطعه سفال موسوم به سفال آبی و سفید شناسایی، ثبت و ضبط و مورد مطالعه قرار گرفت. سفال آبی و سفید از معروف‌ترین سفال‌های ساخته شده در چین است. ساخت این سفال از دوره تانگ آغاز و تا دوره چینگ ادامه می‌یابد. اوج استفاده از این سفال در ایران به دوره صفوی باز می‌گردد. قرارگیری ایران در مسیر جاده ابریشم و همچنین گسترش روابط فرهنگی و تجاری بین ایران و چین سبب تاثیر هنر چین بر آثاری هنری ایران شد به گونه‌ای که در این قرن ساخت سفال‌های متاثر از آثار سفالی دوره مینگ مورد توجه شاهان صفوی قرار گرفت. این پژوهش با هدف معرفی، طبقه‌بندی و گونه‌شناسی سفال‌های آبی و سفید شهر حوض‌دار انجام شده است. همچنین، ارتباطات این منطقه با چین و شهرهای ایران مانند کرمان، نیشابور، سمرقند و تبریز واقع در مسیر تجارت ابریشم مورد بررسی قرار می‌گیرد. مطالعات اسنادی و بررسی میدانی مبنای روش‌شناسی این پژوهش بود. نتایج نشان داد که سفال‌های آبی و سفید شهر حوض‌دار در دوره صفوی شباهت‌های زیادی با نمونه‌های تولید شده همزمان در چین و مناطق مذکور در مسیر تجارت ابریشم دارد که حاکی از روابط فرهنگی گسترده بین این مناطق است.

کلیدواژه: سفال آبی و سفید، شهر حوض‌دار، سیستان، چین، برهمکنش‌های فرهنگی.

I. Introduction

Pottery has always been used due to its practical and aesthetic features, and the beautiful and well-made pottery of Iran's prehistoric era (especially the fifth millennium BC), historical and Islamic eras is proof of this claim. In the Islamic period, pottery was one of the prominent elements of Islamic art (Allen, 2004: 4). One of the important centers of Iranian pottery in the Islamic era was the Sistan area in the cultural region of southeastern Iran. Citing historical sources, there is no doubt that the Sistan area was very important and prestigious during the Islamic era. The Howzdaar City in Sistan, Iran, as one of the cities of the middle Islamic centuries, has a very favorable position for archaeological studies due to the large amount of diverse cultural materials. Cultural interactions in the Sistan area during the Safavid period and the similarities that can be seen in the material culture of the societies of this area have always been of interest to researchers of culture, history, archaeology, and architecture. Today, due to the new archaeological investigations in the historical area of Howzdaar, it is possible to study these cultural features. This research aims to study some cultural similarities through the typological comparison of pottery in a wider geographical area. The importance and necessity of this study lies in the fact that, in addition to highlighting common cultural elements in Howzdaar City itself, it shows the cultural convergences of this area with China. The Safavid period was a very important historical stage in this area and its prosperity can be seen in the form of a large number of archaeological sites belonging to this period. From this point of view, the main question of the research is, how were the interactions of the historical city of Howzdaar with China during the Safavid period?

To better understand the cultural connections of the historical city of Howzdaar in the Sistan Plain with China, it is necessary to examine and compare the similarities of the cultural materials of this area, especially the blue and white pottery with Chinese examples. The data, on the one hand, evaluates and specifies the degree of connection and the role of the Howzdaar area in the cultural interactions of the two regions of Sistan and China. On the other hand, it reconstructs the cultural relations of the two countries in the Safavid period. Therefore, 237 blue and white pottery from the project of surveying and determining the core zone and proposing the buffer zone of Howzdaar Area's Sites, Sistan[1] were selected for comparative study. This article tries to discuss the results of this study.

II. Research methodology

In the current research, the main approach is based on a comparative study. The necessary data has been collected in two ways, field and documentary. First, the pottery samples collected from the historical city of Howzdaar were recorded, documented, designed, and classified, and then a typological comparison was made. Before all, the technical characteristics of blue and white pottery are of interest. In the following, the analysis of the statistical results obtained from the typology and the comparative study of the pottery types is presented. The blue and white pottery of the Howzdaar site in the southeast of Iran, which is one of the most important cultural characteristics of the Safavid period, is compared with similar samples from China.

III. Research background

"Cultural Region of Sistan and Hirmand Civilization" refers to the geographical region that starts from the southern foothills of the Hindu Kush and continues to the final lakes of Sistan. In the geographical and historical sources of the Islamic era, clear information has been mentioned about the importance and position of the southern plain of Sistan (Hodud al-Alam, 1983; Yate, 1986; Tate, 1983; Ibn Hawqal, 1986; Jihani, 1989; Istakhari, 1961; Lestrange, 1994; Dehmardeh, 2006; History of Sistan, 2008; Malik Shah Hossein, 2004; Sistani, 1988). However, the archaeological information about this area has been limited to a few projects and no detailed work has been done in this area of Sistan. The archaeological projects in this area include the following.

1- Following the implementation of the big project of preparing the archaeological map of the country, the Sistan plain was surveyed. In this survey, between 2007 and 2009, in the southern part of Sistan, the Howzdaar area's sites were also recorded (Mousavi-Haji & Mehrafarin, 2009).

2- Excavation at Rostam Castle in Sistan to find the surrounding moat, foundation, and alcove.

3- Doctoral dissertation with the title "Chronology and Spatial Analysis of Islamic Era Settlements in Sistan's Howzdaar Area with Emphasis on Rostam Castle" (Saadatian, 2019).

4- Systematic survey of Howzdaar City in the summer of 2019 during the project of sounding to

[1] This article is taken from the Archaeological research project "Surveying and Determining the Core Zone and Proposing the Buffer Zone of Howzdaar Area's Sites, Hamoun County" which was carried out under the permission of the Iranian Center for Archaeological Studies No. 9810973 dated July 12, 2019, conducted by Mohammad Keikha.

determine the core zone and propose the buffer zone of Howzdaar area's sites, Hamoun County, conducted by Mohammad Keikha. In this study, the relative chronology of the site and its relationship with the surrounding sites were presented (Keikha, 2019).

The complex of buildings of Howzdaar City is the remains of one of the cities of the Islamic era in the southern part of the Sistan Plain with an area of about 40 km², in the east-west direction. This site is located 60 km southwest of Zabol City, 3 km west of the Zabol-Zahedan road, at an altitude of 497 meters above sea level, and the geographical coordinates N:334134 and E:3380541 (Fig. 1). On the western front of this historical city and approximately 10 km from it, there is the historical area of Kandar, and on the northeastern front is the Shahr-e Sokhta site. In this site, there are 180 features including 2 castles, 3 stables, 12 mounds, 16 furnaces, 6 Windmills, 15 cemeteries, 14 tombs, about 120 buildings, and a set of water supply systems (canals and moats) (Fig. 2).

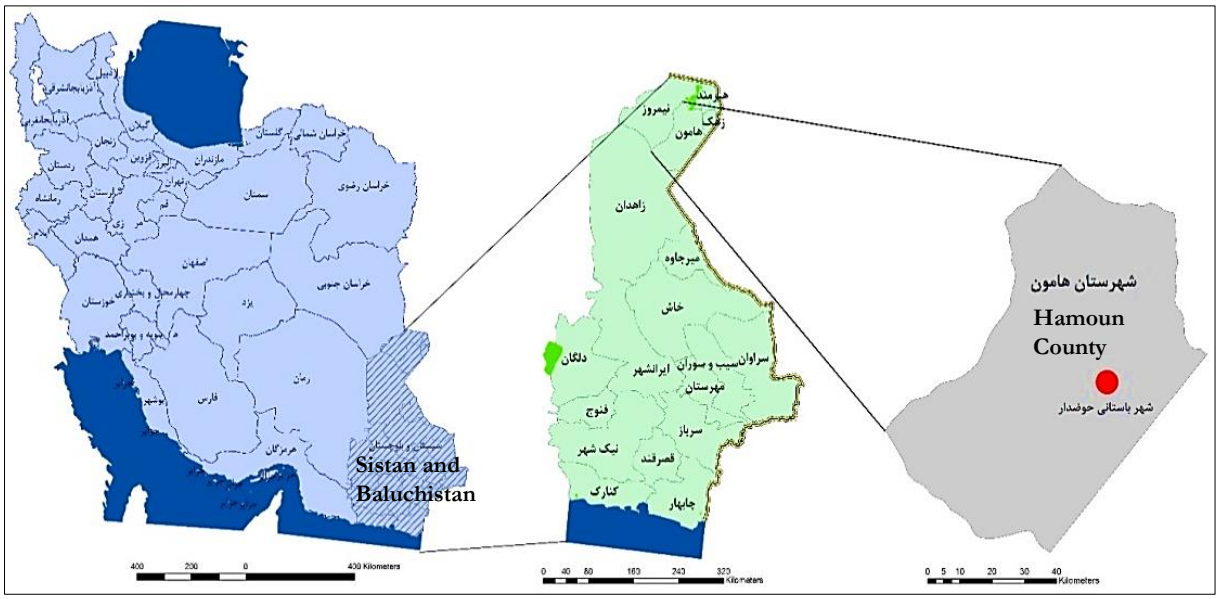


Figure 1. Map of Sistan and Baluchistan province, Hamoun County, and the location of Howzdaar historical area (Authors, 2021).

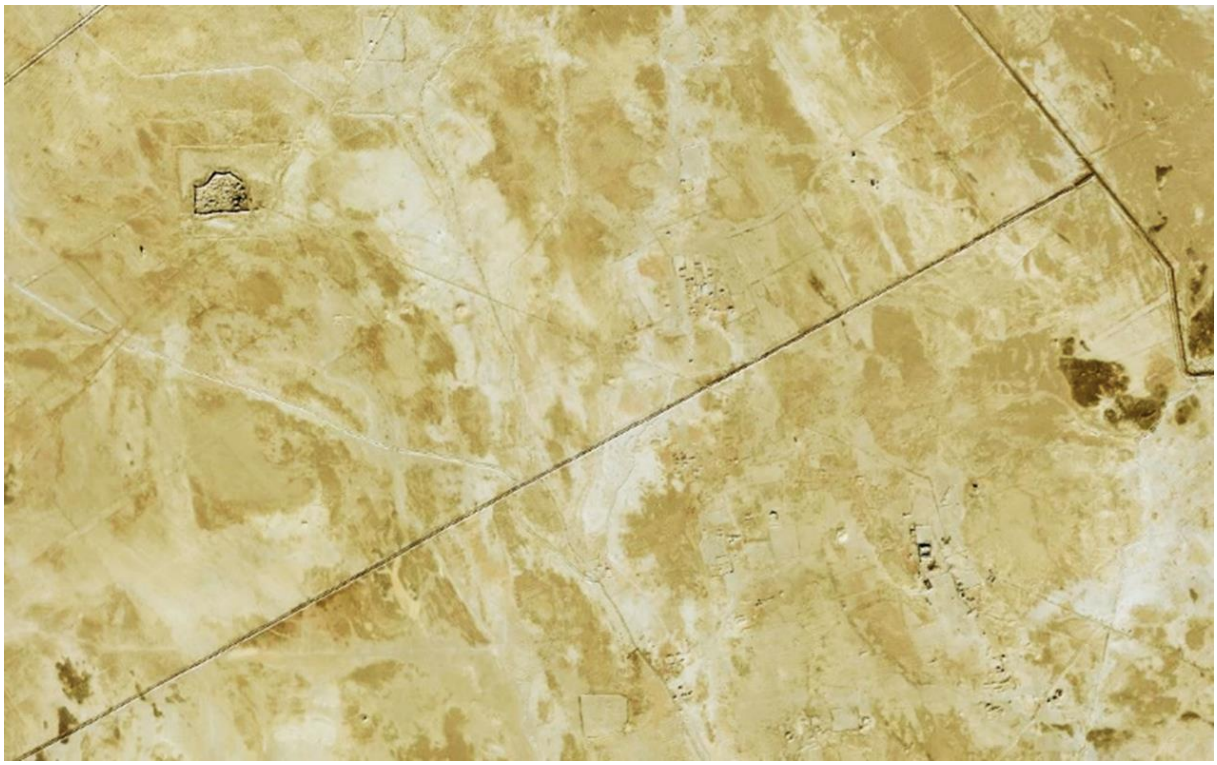


Figure 2. Distribution of findings in the Howzdaar area (Authors, 2021).

IV. The background of blue and white pottery production in China

The Tang Dynasty, which was a prosperous era of social development in ancient China, ruled China between 618 and 907 AD. During this period, the porcelain-making industry developed rapidly. The porcelain made in that period was known for its great variety, colored glazes, and many shapes. Productivity growth, technological progress, social stability, cultural prosperity, and socio-economic conditions provided suitable conditions for the invention of blue and white porcelain in the Tang Dynasty. However, few blue and white ware from the Tang Dynasty can be found in China because most of it was exported abroad. The origin of the production of the first blue and white ware in the Tang Dynasty can be considered to be Gongyi, Henan Province, China (Li et al., 2017: 358-359, 364).

As described, the production of blue and white pottery in China began at the same time as the Tang Dynasty and continued until the Qing Dynasty (1636-1912 AD). These pottery are considered one of the most important porcelain products made in China in different periods, from Yuan to Qing (Dias et al., 2013: 3047). After the destruction of the Yuan Dynasty, the foundation of the Ming Empire was laid, which ruled China for 276 years between 1368 and 1644 AD. The Ming Dynasty was a period of great prosperity in the production of white porcelain, which showed one of the most important and highest levels of technology in this type of production (Ibid: 3057). The most important blue and white pottery production center in China can be considered Jingdezhen located in the south of China in the northeast of Jiangxi (Sarmadi and Torki Baghbadrani, 2010: 114). There were two ways to make pottery in China; A part was under the monopoly of royal workshops and furnaces and a part was under the control of local furnaces. The export of Chinese porcelain began in the Tang Dynasty, and during the Ming and Qing dynasties, blue and white porcelain was exported to foreign countries in a large volume as a valuable trade item. A high amount of blue and white porcelain was obtained from shipwrecks in the Ming and Qing eras in the coastal areas of China, which not only indicates the boom in the export of blue and white porcelain but also confirms the spread of trade through the Maritime Silk Road (He et al., 2021: 1-2).

V. Blue and white pottery in the Safavid period in Iran

One of the brilliant stages in Iranian pottery is the Safavid period. Besides, this era is considered the peak period of blue and white pottery production, so that sometimes it is difficult to distinguish some of these vessels from the original Chinese examples. The blue and white vessels made by Iranian workshops, as was common since the Timurid period, had Chinese or Iranian designs or a combination of both (Demand, 2004: 198; Allen, 2004: 54). Among the Safavid rulers, Shah Abbas I played a significant role in the production and trade of blue and white pottery. For this purpose, he settled three hundred Chinese potters with their families in Iran to train Iranian potters directly under their supervision in the china-making industry. Iranian potters made blue and white dishes by adapting Chinese designs, which became a serious competitor in the global commercial market due to their similarity to Chinese pottery (Alipour, 2016: 185; Sarmadi and Torki Baghbadrani, 2010: 114). The best examples of these vessels belong to the late 10th and 11th centuries AH, but in the 12th century, these products gradually declined (Demand, 2004: 198). In the middle of the 9th century AH, potters probably produced blue and white ware in five centers for court use and sale in the market. The two centers of Neyshabur and Tabriz continued their production until the early Safavid era, and the third center, Mashhad, was revived again in the 11th century of AH (Golombek et al., 2001:207). French traveler Chardin mentioned Shiraz, Mashhad, Yazd, Kerman, and Zarand as Iran's most important pottery and porcelain production centers in the 17th century AD/11th AH (Chardin, 1993: 880). In general, it can be said that the most important production centers of blue and white pottery in the Safavid period were Kerman and Mashhad. However, besides these two centers, we can also mention the cities of Tabriz, Kashan, Isfahan, Shiraz, Ghobira, Yazd, and Neyshabur which had pottery workshops (Akbari and Sadeghi Taheri, 2014: 78; Alipour, 2014: 205-204; Mahjour, 2005: 127). The characteristics of the pottery produced by some of these centers are mentioned below.

Kerman: The blue and white pottery made in Kerman is very high quality, made of soft dough with designs such as flowers and plants in the style of Chinese blue and white ware. However, the main designs, general decorations, and backgrounds are arranged in Iranian style (Mahjour, 2005: 133). During the Safavid period, the importance of the city of Kerman in the production of pottery was so great that both Persian and European sources emphasized that Kerman was the center of production of the best Safavid ware (Golombek, 2006: 152). One of the factors that made Kerman important as a center in the production of pottery during the Safavid era was the proximity of Kerman to Bandar Abbas, which was on the route of the Maritime Silk Road. This geographical location caused the producers of pottery works to benefit from the new styles of pottery production on the one hand, and on the other hand to facilitate their export (Alipour: 2016, 187; Akbari & Sadeghi Taheri, 2013: 79). At the same time, a famous potter named

Seyyed Ahmad known as "Agha" was making pottery in Kerman, which could not be easily distinguished from porcelain (Golombek, 2006: 152). Multi-colored pottery with various motifs and Celadon pottery (Akbari & Sadeghi Taheri, 2013: 82-83).

Mashhad: The city of Mashhad is known as another important center for making blue and white pottery. Since the end of the Timurid period, the potters of this city made great efforts to make blue and white pottery, and this caused the development of these pottery works. The decorations of Mashhad ceramics, which are made of hard mud and dark blue color, are influenced by Chinese motifs in a way that is very similar to Chinese ceramics (Akbari & Sadeghi Taheri, 2014: 81 and 79; Mahjour, 2005: 133). According to Lin, Mashhad pottery has a delicate and thin body, which is stronger and better than Kerman pottery (Alipour, 2016: 187). In general, Mashhad pottery can be classified in the following ways. The first group is earthenware which is made in imitation of porcelain. In the decorations of this group, there are Chinese motifs in the middle and Buddhist symbols around. One of the other characteristics of Mashhad workshop productions is the creation of surface differences for the production of blue and white ceramics, which led to the production of vessels with semi-embossed patterns (Mahjour, 2005: 133). The next group includes ceramics that are distinct from China's blue and white ceramics. In this group, the background of the works is white, with blue motifs drawn on it. These motifs are drawn with black and sometimes dark blue lines (Akbari & Sadeghi Taheri, 2014: 81).

Neyshabur: In Neyshabur, pottery was made from stone paste as well. The motifs of this group include animal (influenced by Chinese animal motifs in the Ming period), plant, and geometric motifs. The blue and white pottery of Neyshabur and Tabriz are very similar. The reason for the similarity between Neyshabur and Tabriz ware is that in the late 9th and 10th centuries AH, some of the potters of this region migrated to Tabriz and transferred the method of making and decorating this type of pottery there (Alipour: 2016, 188).

Yazd: The potters of Yazd succeeded in making white, semi-transparent pottery with a soft paste from the end of the 10th century AH. The decorative motifs of these ceramics were similar to Chinese pottery in the Ming period. The only difference between these works is that the works of Yazd were produced better than Chinese pottery. The reason for this is that Yazd terracotta patterns were designed with blue and dark blue colors (Kambakhsh Fard, 2010: 473).

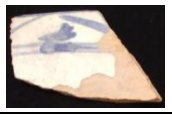
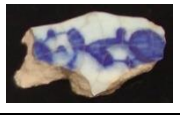
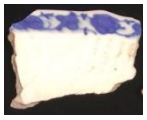
VI. Classification and typology of blue and white pottery of Howzdaar City

The samples of blue and white pottery from the Howzdaar site can be divided into three main groups. (1) Blue and white pottery with clay paste, (2) Blue and white pottery with stone paste body, and (3) Blue and white pottery with black border.

1- Blue and white pottery with clay paste

These ceramics have clay pastes in various color spectrums of buff. Patterns such as Chinese rock and wave patterns and azure blue plant motifs decorate their white background (Table 1). Most of these ceramics belong to the 8th and 9th centuries AH. Similar pottery has been obtained from eastern Iran (Neyshabur) and Syria.

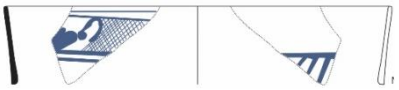
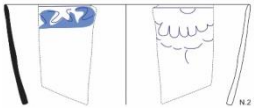
Table 1. Blue and white pottery with clay paste (Authors, 2021).

Pottery no.	Source of comparison	Design	Image
1	Dias et al., 2013: Table 1, A8/480 Neyshabur (British Museum) (Golombek et al., 1996: 200, p1.41)		
2	Krahe, 2016, fig. 133 Dias et al., 2013: Table 1, A8/469 Eastern Iran (Kuwait National Museum) (Watson, 2004: 451. cat. U4)		
3	Syria (American University of Beirut Museum) (Carswell, 1979: p1. XIV)		
4	Krahe, 2016: fig. 133		

2- Blue and white pottery with stone paste body

The colors of the designs of the existing samples range from pale blue to azure on a white or milky background. Plant designs are the dominant motif of this type of pottery. Geometric motifs, landscapes, Buddhist symbols, and potter's marks are other motifs of this type of pottery (Table 2). During the Safavid period, the quality of Iranian blue and white pottery products reached such a level that European merchants could sell them as original Chinese productions. In response to this market, Iranian potters began to imitate the signs on the base of many porcelain vessels. For non-expert people, these Iranian ceramics seemed authentic enough (Golombek et al., 2001: 207-208). Similar to these ceramics were also obtained from Tabriz and China.

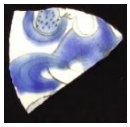
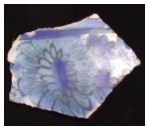
Table 2. Blue and white pottery with stone paste body (Authors, 2021).

Pottery no.	Source of comparison	Design	Image
1	Tabriz (Armitage) (Golombek et al., 1996: p1. 71), ? (Museum of the American University of Beirut) (Carswell, 1979: p1. XIV), Iran belonging to the 12th century AH (Crowe, 2002: 27), and Iran belonging to the 12th century AH (Wilkinson, 1963: fig. 8)		
2	Wen et al., 2019: Fig. 1 (C) N.2 China (Valenstein, 1989: 185, Fig. 181)		
3	Tabriz (Armitage) (Golombek et al., 1996. p1. 71), ? (Museum of the American University of Beirut) (Carswell, 1979, p1. XIV), Iran belonging to the 12th century AH (Crowe, 2002: 27), and Iran belonging to the 12th century AH (Wilkinson, 1963: fig.8) Krahe, 2016: fig. 87		
4	He et al., 2021: Fig.2. c		
5	Dias et al, 2013: Table 1, A08/096 & 085 Tabriz (Armitage) (Golombek et al., 1996: p1. 71), ? (Museum of the American University of Beirut) (Carswell, 1979: p1. XIV), Iran belonging to the 12th century AH (Crowe, 2002: 27), and Iran belonging to the 12th century AH)Wilkinson, 1963: fig. 8(		

3- Blue and white pottery with a black border

The main motifs of this type of pottery are blue on a white background, and black color is only used to border the details of the motifs. Most of these potsherds have a body made of stone paste and some samples are also made of clay. Plant, geometric, animal, and human motifs have decorated the surface of these ceramics (Table 3). Previously, the method of painting with black color was a distinguishing feature for vessels produced in Mashhad workshops, but recent research shows that vessels with this feature were produced in Kerman and perhaps other centers as well (Watson, 2004: 446). This type of pottery has been obtained from Kerman, Samarkand, Neyshabur, and China.

Table 3. Blue and white pottery with a black border (Authors, 2021).

Pottery no.	Source of comparison	Design	Image
1	Kerman (Mason, 2003: 276, KIR.12)		
2	Samarkand (Museum of the Observatory of Elgh Beyg) (Carswell, 2000: 100, Fig. 108)		
3	China (Valenstein, 1989, fig. 18)		
4	Neyshabur (Metropolitan Museum of Art) (Golombek et al., 1996: p1.V)		
5	Dias et al., 2013. Table 1, A8/482 He et al., 2021: Fig.2. b		

VII. Statistical analysis and typology of pottery

According to the objectives of the research, an effort was made to focus part of the cultural characteristics of the historical city of Howzdaar on the finds of blue and white pottery. In this regard, these pottery were classified and finally compared and evaluated according to the variables considered for each class. Its description is given below.

1- Statistical study based on the type of piece

The blue and white pottery of Howzdaar City was classified into 4 different types, including incomplete vessel, rim, body, and bottom. After studying 237 potsherds, it was found that the body with 111 pieces, or 47% is the most frequent, and the incomplete vessel with 1 piece, or 1% is the least frequent. Besides, the base is 54 pieces or 23% and the rim is 71 pieces or 29% (Fig. 3).

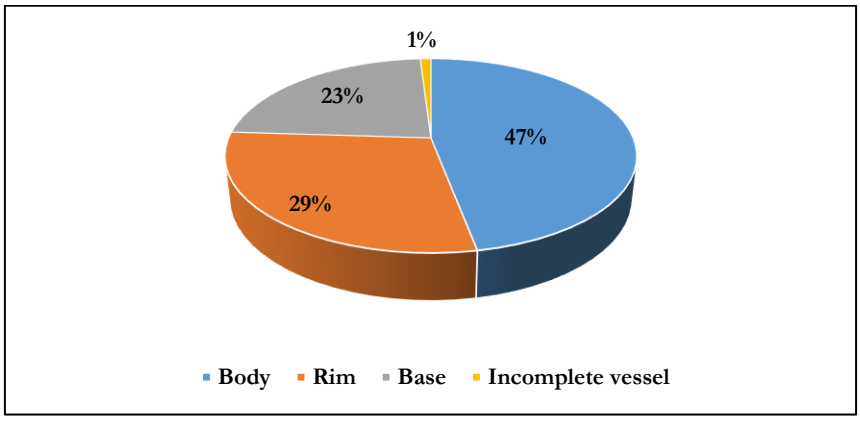


Figure 3. Statistical study of pottery based on the type of piece (Authors, 2021).

2- Statistical study based on the type of form

These pottery are grouped into 4 different types, including small bowls, bowls, cups, and plates. The small bowl with 29 numbers or 41% is the most frequent and the plate with 1 number or 1% is the least frequent. The number of bowls is 27 or 38% and the

number of cups is 13 or 20%. It is necessary to mention that 165 pieces of the samples (body and base) had no identifiable form. Therefore, the percentage of the form of the pottery is based on the number of pieces that have an identifiable form (Fig. 4).

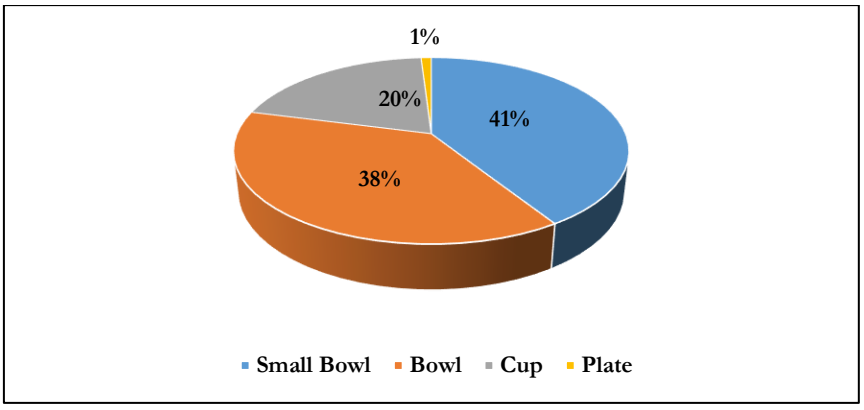


Figure 4. Statistical study of pottery based on form type (Authors, 2021).

3- Statistical study based on motif type

These pottery are divided into 6 types, including geometric, plant, animal, human, combined (geometric and plant), and potter's mark. Geometric motifs with 142 numbers or 60% were the most frequent and Potter's sign with 1 number or 1% was the least frequent. In addition, there are plant motifs with 81 numbers or 33%, animal motifs with 3 numbers or 2%, human motifs with 2 numbers or 2%, and combined (geometric and plant) motifs with 3 numbers or 2%. (Fig. 5).

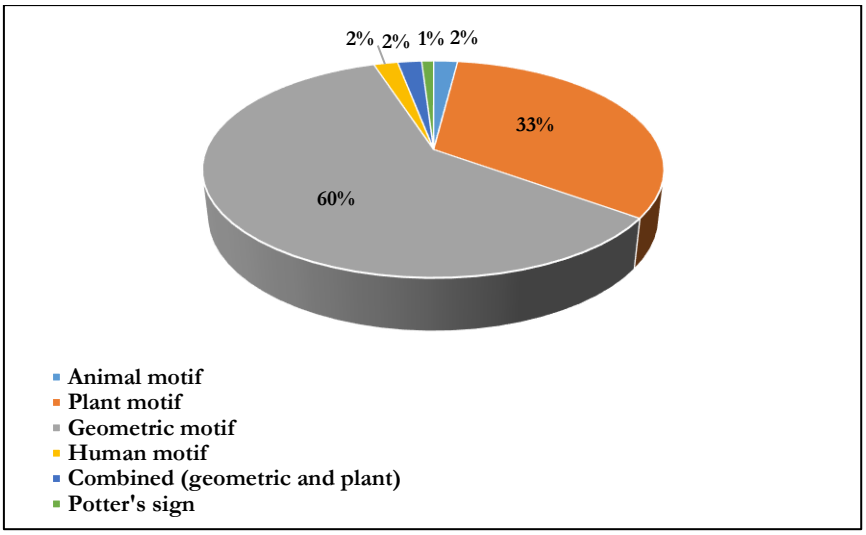


Figure 5. Statistical study of pottery based on the type of motifs (Authors, 2021).

4- Statistical study based on quality

In terms of production quality, these pottery are classified into three types fine (1-3 cm), medium (4-7 cm), and rough (8 cm <). Fine pieces with 109 numbers or 46% are the most frequent and rough pieces with 20 numbers or 9% are the least frequent. Further, there are 107 pieces, or 45% with medium quality in this collection (Fig. 6).

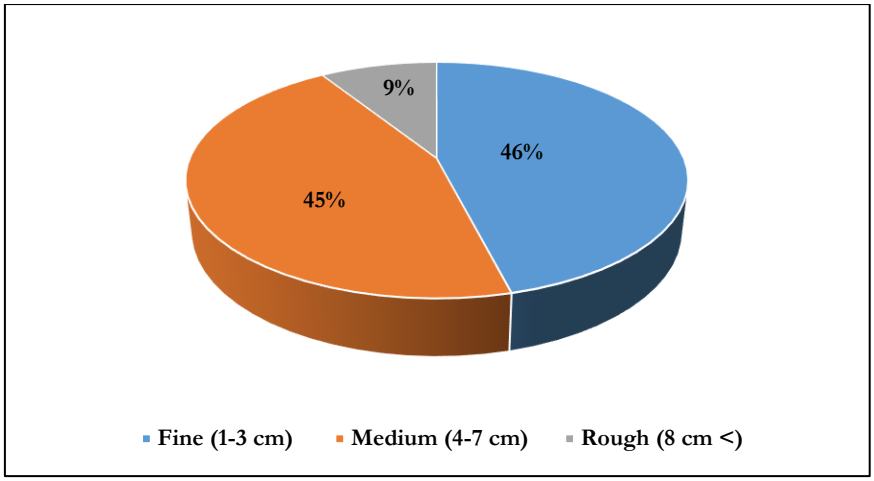


Figure 6. A statistical study of pottery based on the type of production quality (Authors, 2021).

VIII. Cultural interactions between Howzdaar City and China in the Safavid period

From the end of the reign of the ninth emperor of the Ming Dynasty, Hong Jie (1487-1505 AD) to the end of the reign of the sixteenth emperor, Chong-Jen (1627-1644 AD), coincided with the rule of the Safavid dynasty (1501-1736 AD) in Iran. The two countries of China and Iran have had extensive cultural, economic, artistic, and commercial relations with each other for a long time. The existence of the Silk Road, which connected East and West Asia as a communication route, played a key role in these communications. According to historical sources, with the beginning of the prosperity of this road at least from the 2nd century BC, commercial relations between China and Rome began. These relationships and economic prosperity continued in the Islamic era (Razavi, 2008: 74-73). During the Safavid period, these connections increased due to trade, competition, and attention to blue and white pottery in the world. China, as the primary producer of this product, and Iran, as another center for the production of this type of pottery and an important country in the trade route of the Silk Road, which played a major role in connecting the East to the West of the world, were the two main poles of the production and export of this pottery (Sarmadi and Torki Baghbadrani, 2010: 111). The art of pottery in the Safavid period was not immune to the influence of foreign arts due to trade exchanges, so that the peak period of producing blue and white pottery, which was made in imitation of Chinese pottery, was at that time. Therefore, in this research, the blue and white pottery found in Howzdaar City and other sites of Iran belonging to the Safavid period, and the blue and white pottery from China belonging to the Ming period (contemporary with the Safavid), were compared. The results of the typological comparisons of the studied pottery show many similarities between these samples and the pottery of Neyshabur, Tabriz, Kerman, Samarkand, and China. This similarity confirms the existence of cultural relations between this area and the neighboring regions, the northwestern regions of Iran and China. Since all the mentioned cities are located on the Silk Road, this similarity is conceivable and indicates the existence of a wide communication and cultural network between these regions. These extensive connections provided the basis for the development of Iranian blue and white pottery to the point where it competed with Chinese pottery in the Ming period in international trade.

IX. Conclusion

In this research, the blue and white pottery of the Howzdaar area of Sistan, found during an archaeological research project in this area, was investigated. A total of 237 pieces of indicative pottery known as blue and white pottery were selected and after carrying out typology and comparative study, they were studied to investigate cultural connections. In this regard, two types of field information and documents were used to achieve the goal. The results show that there is a lot of harmony between the Iranian blue and white pottery with the Chinese pottery in the Ming period. In addition, there are many similarities between the pottery of the Howzdaar site and the blue and white pottery found in the sites of Kerman, Neyshabur, Samarkand, and Tabriz. One of the main reasons for this similarity is the location of all these sites on the Silk Road. This location caused strong connections between China in the Ming period and Iran in the Safavid period. Among all the centers of Iran such as Neyshabur, Tabriz, Mashhad, Kerman, Yazd, Isfahan, Ghobira, Kashan, and Shiraz that produced blue and white pottery, Kerman and Mashhad are known as the two main poles of production of this pottery. Iranian potters in these centers succeeded in producing pottery with the

quality of Chinese pottery and in this way competed with Chinese pottery in the world markets. Because evidence of pottery-making such as kilns, pottery tripods, Furnace welding, etc. were found in the Howzdaar area and its surrounding areas, it seems that the pottery of this area is of local production. Since Howzdaar City was located on the east-west trade route, the techniques of making this pottery were influenced by the important pottery centers of the Safavid period, such as Kerman, Khorasan, etc., and entered Sistan.

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THE GABRI MOD SITE (MOD B), THE CONNECTING RING BETWEEN KHORASAN AND SISTAN REGIONS IN THE HISTORICAL ERA

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Abstract: The Gabri Mod site is located in South Khorasan province, 30 km southeast of Birjand and 3.5 km northwest of Mod in a vast plain called Nokhodi. This site includes two mounds in the northwest and the southeast adjacent to each other. The larger mound is named Mod A and the smaller mound is named Mode B. Their area is over 14 ha. Based on the cultural materials obtained from the excavations, the site of Gabri Mod belongs to the historical era, especially the Parthian period. Since 2018, the Gabri Mod site (southern mound/Tepe Mod B) has been excavated during three seasons as an internship excavation site for archaeology students of Birjand University. The weakness of environmental patterns and climatic limitations in eastern Iran, especially the lack of water resources and suitable soil for agriculture, have caused the absence of large and densely populated settlements in this region. Therefore, Tepe Mod B is of great importance in the archaeological studies of East Iran and its connection between the northern (Khorasan) and southern (Sistan) regions. Based on excavations, architectural evidence, and aerial images of Tepe Mod B, a circular structure was found inside an oval enclosure surrounded by a moat. This research aims to introduce the architectural remains and cultural data found from three seasons of archaeological excavations at Tepe Mod B. This research is descriptive and analytical and data collection is based on documentary studies and archaeological surveys and excavations.
Keywords: South Khorasan, archaeological excavation, Gabri Mod site, Mod B, architecture, pottery, historical era.

چکیده: محوطه گبری مود در استان خراسان جنوبی، ۳۰ کیلومتری جنوب شرقی بیرجند و در ۳/۵ کیلومتری شمال غربی مود در یک دشت وسیع به نام نخودی واقع شده است. این محوطه شامل دو تپه شمال غربی–جنوب شرقی در مجاورت هم می‌شود. تپه بزرگ‌تر به نام مود A و تپه کوچک‌تر به نام مود B نام‌گذاری شده و مساحت آنها بالغ بر ۱۴ هکتار می‌باشد. براساس مواد فرهنگی و کاوش‌های صورت گرفته، قدمت محوطه گبری مود به دوران تاریخی خصوصاً دورهٔ اشکانی مربوط است. از سال ۱۳۹۷ محوطه گبری مود (محوطهٔ جنوبی/مود B) به‌عنوان محوطه کاوش کارآموزی دانشجویان باستان‌شناسی دانشگاه بیرجند (دانشکده هنر)، طی سه فصل کاوش صورت گرفته است. ضعف الگوهای زیست‌محیطی و محدودیت‌های اقلیمی در شرق ایران، خصوصاً کمبود منابع آبی و همچنین خاک مناسب که دو شاخصه مهم کشاورزی می‌باشد که باعث عدم وجود سایت‌ها و سکونت‌گاه‌های پرجمعیت و وسیع در این منطقه شده، به همین دلیل محوطه گبری مود (مود B) در مطالعات باستان‌شناسی شرق کشور و ارتباط آن بین مناطق شمالی (خراسان) و جنوبی (سیستان) از اهمیت زیادی برخودار می‌باشد. آنچه که بر اساس کاوش‌های انجام گرفته، شواهد معماری و عکس‌های هوایی در سطح تپه جنوبی محوطه گبری/مود B مشخص است، نشان از یک سازهٔ دایره‌ای شکل داخل یک محیط بیضی شکل است که اطراف آن خندقی ایجاد شده است. هدف از این تحقیق، معرفی معماری و داده‌های فرهنگی، در جریان سه فصل کاوش‌های باستان‌شناسی محوطهٔ گبری مود/مود B است. روش تحقیق در این پژوهش، از طریق توصیفی – تحلیلی و گردآوری داده‌ها براساس مطالعات کتابخانه‌ای، بررسی‌های میدانی و تجزیه و تحلیل داده‌های حاصل از کاوش باستان‌شناسی است.
کلیدواژه: خراسان جنوبی، کاوش باستان‌شناسی، محوطه گبری مود/ مود B، معماری، سفال، دوران تاریخی.

I. Introduction

Although Sarbisheh County is located between the two cultural domains of Sistan and Khorasan, like Nehbandan, it has received less attention from cultural heritage researchers. Due to its suitable climate and rich pastures, this region has been a suitable place for livestock breeding for a long time. Archaeological research in Sarbisheh County, as a connecting ring between this region and Sistan, Greater Khorasan, as well as Afghanistan, can lead to the discovery of evidence indicating cultural links between these regions (Farjami, 2016). Due to its geological structure, this county is a major center for mineral extraction in East Iran. Mineral veins were exploited in this region in the past as well (Zarei et al, 2022: 32). For many years, the archeology department of Birjand University has carried out excavations in the sites of this county, such as the mound of Qale Kohneh Mod (2007 to 2010), the Kohnak site (2013 to 2018), and the Gabri Mod site (Mod B).

The Gabri Mod site is located 3.5 km northwest of Mod City and 29 km southeast of Birjand in South Khorasan. This site consists of two mounds in the northwest to southeast direction. Archaeological excavations have been carried out in the southeastern part of the site. The results of these excavations show a circular structure with a moat around it. This circular structure has a base diameter of 40 m and a height of about 1.5 m. The results of the surface survey and site excavations show two settlement stages. The earliest stage is related to the post-Achaemenid period until the beginning of the Sassanid period. At this stage, cultural data, including pottery, indicate the importance of the Parthian period. The second settlement stage is related

to the middle Islamic era. There is a stone structure related to nomads in the eastern part of the circular structure. The use of this structure covers a relatively short period. The surface pottery in the eastern part of the site belongs to the middle Islamic era (7th and 8th centuries AH). The excavations at the Gabri Mod site (Mod B) had an educational aspect and were done in order to familiarize archaeology students with stratigraphy, cultural materials, and archaeological periods. The excavations aimed to know the architectural spaces and the way of settlement, to study the process of technological and economic changes, the interactions of the residents with the neighboring areas, to collect information to complete the chronological table of the region, and to enrich the data of the historical era of South Khorasan.

The main questions and hypotheses of this research are: (1) To what era do the Gabri Mod site (Mod B) and its architectural structures belong? The Gabri Mod site is related to the historical era and has had a relatively long settlement continuity. This site has been an important settlement from the Achaemenid period to the Sassanid period. The surrounding materials are used in the architecture of this historical settlement, according to the climate and environment of the region. Especially, andesite stones have been used in the foundation and sometimes in the walls. (2) What is the main nature of the circular structure that was discovered in the first, second, and third seasons of excavations? It seems that this is a defensive structure with a moat around it, and a wall on the edge of the moat surrounds these parts. Inside, there are residential spaces and production workshops. (3) According to the three seasons of excavations at Tepe Mod B, what application can be considered for the circular structure? The excavations of the past seasons have given rise to the hypothesis that Tepe Mod B, in addition to being a historical defense structure, can also be a production workshop. Furthermore, cultural materials (pottery) and data related to the subsistence system of the site's residents have been identified.

II. Research background

Among the earliest studies and publications of this site are the determination of the buffer zone of the site in 1999 (Labaf Khaniki, 1999), the registration report of the site (Nasrabadi, 2002), a thesis entitled Systematic Survey of Mod A Mound, Sarbisheh (Behdad, 2012) and the article derived from it (Behdad et al., 2013). This site was re-examined in the archaeological survey of Sarbisheh County and articles were published about the study of its pottery (Farjami, 2013a, Farjami, 2013b and Farjami, 2017). Besides, from the recent important studies, it is possible to point out the following cases; An article entitled Classification and Typological Analysis of the Pottery of Tepe Mod B in Sarbisheh County, South Khorasan (Moradzadeh et al., 2020) and a thesis entitled Analytical Archaeology of the Pottery of Gabri Mod Historical Site (Mod B) in Sarbisheh County with an approach to Mineralogy (Moradzadeh, 2022).

III. Excavations at Gabri Mod site (Mod B)

The Gabri Mod site is located in South Khorasan province, Sarbisheh County, 3.5 km northwest of Mod City (Fig. 1). In the middle of the Mod plain, two mounds are located next to each other, in the northwest-southeast direction and next to the asphalt road of Haji-Abad village. The northwest mound has a higher height than the southeast mound (Behdad, 2013) (Fig. 2).

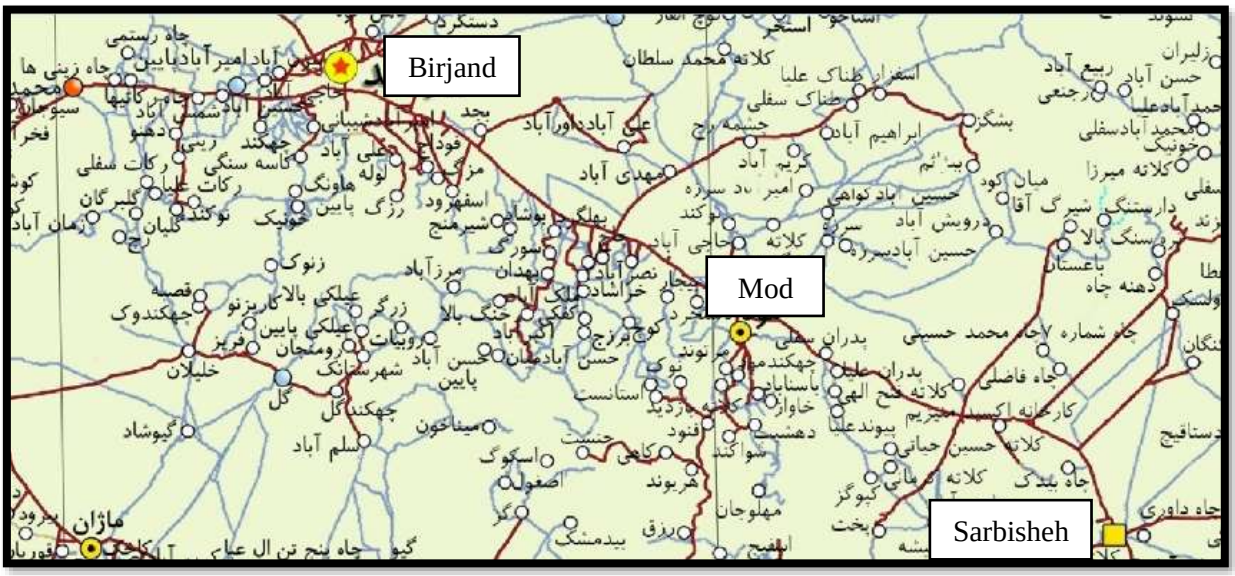

Figure 1. The location of the Gabri Mod site is marked with a star on the map relative to Birjand City (the center of South Khorasan province) and the center of Sarbisheh County (archives of the General Directorate of Cultural Heritage of South Khorasan).

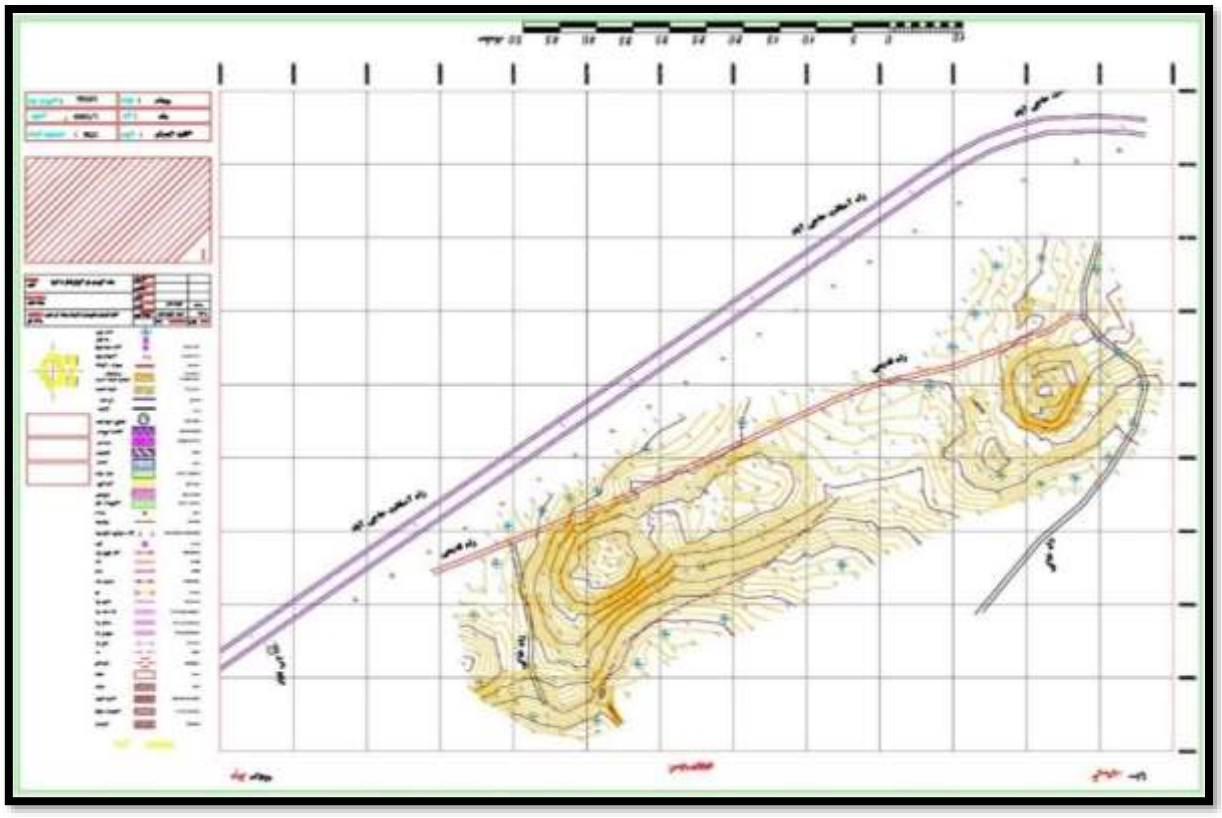

Figure 2. Topography of the Gabri Mod site (north and south mounds) (Behdad, 2012).

The Gabri Mod site is located at the geographical coordinates of 32°44'29.37"N, 59°31'7.47"E, and 1799 meters above sea level. All around the site, especially in the south, it can be seen agricultural fields that have encroached on the buffer zone of the site. The Gabri Mod site is located in the middle of a plain known as Nokhodi, between two mountain ranges of Bagharan in the south and Momen-Abad in the north. In the southern view of this site and along the Bagharan mountain range, there are settlements including Mod, Dastjerd, Bijar, Nofirist, etc. The area of this site is about 145,000 m^2 and its height is 10 m. Apart from unauthorized excavations, road construction operations and road crossing from the eastern edge of the site, as well as drainage and water pipe and gas pipe crossing inside the site, are the main reasons for the human destruction of the site. The Gabri Mod site was excavated and determined its buffer zone in 1997, and in March 1998, the first season of excavations and in October 2021, the third season was carried out by the Department of Archaeology of Birjand University.

In the first season of excavations, a trench measuring 3 × 3 m was excavated in the southern mound/Tepe Mod B. Another trench named IA was excavated on the western side of the mound with the dimensions of 2 × 12 m in the form of steps (the dimensions of the steps are 2 × 3 m). Then, on the eastern side of the stepped trench, trench IB with the same dimensions was excavated and continued to the lowest depth of the stepped trench. In the second season of excavations, in the northern part of the site, the TC trench with dimensions of 5 × 8 m was excavated and continued to the virgin soil. In the third season of excavations, trench TD with dimensions of 5 × 10 m was excavated in the northern part of trench TC (Fig. 3). The site surface was divided into 100 × 100-meter squares based on a map with a scale of 1/1000. Each of these grids has ten squares of 10 × 10 m, which are named in the north-south direction with numbers and in the east-west direction with Latin letters. The stepped trench is located in the 40V and 40W squares, and the eastern trench is in the 40Y square. Excavations in the Gabri Mod site (Mod B) have been done using the Context method.

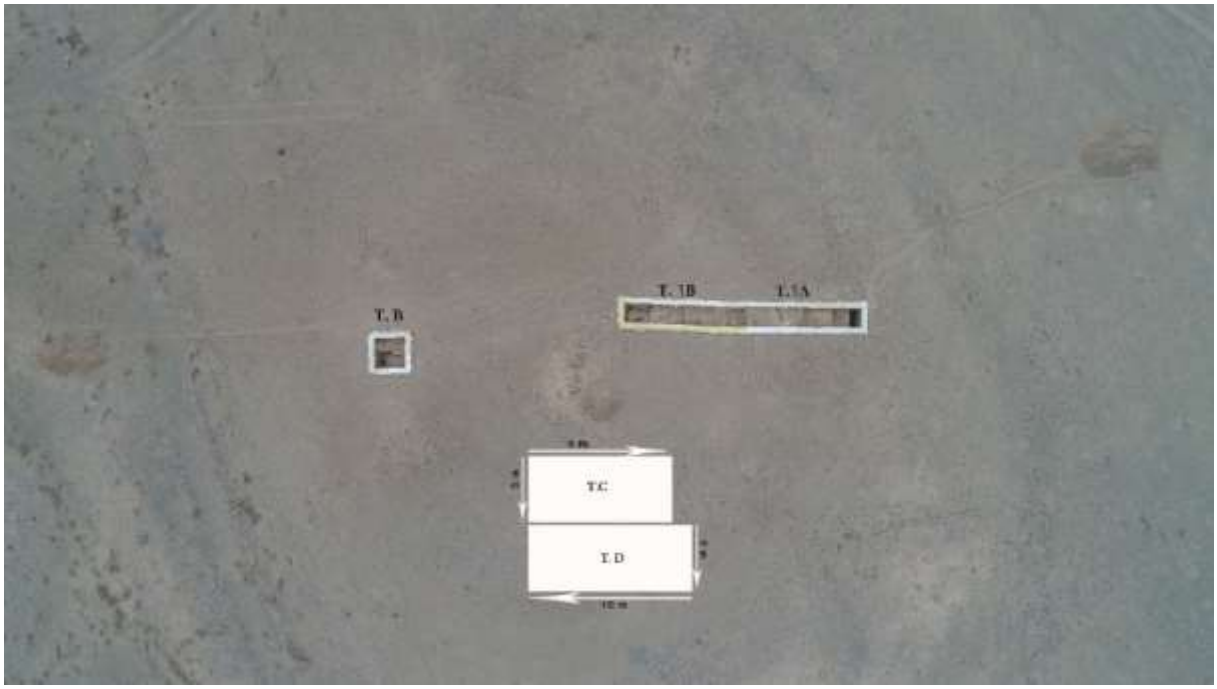

Figure 3. Excavated trenches in the Gabri Mod site (Mod B).

IV. Architectural findings

1. The first season of excavations

Excavations in the southern mound of the Gabri Mod site (Mod B) were started in March and April 2019 to reveal ancient layers and determine the chronology of the settlement. Two trenches were excavated at the highest level of the southern mound. The first trench named IA was dug in the western part of the mound with dimensions of 2 × 12 m in the form of steps (the dimensions of the steps are 2 × 3 m) and in the southeast-northwest direction. After the completion of the excavation in this trench, in its eastern part, inside the architectural space of Tepe Mod B, trench 1B with dimensions of 2 × 12 m was excavated as a replica and continued until the virgin soil. In the eastern part of Mod B, the second trench with dimensions of 3 × 3 m was excavated until reaching virgin soil (Figs. 2 and 3).

The architectural evidence obtained and the aerial images in Tepe Mod B show a circular structure inside an oval environment around which a moat was created. The evidence of this moat can be seen in trench (1A-P4) (Figs. 4 and 5). In terms of the overall form, this architectural structure is comparable to the architectural structure in Takhcherabad mound, 20 km northeast of Birjand and 30 km northwest of the Gabri Mod site, which includes a circular mud brick structure and a moat around it (Dana, 2016). Architectural remains were found in this season of excavations. One of the features of this structure was the use of stone supports (1A and 1B) to strengthen the main mud brick wall. Pieces of plaster and lime related to architectural spaces were also found among the debris. The thickness of the mud brick walls with three rows of mud brick with dimensions of 7 × 40 × 40 cm with mud mortar was about 120 cm. In some spaces, in addition to stone walls, stone debris with regular arrangement has also been identified. Excavation in trench B shows two stages of settlement. In the first stage, the architectural spaces are in the form of stones and without clear arrangement, which probably indicates a temporary settlement. In the second (upper) stage, the architectural spaces have a regular arrangement, and in the construction of the architectural spaces, mud bricks with dimensions of 40 × 7 × 40 cm have been used. These mud bricks have a strong texture with a mixture of pebbles and are light brown in color with mud mortar. In addition, in this space, a light brown beaten floor related to a residential space was discovered.

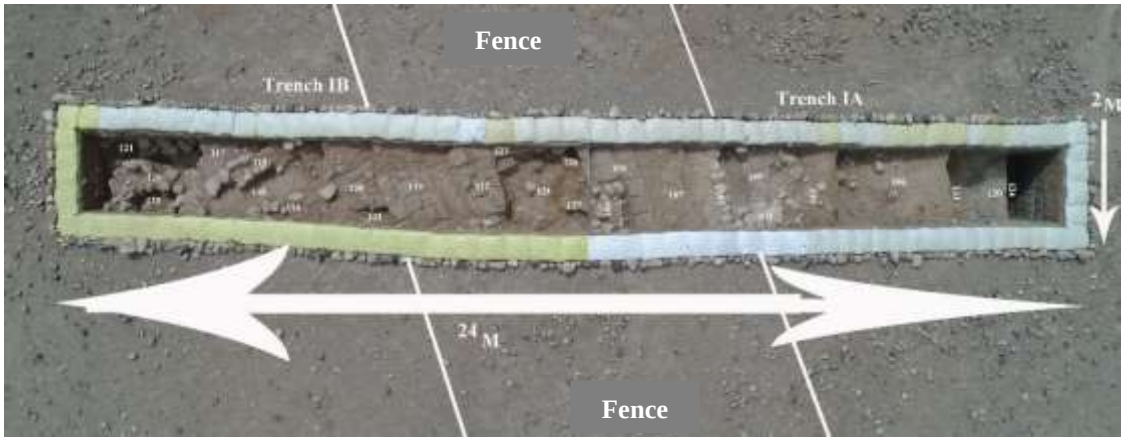

Figure 2. Trench 1A and 1B.

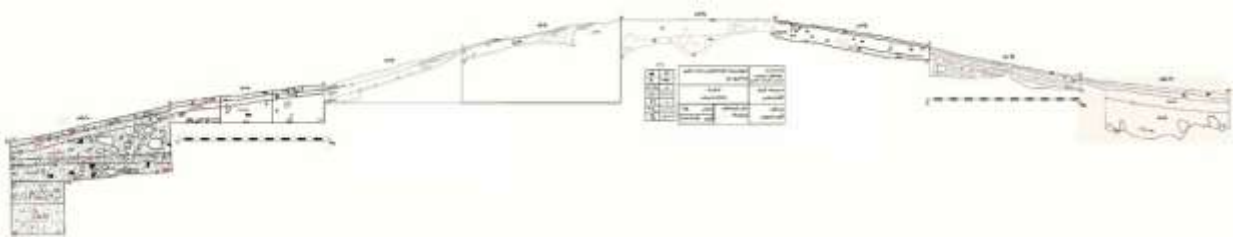

Figure 3. Location of contexts in Trench B.

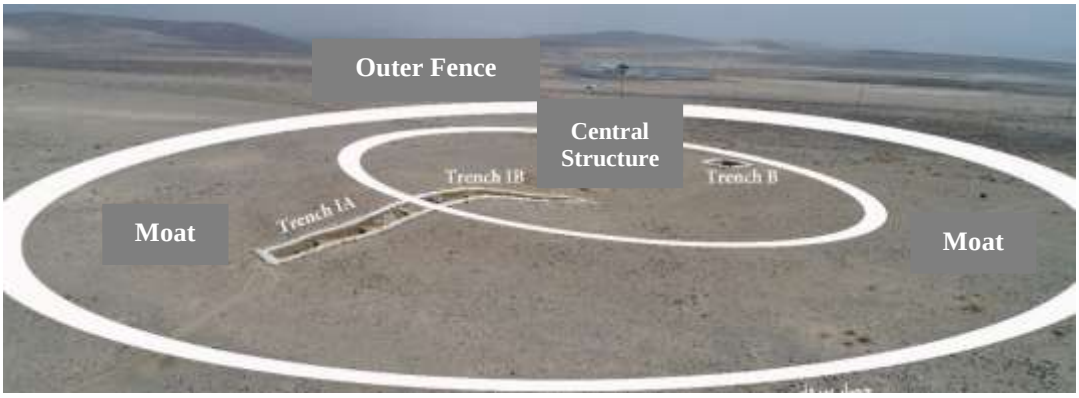

Figure 4. Trench 1A and 1B and Trench B.

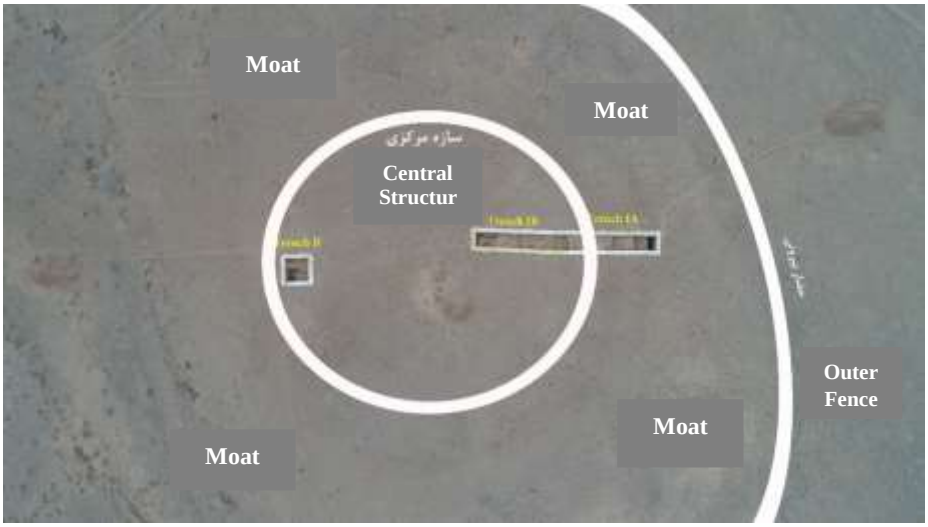

Figure 5. Location of contexts in Trench B.

2. The second season of excavations

Trench C was excavated in the north of the southern mound with dimensions of 5 × 8 m, and the remains of two architectural phases were uncovered. In the old phase, evidence of stone architecture was discovered, in which, in addition to mud mortar, pieces of plaster mortar were also used. In the second or newer phase, the architectural spaces were revealed, which were built with mud brick walls with dimensions of 10 × 40 × 40 and 8 × 38 × 38 cm (Fig. 6). These mud bricks have a strong texture with a mixture of pebbles and are light brown in color with mud mortar. Large stone slabs among the debris and architectural spaces indicate that some architectural spaces were covered in the form of flat covering. One of the interesting points among the architectural spaces is the large amount of stone rubble piled up and had no regular arrangement. Since in this season of excavations, many grindstones and stone mortar handles were obtained from this trench, there is a possibility that this space was used as a workshop for making these handicrafts.

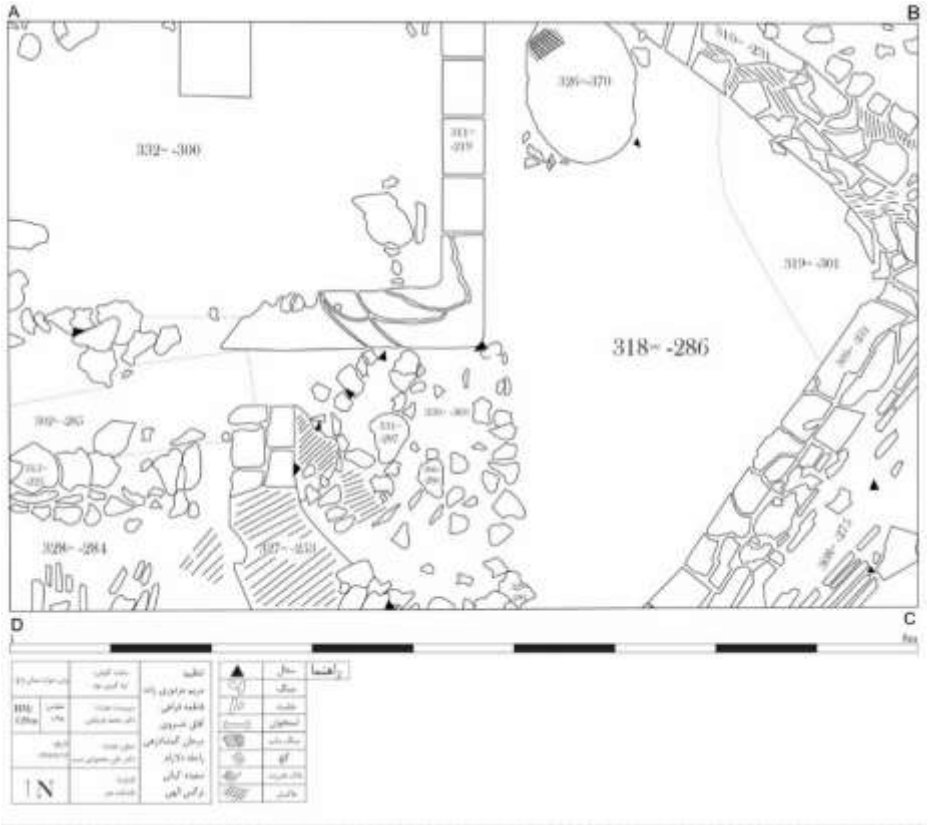

Figure 6. The final plan of Trench C.

3. The third season of excavations

Trench D was excavated on the southern mound, in the north of Trench C with dimensions of 5 × 10 m. Two architectural phases were identified in this trench. The upper phase, which includes mud brick and stone debris, indicates the occurrence of a possibly natural event such as an earthquake. The arrangement of stone and mud brick was regular. Mud brick debris was detected horizontally on the surface of the trench, which indicated that the roof of this architectural structure collapsed simultaneously and suddenly. Besides, this state of rubble shows that the roof was dome-shaped. The mud bricks obtained from the trench have dimensions of 10 × 40 × 40 cm and 8 ×38 × 38 cm and have a firm texture with a mixture of pebbles and pale brown in color (Fig. 7). In this phase, in the northern part of the trench, there is a thick mud wall with a length of 10 m, which corresponds to the outer wall of the site's circular structure. This wall has a strong texture with a mixture of pebbles, the mud of which is well mixed and a part of it is visible in a circular shape on the surface of the trench. In the foundation of this wall, which was found on the surface of the earth and virgin (sedimentary) soil, rubble was also used in the layers, and due to its large diameter, it was less damaged. The second (lower) phase of architecture in Trench D is related to two residential floors. In this part, only the floor of the residential space along with some ovens (heaters) have been obtained. Among the interesting points of interest in this phase is the presence of characteristic pottery pieces with patterns and pipes, as well as many pieces of animal bones related to the Parthian period. Stone is also used in the construction of architectural spaces. In addition to mud mortar, pieces of plaster were also found among the debris. The presence of large stone slabs among the debris and architectural spaces indicates that some of the arches of the structures were covered with flat covering.

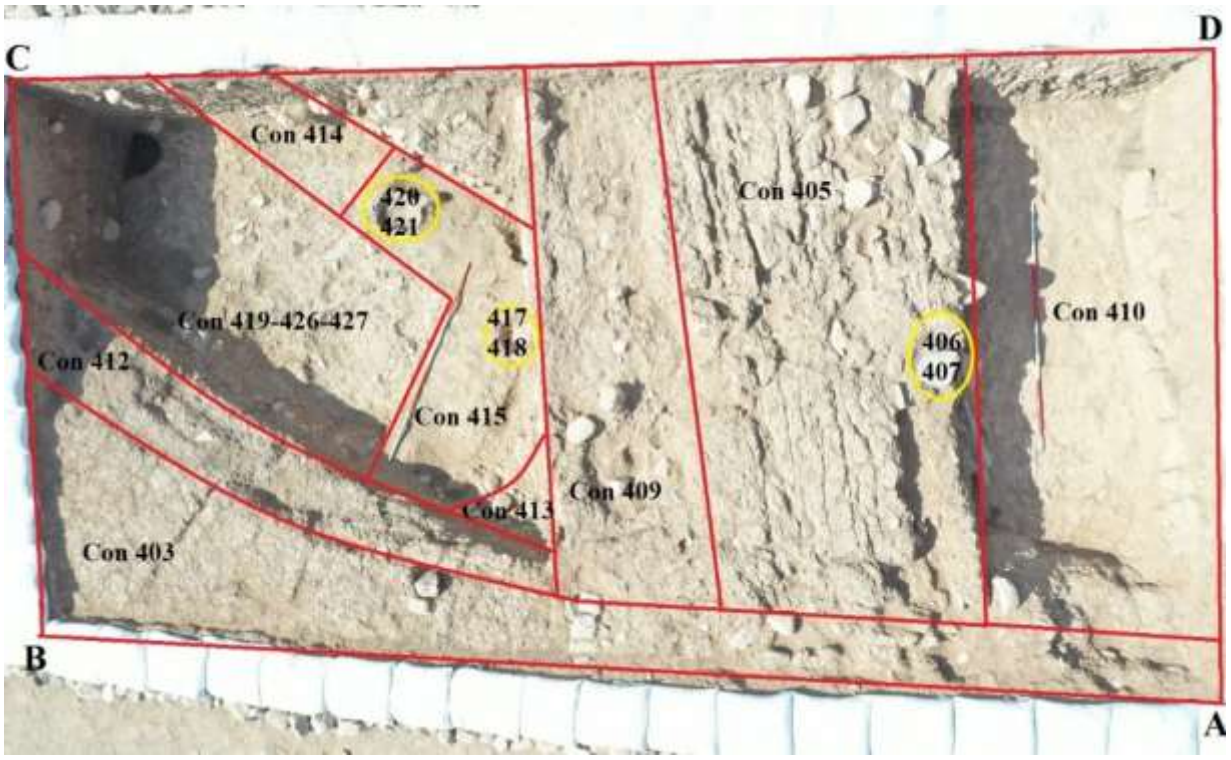

Figure 7. Aerial image of Trench D

Portable findings: The most cultural findings obtained from the site are pottery. In total, 3707 pottery pieces were numbered in three excavation seasons; Four caps, 538 rims, 2792 bodies, eight handles, three pipes, 361 bases, and one unknown piece (Fig. 8). The pottery was both simple and decorated. The patterned pottery is decorated with the techniques of carving, grooving, adding motifs, and painting with geometric and sometimes animal motifs.

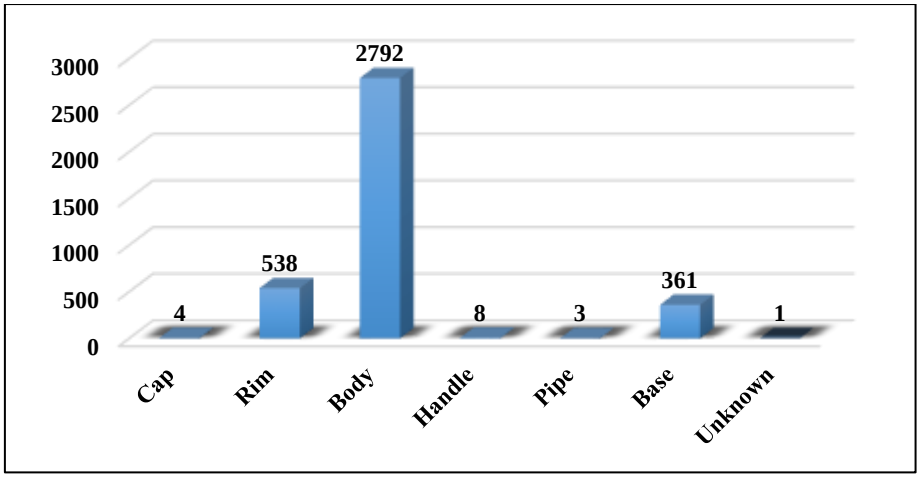

Figure 8. Types of pottery found from the three seasons of excavations at Tepe Mod B.

In terms of manufacturing technique, potteries are divided into two general categories. The first category includes handmade pottery, with insufficient baking and gray, black, and sometimes brown paste. These pottery are very rough and have a mixture of coarse sand. The outer and inner surfaces of most of them are smoky and their slip is mud in a range from black-gray to brown. In general, these potteries are often handmade and are not of high quality.

The second category includes wheel-made pottery, with enough baking and pale brown, gray, red, and brown paste. Their quality is relatively high. The chamotte of potteries is mineral (sand). Many potsherds are related to food storage containers, especially pots, which in some cases are very rough due to the chamotte of coarse sand. The outer and inner surfaces of the pottery are covered with mud slip in pale brown, brown, red, orange, and gray colors. A small percentage of pottery is often carved with parallel-wave lines. Some pottery is decorated with ocher mud, which is called Londo pottery. The motifs of these pottery are mostly geometric. Most of the pottery belongs to this category.

V. Pottery typology

Introducing pottery types is a basic measure to better understand the settlements and a step towards the reconstruction of the economic, social, and cultural status of societies in cultural periods. From Tepe Mod, pottery belonging to the Achaemenid (Fig. 9 and Table 1), Parthian (Fig. 10 and Table 2), and Sasanian (Fig. 11 and Table 3) periods were identified. These potteries include normal, grooved, burnished, painted, carved, and boat types. Most of the pottery forms include pots, bowls, and small carafes.

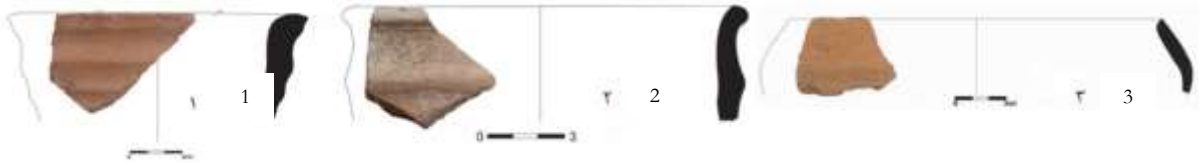

Figure 9. Pottery attributed to the Achaemenid period

Table 1: Samples of indicative pottery attributed to the Achaemenid period

No.	Description	Period	Sources
1	Normal texture, red paste, red clay coating, mineral chamotte, sufficient baking, wheel-made.	Achaemenid	Dales 1977: Pl. 21, no. 5.
2	Normal texture, red paste, pale brown clay coating, mineral chamotte, enough baking, wheel-made.	Achaemenid	Helms 1997: 332, fig. 121, no. 1566, Ricciardi 1980: 68, no. 4; Dales 1977: pl. 22, no. 7.
3	Normal texture, red paste, red clay coating, mineral chamotte, sufficient baking, handmade.	Achaemenid	Whitehouse 1978: fig. 6, no. 59 & 61, fig. 15, no. 255.

Figure 10. Pottery attributed to the Parthian period.

Table 2. Samples of indicative pottery attributed to the Parthian period.

No.	Description	Period	Sources
1	Fine texture, red paste, buff clay coating, mineral chamotte, sufficient baking, wheel-made, burnished.	Parthian	Roustaei, 2012: Fig. 183, Wheeler, 1962: Fig. 25
2	Normal texture, red paste, red clay coating, mineral chamotte, sufficient baking, wheel-made.	Parthian	Roustaei, 2012: Fig. 75
3	Normal texture, red paste, red clay coating, mineral chamotte, sufficient baking, wheel-made.	Parthian	Alizadeh, 2012: plan 48, Dales, 1977: Fig. 8:1

Figure 11. Pottery attributed to the Sassanid period.

Table 3. Samples of indicative pottery attributed to the Sassanid period.

No.	Description	Period	Sources
1	Fine texture, red paste, mineral chamotte, insufficient baking, wheel-made.	Sassanid	Priestman, 2009: 174, fig. 1. Pushnigg, 2006: 185, R175
2	Fine texture, red paste, red clay coating on the outside, mineral chamotte, enough baking, handmade.	Sassanid	Labaf Khaniki, 2009: 170, fig. 8, no. 1. Bagh Sheikhi et al., 2019: 99, fig. 15, no. 8.
3	Normal texture, red paste, red clay coating on the outside, mineral chamotte, sufficient baking, wheel-made, carved pattern on the outside.	Sassanid	Basafa, 2008: 201, pl. 19, no. 2

Examining the types of pottery in different areas in South Khorasan shows different characteristics. No glazed samples have been identified among the pottery from Tepe Mod. Most of the pottery on this site is wheel-made, in colors of pale brown, red, and orange, with medium and high fineness. Four types of pottery were identified in terms of decoration: simple unglazed pottery with carved motifs, pottery with ocher mud, and burnished and grooved pottery. Potteries are technically of high quality. The color of the paste of most pottery is red and orange. Although in terms of construction technique, decoration method, color, and typology, the pottery of this site has many similarities with the samples of exported pottery and the main workshops of the historical era, in qualitative comparison with the main centers of pottery production of the historical era, the studied potteries were probably imitated in local workshops. Many comparable samples have been identified among the pottery, but only three samples from the neighboring sites of Gabri Mod are presented. In the following, we will introduce the decoration types of potties of the Gabri Mod site.

A) Simple and unglazed pottery with carved patterns: This type of decoration has been used since before Islam, and it includes most types of pottery. These ceramics have almost the same decorations in most sites, including geometric motifs (wavy, parallel, diagonal, checkered lines), and are in the form of bowls, carafes, jars, and pots (Fig. 12).

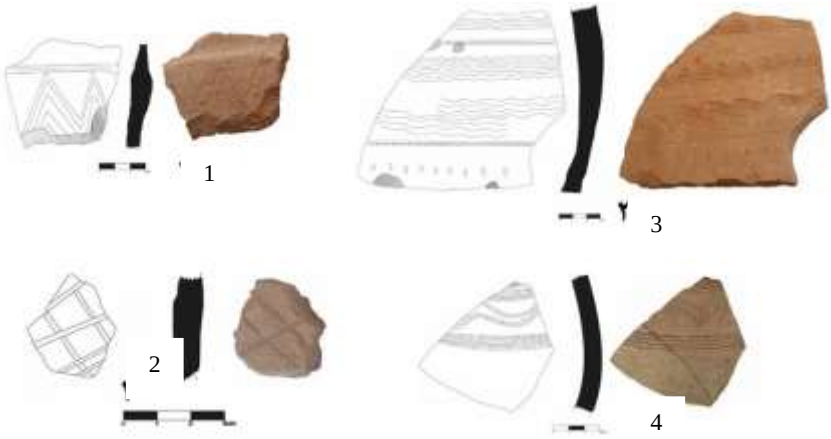

Figure 12. Simple and unglazed pottery with carved patterns.

Table 4. Info of simple and unglazed pottery with carved patterns.

No.	Description	Period	Sources
1	Medium texture, red paste, pale brown mud coating, mineral chamotte, sufficient baking, wheel-made, carved patterns.	Parthian	
2	Medium texture, red paste, orange mud coating, mineral chamotte, sufficient baking, wheel-made, carved patterns.	Parthian	
3	Medium texture, red paste, pale brown mud coating, mineral chamotte, sufficient baking, wheel-made, carved and pressed patterns.	Parthian	
4	Medium texture, red paste, pale brown mud coating, mineral chamotte, sufficient baking, wheel-made, carved patterns.	Parthian	

B) Patterned pottery: One of the types of pottery in South Khorasan is patterned pottery with crossed lines, and red and sometimes brown to black stripes, which have been identified in historical sites. In eastern Iran's studies, Haerinck refers to several samples of patterned pottery, some of which are similar to the patterns of patterned pottery in South Khorasan. Perhaps one of the most known types of pottery of the Parthian period in the southeastern region of Iran, Baluchistan of Iran and Pakistan, and the southern coasts of the Persian Gulf, is the carved pottery known as Londo and Namord (DeCardi, 1951; Seyed Sajjadi, 2013; Khosrowzadeh, 2018). Londo pottery is wheel-made and has high quality and a red homogeneous paste. The patterns of Londo pottery are dark brown on a pale brown coating (Haerinck, 1997). At first, De Cardi attributed this type of pottery to the late second millennium BC, but after revision, he suggested a date between the third and second centuries BC (Ibid: 244). Stronach considered this pottery culture to be closely related to the type of pottery with the triangular pattern of Ardabil. According to him, this type of pottery was popular from the second half of the first millennium BC until the Achaemenid period, and similar to it was obtained from Jame Shuran, Mahidasht (Stronach, 1974: 242).

The carved pottery from South Khorasan is mostly attributed to the Iron Age III and the Achaemenid period (Dana, 2019). However, according to the evidence, they can also be dated to the Seleucid and Parthian periods. Samples of carved pottery from Dokuhe have also been identified, the most important of which has an image of a bird. This sample cannot be dated to the Achaemenid period, because it is on pottery with a double rim, which is an indicator of the late Parthian period, and from sites such as Yazdgerd Castle of Kermanshah (Keall & Keal, 1981), Tepe Mod A (Behdad, 2012), Dokuhe Khosf, and Qale Asrar. It is reported in the middle (Dana, 2019: 403). In addition, the carved pottery that was found on the floor of the architectural spaces (Fig. 13 and Table 5) are indicative samples that Haerinck identified similar pottery to them from northwestern Iran and attributed them to the early to mid-Parthian period (Haerinck, 1997: 147). These motifs are very similar to the known motifs of the Ardabil style (Ibid: 149).

Figure 13. Patterned pottery from Tepe Mod B.

Table 5. Info of patterned pottery from Tepe Mod B.

No.	Description	Period	Sources
1	Fine texture, red paste, pale brown mud coating, mineral chamotte, enough baking, wheel-made, painted with ocher mud.	Parthian	Alizadeh, 2012: 213, plate 36, No. 175. DeCardi, 1951, fig. I, No. 109.
2	Fine texture, red paste, pale brown mud coating, mineral chamotte, enough baking, wheel-made, painted with ocher mud.	Parthian	Alizadeh, 2012: 213, plate 36, No. 181.
3	Fine texture, red paste, pale brown mud coating, mineral chamotte, enough baking, wheel-made, painted with ocher mud.	Parthian	Haerinck, 1997: 149, fig. 20, No. 5.
4	Fine texture, red paste, red mud coating, mineral chamotte, sufficient baking, wheel-made, painted with ocher mud.	Parthian	Khosrowzadeh and Aali, 2004: 65, design 12, No. 2.
5	Fine texture, red paste, red mud coating, mineral chamotte, sufficient baking, wheel-made, painted with ocher mud	Parthian	DeCardi, 1951: 68, fig. I, Nos. 3-5.

C) Burnished pottery: Haerinck has suggested the production period of burnished pottery in the historical era from the 3rd and 2nd centuries BC to the Sassanid and Islamic periods (Haerinck, 1997: 235). All researchers agree on the production of this pottery in the historical era (Mehrafrin et al., 2014). Some scholars consider its origin to be in northern Afghanistan because its samples were obtained from Shamshirghar related to the Kushan-Sassanid period, which shows the continuity of this pottery tradition from the Parthian period to the fall of the Kushans (Dupree, 1958; Schachner, 1996). There are also samples from Nad Ali in Afghanistan, which are attributed to the Parthian and Sasanian periods (Dales, 1977). Some samples of burnished pottery with radial designs from the Kandahar Kohneh site related to the Achaemenid and post-Achaemenid (Moorian) periods have been introduced and show that most bowls and small vessels were burnished (McNicoll & Ball, 1996). Some burnished samples can be seen among the pottery of the Dahan-e Gholaman site (Zehbari et al., 2014: 69, Fig. 6 and 7).

According to the findings of archaeological surveys in the South Khorasan region, it can be said that this type of pottery has been identified from the surface of a number of historical sites. The dominant forms of this pottery include carafes, bowls, goblets, and jars. Among them, large vessels such as pots and jars are less common. Burnished pottery from sites such as Poshteh Avesta, Anbazposhteh (Farjami and Mahmoudi Nasab, 2014), Tepe Kureh Mohammad Abad Zirkuh (Gholinejad, 2015), Korgah Chaharfarsakh (Heidari,

2016), Kalateh Shahpuri and Qale Neh (Farjami, 2020; Labaf Khaniki et al., 2021), and Anjirak (Heidari, 2015), Nehbandan have been identified. Other samples have also been identified from the Survey of Birjand County and the Burj Cheshmeh Molid site (Heidari, 2012), Tepe Takhcherabad (Dana, 2009; Dana, 2017), and the Kheshkheshunak site in the Sedeh Plain, Qaenat County (Gholinejad, 2016). Due to the lack of indicative dated samples from these sites, it isn't easy to distinguish the burnished potteries related to the Achaemenid and Parthian periods. The samples found from the Gabri Mod site are in different forms bowls, carafes, pots, and thermoses (Fig. 14 and Table 6).

Figure 14. Burnished pottery from Tepe Mod B.

Table 6. Info of burnished pottery from Tepe Mod B.

No.	Description	Period	Sources
1	Fine texture, red paste, red mud coating, mineral chamotte, sufficient baking, wheel-made, burnished.	Parthian	Wheeler, 1962: fig. 27 , no. 216.
2	Fine texture, red paste, red mud coating, mineral chamotte, enough baking, wheel-made, burnished.	post-Achaemenid	Stronach, 2000: 328, No. 110, Vol. 7.
3	Normal texture, red paste, red mud coating, mineral chamotte, enough baking, wheel-made, burnished.	Parthian	Roustaei, 2012, Nos. 223 and 234.

D) Grooved pottery: Among the other indicative pottery of the Parthian period in East Iran, which is widely distributed in the north of Sistan, is the grooved pottery. This pottery has been identified in the exploration of South Khorasan sites (Dana, 2016, 2017, 2018; Labaf Khaniki, 2007) and in the archaeological surveys of this area (Gholinejad, 2015; Farjami and Mahmoudi Nasab, 2014). Archaeological evidence indicates that the production of grooved pottery in eastern Iran continued from the Achaemenid period to the Islamic era (Haerinck, 1997: 270; Mousavi Haji and Ataei, 2010: 325). Grooved pottery is wheel-made, relatively high quality, and has sufficient and uniform baking. The chamotte of these pottery is often mineral and organic chamotte is rarely used in their construction. The color of the paste of these pottery ranges from red-brown to pale brown and generally, the surface of the pottery is the same color as the paste. The quality and thickness of grooved pottery shows that this type of pottery certainly belonged to large jars and pots (Haerinck, 1997: 233). The distribution of this pottery in the South Khorasan region and adjacent to Sistan is much more than in other parts of South Khorasan province. This type, which is also known as Sistan grooved pottery, has a significant distribution and diversity in the Neh Plain, but only a limited number has been found in the Zirkuh area (Farjami and Mahmoudi Nasb, 2014; Qolinjad, 2015). Archaeological studies of South Khorasan show that grooved pottery is seen only in historical sites in the southern half of the province and there is no evidence of it in the northern half of the province. Despite three seasons of archaeological excavations and systematic surveys at the Gabri Mod site, a handful of grooved pottery has been identified. This diversity of pottery and the prevalence of grooved pottery in Takhcherabad sites in the northern part of Birjand Plain and the Gabri Mod site are very few, while the surface survey of the Sorg site (Heidari, 2013; Esmaili, 2021) shows a high variety of grooved pottery. Considering the prevalence of this type of pottery in the sites of Sistan (Mehrafarin et al., 2015) and South Khorasan (Labaf Khaniki et al., 2021) belonging to the historical era and mostly Parthian period, the pottery of Tepe Mod can also be cautiously attributed to the Parthian period.

Grooved pottery found from Tepe Mod and Takhcherabad has shallow and spaced or unbalanced grooves. This type of groove is mostly seen on large potteries. This decoration is a single groove with a very regular distance, relatively shallow and narrow (Fig. 15 and Table 7). The paste of this type of grooved pottery found from two sites Ab Joo in Neh plain and Tepe Chardah Sorg in the southeast of Birjand plain and the northern slope of Baghran mountain, is red. The coating of this pottery is pale brown at both sites. Similar to this grooved pottery, it has also been identified from the study of the Sistan Plain (Fairservice, 1961: 46).

Figure 15. Grooved pottery from Tepe Mod B.

Table 7. Info of Grooved pottery from Tepe Mod B.

No.	Description	Period	Sources
1	Normal texture, red paste, pale brown mud coating, mineral chamotte, sufficient baking, wheel-made, grooved.	Parthian	Fairservice, 1961: 46, fig. 13, no. a.

E) Boat and tulip-shaped pottery: this pottery is often open-mouthed, with a shallow concavity, a common form of pottery throughout the Achaemenid realm (Genito, 1990: 592; Adachi, 2005: 26; Haerinck 1997: 267). Production of this pottery from the Iron Age III to The third century BC has continued (Genito 1990: 592-593). There are carvings of this pottery in the reliefs of the eastern staircase of the Apadana of Persepolis, in the hands of the Balkh and Assyrian delegations (Schmidt, 1963).

Tulip pottery is bowl-shaped, with the difference that their opening is often smaller, their depth is greater and the upper part of the pottery is more elongated. This type of pottery is mainly wheel-made, has sufficient baking, and fine texture, and sometimes has white particles in the paste. Polished lines can be seen on their surface. They are usually red and brown with red, brown, and pale brown coatings.

These vessels have been found in South Khorasan sites from Tepe Takhcherabad in Birjand (Dana, 2009, L.13; 172-2; Dana, 2016; Dana, 2017; Dana, 2018; Dana, 2019), Shah-Wali in Dermiyan (Zafranloo, 2003: 14), Chah Gaz (Farjami, 2020: 628), Korga (Heidari, 2012: 27; Heidari, 2016: 48) and Kalate Shahpuri Nehbandan (Heidari, 2013: 67), Dokuhe Khosf site (Yousfi, 2009), Dezag site (Farjami, 2020: 351), Tepe Kureh of Mohammad Abad (Gholinejad, 2015: 53), Tepe Salek Abad (Ibid: 278), Tepe Gerd Estand (Farjami, 2020: 293), Poshteh Avesta (Farjami, 2020: 315) and Anbaz Poshteh of Zirkoh County (Farjami, 2020: 337), Kheshkheshunak site (Gholinejad, 2016: 500), Talkhik Zol (Gholinejad, 2015: 636) and the ancient city of Qaen in Qaenat County (Labaf Khaniki, 2008, no. 21 and 545) have been identified. It should be noted that high-quality samples of this type of pottery have been found in the southern half of Khorasan province and the neighboring parts of Sistan in the Chahar Farsakh Valley of Nehbandan. This pottery has been identified in most of the sites of South Khorasan and it seems that its distribution in the east and west of territory was done in the same way and it has also had local influences. Vessels with this characteristic form have been found at the Gabri Mode site (Mod A and Mod B) (Behdad, 2012: 102; Moradzadeh et al., 2020: 102) (Fig. 16 and Table 8).

Figure 16. Boat and tulip-shaped pottery from Tepe Mod B.

Table 8. Info of Boat and tulip-shaped pottery from Tepe Mod B.

No.	Description	Period	Sources
1	Normal texture, red paste, pale brown mud coating, mixed chamotte, sufficient baking, wheel-made.	Achaemenid/post-Achaemenid	Dana, 2019: 402, Figure 10, No. 28 Qale Asrar.
2	Fine texture, pale brown paste, pale brown mud coating, mineral chamotte, sufficient baking, wheel-made.	Achaemenid/post-Achaemenid	Sumner, 1986: 6, fig. III.2, no. I. Stronach, 2000: Figure 106, No. 12. Petrie et al., 2008: fig. 2, no., 269 & 473.
3	Normal texture, red paste, pale brown mud coating, mineral chamotte, sufficient baking, wheel-made.	Achaemenid/post-Achaemenid	Dana, 2019: 401, figure 9, number one, Takhcherabad.
4	Fine texture, red paste, red mud coating, mineral chamotte, sufficient baking, wheel-made.	Achaemenid/post-Achaemenid	Dales, 1977: pl.19, no. 13. Dana, 2019: 402, fig. 10, no. 28 Qale Asrar. Vahdati, 2015: 273, fig. 12, no. 17.
5	Normal texture, pale brown paste, pale brown mud coating, mineral chamotte, underbaked, wheel-made.	Achaemenid/post-Achaemenid	Ataei, 2006: 60, fig. 2, no. 2.
6	Normal texture, red paste, pale brown mud coating, mineral chamotte, sufficient baking, wheel-made.	Achaemenid/post-Achaemenid	Ricciardi, 1980: 61, fig. E, no. 3.

VI. Other finds

In addition to pottery, other finds such as broken pieces of Grindstone and complete and broken querns, cut brick related to the heel of the door, a knife sharpener, stone mortar handle, metal, a piece of metal that was probably a stud on a wooden door, slag, a large stone that belonged to the heel of a door, a stone knife sharpener, a piece of shell, an agate bead, and animal bone fragments related to the jaw (concerning the food of the inhabitants of the site), tooth, joint, and skull were also found (Fig. 17). The most important portable finds obtained from these excavations are the engraving of a broken cross (Fig. 18) on the upper part of a vessel in trench II and an inscribed piece of pottery on which a Parthian Pahlavi (Aramaic) letter in the form of a Latin P is engraved (Fig. 19). In the historical era, there is a swastika on the body of some pots, which had a burial function. This function has been identified in pot graves, Taq Bostan, Kermanshah (Kambakhsh Fard, 1968), and Garmi, Moghan Plain (Kambakhsh Fard, 1998). The most important portable find obtained from the second season of the excavations is an animal clay figurine without the arms, legs, and head, which can be cautiously attributed to a cow (Fig. 20).

Figure 17. Some indicative findings from the Gabri Mod site. From right to left: slags, querns, and pieces of plaster.

Figure 18. The swastika pattern on a pot found from the first season of the excavations at Tepe Mod B.

Figure 19. Inscribed pottery found from the first season of excavations at Tepe Mod B.

Figure 20. Clay figurine found from the second season of excavations at Tepe Mod B.

VII. Conclusion

The study of the findings obtained from the three seasons of the excavations at the southern mound of the Gabri Mod site (Tepe Mod B), which mostly includes slag, stone tools, and pottery, indicates the chronology of the settlement from the Achaemenid period to the Sassanid period. The few pottery found around the site belong to the Islamic era. The chronology proposed in this research is based on pottery data and is their comparative study. Therefore, absolute chronology is necessary for the sites of the historical era of South Khorasan. According to the findings, the Gabri Mod site had the largest extent and continuity of settlement in the Parthian period. In addition, the settlement of Gabri Mod during the Parthian period has more cultural interactions with the cultural region of Sistan and Baluchistan than Khorasan. The architectural structures identified in the three seasons of excavations include parts of a thick mud wall with a width of about 2 m, which is more than 1.5 m high in some parts of the mound. This wall can be considered related to a circular structure similar to the architectural structure of Tepe Takhcherabad, in Birjand Plain, 25 km northwest of the site. Takhcherabad structure has a mud brick wall with a height of 4 m. Of course, in the first season of excavations, in trench I, the highest part of the wall has mud brick, which indicates the construction or reconstruction and restoration of the wall with mud brick (5 x 38 x 38 cm). The circular structure has no foundations and is built on the sedimentary layer of the plain, similar to Takhcherabad. Still, it has at least two small seat rows with small andesite stone fragments collected from around. This method was also used in other walls built in the first phase of the settlement. The mud layers are arranged together in orderly pieces and there is a very small distance between these layers, which are filled with andesite rubble or broken pieces of mud brick in some parts. Internal structures can be examined in two phases. The upper phase is mainly mud brick walls, which are built in some parts with 40 x 40 and 38 x 38 cm mud bricks on mud layers or mud brick parts of the older phase. It seems that most of the remains left in Tepe Mod B are related to this phase, and in some parts of the wall, andesite rubble was also used for wall construction. Mud bricks were probably used to cover the vaults and large stone slabs were used to cover the roofs. The type of arrangement of mud bricks and their destruction, which happened simultaneously and suddenly, indicates a natural event (probably an earthquake) in the region. This incident caused the entire structure and the mud bricks to collapse completely, in such a way that even the mortar was not moved between the mud bricks and the mud bricks were placed next to each other. The presence of many pieces of plaster coating on the floor of the architectural spaces indicates the use of this material for coating the spaces, especially in the northern part of the trench of the second season of excavations. Evidence of plaster decorations has not been found so far. In general, the architectural structures in Tepe Mod B were built with materials of mud, mud brick, and rubble on the surface of the ground and without foundations. The primary floor of the architectural spaces was beaten, and created on the sedimentary surface of the plain. In the second phase of architecture, some collapsed walls and spaces were restored. The presence of unfinished grindstones on the floor can indicate the existence of a stone-cutting workshop for the production of millstones, querns, stone mortar handles, etc., in this part of the Gabri Mod site.

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IDENTIFICATION, CLASSIFICATION, AND TYPOLOGY OF SILVER DIRHAMS OF THE UMAYYAD CALIPHATE (MARVANIAN BRANCH) IN THE REPOSITORY OF THE REGIONAL MUSEUM OF SOUTHEAST IRAN (ZAHEDAN)

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Abstract: During the reform period of Abdul Malik Ibn Marwan (65-86 AH), in 76 AH it was decided to replace Arab-Sasanian and Arab-Byzantine coins with a completely Islamic form. The first gold dinar was minted in Kufic script in 77 AH, and the first Islamic dirhams were minted in 78 AH. The minting of new dirhams spread rapidly, so that about a hundred mints minted these dirhams. The knowledge of numismatics can solve many historical mysteries. The period of the Umayyad caliphate was not free of historical uncertainties, so knowing the coins of this period is very important. There are 42 silver dirhams belonging to the Umayyad period, confiscated from antique smugglers, in the coin collection of the Southeast Regional Museum of Iran. This research focuses on these valuable coins' identification, classification, and typology. The descriptive framework of "Stephen Album" numismatics was used to carry out this research. This method was proposed for the first time in 2012 in Santa Rosa (California, USA) by the Stephen Album Rare Coins Institute and was welcomed by numismatists. Also, the abundance chart of each mint's coins in relation to the total number of coins is presented. The results show that the Umayyad silver dirhams of this collection were minted sporadically between 82 and 128 AH in Wasit, Basrah, Damascus, Merv, Darabgerd, and Kerman mints (in order of abundance.
Keywords: Umayyad period, Silver Dirham, Numismatics, Grand Museum of Southeast Iran, Stephen Album.

چکیده: پس از شروع اصلاحات عبدالملک‌بن‌مروان (۶۵–۸۶ ه.ق)، در سال ۷۶ ه.ق تصمیم بر جایگزنی سکه‌های عرب ـ ساسانی و عرب ـ بیزانسی با فرمی کاملا اسلامی گردید؛ اولین دینار طلا با خطوط کوفی به سال ۷۷ ه.ق ضرب گردید و از سال ۷۸ ه.ق ضرب اولین درهم‌های تراز اسلامی آغاز گردید. ضرب درهم‌های جدید به سرعت گشترش یافت، تا جاییکه حدود صد ضرابخانه به ضرب این درهم‌ها می‌پرداختند. دانش سکه‌شناسی می‌تواند راهگشای بسیاری از ابهامات تاریخی باشد؛ دوره خلافت امویان نیز خالی از ابهامات تاریخی نبوده، به همین واسطه شناخت سکه‌های این عصر از اهمیت بالایی برخوردار است. در مجموعه سکه‌های موزه منطقه‌ای جنوب شرق ایران، تعداد ۴۲ درهم نقره از دوران خلافت امویان که از قاچاقچیان عتیقه توقیف شده، موجود است. مسأله کانونی این پژوهش بر شناسایی، طبقه‌بندی و گونه‌شناسی این سکه‌های ارزشمند قرار گرفت. برای انجام این پژوهش از قالب توصیفی سکه‌شناسی «استیفن آلبوم» استفاده گردید؛ این شیوه برای اولین بار در سال ۲۰۱۲ در شهر سنت‌رسا (کالیفرنیا، آمریکا) توسط موسسه «سکه‌های کمیاب استیفن آلبوم» پیشنهاد گردید و پس از مورد استقبال سکه‌شناسان قرار گرفت. در ادامه این پژوهش نیز از نمودار فراوانی نسبی برای میزان فراونی سکه‌های هر ضرابخانه نسبت به کل سکه‌ها استفاده گردید. برآیند این پژوهش مشخص ساخت که درهم‌های نقره خلافت اموی این مجموعه، به صورت پراکنده بین سال‌های ۸۲–۱۲۸ه.ق و به ترتیب میزان فراوانی در ضرابخانه‌های واسط (در عراق امروزی)، بصره، دمشق، مرو، دربجرد (دارابگرد)، و کرمان، به ضرب رسیده است.
کلیدواژه: دورهٔ امویان، درهم نقره، سکه‌شناسی، موزهٔ بزرگ جنوب شرق ایران، استیفن آلبوم.

I. Introduction

Coins can be considered the most valuable historical documents and archaeological data. In Iran, researchers of coins (especially coins of the Islamic era) have been aware of the lack of scientific resources in this field for a long time. They know there has never been a proper list and catalog of Islamic coins, especially those in museums. Therefore, identifying and organizing objects is one of the most important topics in museum management. In recent years, this issue has become one of the most fundamental issues of related organizations and institutions worldwide, especially in Europe. Organizations and museum institutes such as ICOM and IAM offer supplementary educational programs for identifying and organizing objects in museums. Today, this is accepted worldwide and shows the recognition and awareness of a museum's responsibility towards society.

42 Umayyad coins are kept in the Great Museum of Southeast Iran. Preliminary investigations indicate the lack of research on the organization of coins of the Islamic era, especially the Umayyad period in this museum. This is even though today there are different ways to organize coins in museums. There seems to be no single museum standard in this city; in most cases, Zahedan city relies on non-museum standards. This research aims to document the coins of the Umayyad era in the Grand Museum of Southeast Iran with the latest special methods of documenting coins, that is, the method of Stephen Albom (Inventory of Coins of the Islamic Era) (2011). Documentation includes accurate identification of coins, checking diameter and weight, scripts on coins, and presenting a brief history. In the end, the statistical analysis of these coins is presented in the form of a relative frequency chart.

II. Methodology

The use of this method was proposed for the first time in 2011 in the city of "Saint Rosa", California, USA by the "Rare Coins of Stephen Album" auction. Finally, it was published in the introduction of the book "Checklist of Islamic Coins" by the same auction (Album, 2012). This method was quickly accepted by all auctions and private collections. With the use of this method by the coins section of the "C.L. David" Museum in Denmark, this method gained a scientific flavor and became famous in European numismatic circles. To carry out this research, it was decided to use the Stephen Album format to introduce the coins of the Grand Museum of Southeast Iran. However, according to the characteristics of the research, there was a slight change in it. In addition, for the statistical analysis of the coins of this collection, the relative frequency was used, which is fully described in the quantitative analysis section.

III. Research background

So far, a lot of research has been done on the Umayyad coins, which can be mentioned in the following publications: "Umayyad Dirhams minted with Islamic Feature" (Naqshbandi, 1967); "The first coins of the Islamic Empire" (Shams Eshraq, 1990); "Catalog of dirhams after the reforms of the Umayyad period" (Klat, 2002); "Silver Coins of the Caliphate" (Shams Eshraq, 2010); and the general book "List of Islamic Coins" (Album, 2011). About the Umayyad coins in this collection, there is a master's thesis titled "Study and Analysis of Umayyad and Abbasid Seized Coins of Southeast Iran Museum by PIXE Method" (Nosrati, 2015) and its article titled "Elemental analysis of silver coins during the Umayyad period through the PIXE method" (Jozi et al., 2019) that deal with the laboratory elemental analysis of these coins.

IV. A brief history of the Umayyads (Marwanian branch)

In Dhu Qa'dah 64 AH, the Muslims pledged allegiance to Marwan bin Hakam in Jabiyah, whose age compared to Khalid bin Yazid had an effect on his election as the Caliph of the Muslims. At the time of pledging allegiance to Marwan, his succession was also discussed. Those present in Jabiya pledged allegiance to Khalid bin Yazid after Marwan and to Amr bin Saeed bin As after him, but Marwan transferred the caliphate to his family. In 65 AH, Marwan replaced his son Abdul Malik and after him, Abdul Aziz, and deprived Khalid bin Yazid of the caliphate and humiliated him. According to some narrations, Umm Khalid, Marwan's wife, killed him in Ramadan 65 AH out of anger (Ibn Khayat, 1967: 1/318, 326; Ibn Saad, 1960: 5/41; Tabari, Bita: 5/534, 537, 610-611; Al-Baladhuri, 1417: 3/285, 289).

Abdul Malik was the founder of the new Umayyad caliphate in the Marwani branch. Before becoming the caliph, he was known for asceticism and worship, but after reaching the caliphate, he changed his behavior. Abdul Malik did not tolerate the slightest criticism and strictly followed the economic order. Abd al-Malik seriously pursued the previous policy of suppressing the Khawarij, especially the Azarqa branch, and the conquests of the country. During this period, the bureaucracy was transferred from Persian to Arabic language by an Iranian. In 77 AH, coins with Islamic designs were minted. By defeating Musab bin Zubair in Iraq and Abdullah bin Zubair in Hijaz, he dismantled the Zubair dynasty and appointed Hajjaj bin Yusuf Thaqafi to the governorship of Medina and then Iraq and Iran. He wanted to transfer the succession from his brother Abd al-Aziz to his children, but he did not do that. However, Abd al-Aziz died in 85 AH and the governorship went to Walid, then to Suleiman, and after him, to Marwan bin Abd al-Malik. Abdul Malik died in 86 AH (Al-Baladhuri, 1417: 7/203-204, 206, 8/123; Tabari, Bita: 8/416-417; Ibn Khayat, 1967: 1/377; Yaqoubi, 1969: 2/334 -335).

Walid succeeded to the caliphate after Abdul Malik. A large part of his reign was spent in conquests. Qutaiba bin Muslim Bahli in Khorasan and Muslimah bin Abdul Malik were engaged in the expansion of the caliphate in the regions of Rome. Walid paid attention to the construction and renewal of mansions. Hajjaj still enjoyed the previous position. Hajjaj died in Shawwal 95 AH and Walid died in Jamadi al-Akhar 96 AH (Tabari, Bita: 8/, 424, 469, 496-499; Al-Baladhuri, 1417: 8/71, 113; Ibn Khayat, 1967: 1/397; Yaqoubi, 1969: 2/339).

Suleiman, who was the governor of Palestine before, became the caliphate after Walid. He conquered Jurjan and Tabaristan. Muslima bin Abdul Malik besieged Constantinople in 97 AH. After the death of Marwan bin Abdul Malik, Suleiman chose his son Ayyub as crown prince, but Ayyub died in 98 AH. It was thought that Dawood, the other son of Suleiman, would be succeeded, but in the last days of his life, the caliph chose Umar bin Abdul Aziz as his successor (Tabari, Bita: 8/505, 530-531, 550; Al-Baladhuri, 1417: 8/99, 102, 113, 126; Dhahabi, 1404: 5/123-124).

Umar bin Abdul Aziz was the governor of Medina during the reign of Walid and was dismissed in 93 AH with the efforts of Hajjaj. After the declaration of caliphate, some Umayyads like Hisham bin Abdul Malik were angry. Omar changed the governors of Iraq and Khorasan. As a caliph, he did not take significant political actions and continued some previous actions. The caliphate of Omar bin Abdul Aziz was different

from the previous caliphate due to reforms and changes in some specific principles. He was a scholar and a jurist, and the list of his sheikhs and narrators in the hadith shows his religious upbringing and his position among the scholars. He returned Fadak to the Alawites and prevented insulting Ali (a.s.), and also he did not like insulting Muawiya and Hajjaj either. He returned the illegitimate Umayyad property to the treasury. He called the Khawarij to talk and ordered to tolerate them as long as they do not touch the sword. He ordered to remove jizya from Muslim Iranians and to improve relations between Muslims and non-Muslims, especially from an economic point of view. Umar bin Abdul Aziz died in Rajab 101 AH (Tabari, Bita: 6/550-551, 555, 559, 567, 565; Al-Baladhuri, 1417: 8/76, 130, 184, 216; Dhahabi, 1404: 5/116 , 128, 147; Yaqoubi, 1969: 2/366; Masoudi, 1966: 17/4; Ibn Asaker, 1415: 45/264).

Yazid II went against the policies of Omar bin Abdul Aziz. He canceled the financial reforms and dismissed the governor of Medina. The biggest event of the reign of Yazid bin Abdul Malik was the uprising of Yazid bin Mahlab in Iraq, which was carried out with the support of the Azd and Rabi'ah tribes. He conquered Khuzestan, Fars, and Kerman, but in 102 AH, Muslimah bin Abdul Malik suppressed the uprising. Yazid appointed his brother Muslimah to the government of Iraq, but later dismissed him and appointed Umar bin Habira Fazari in his place. Yazid continued the policy of suppressing the Khawarij, he continued to fight on the borders of Rome and Khorasan. The story of his infatuation with two singing maids, Hababa and Salameh, is mentioned in some sources. Finally, shortly after the death of one of those two maidservants, he died of grief in Sha'ban 105 AH (Al-Baladhuri, 1417: 8/243-245, 279, 353, 9/31; Tabari, Bita: 6/574-575, 590 604, 615, 7/21, 122; Yaqoubi, 1969: 2/372; Masoudi, 1966: 4/30; Abolfaraj-Esfahani, Bita: 124/15; Wellhausen, 1997: 258-259, 295).

According to the previous agreement, Hisham bin Abdul Malik succeeded to the caliphate after Yazid II. He ruled as a caliph for 20 years and tried to establish the foundations of the Umayyad caliphate. He made efforts in economy and civil order, and even later Mansour Abbasi praised him. He started a new phase of conquests in the Roman area and kept the military away from the political arena. He had extensive conquests in Great Khorasan and Sharvan. Hisham adopted the method of the Umayyad caliphate in dismissing and installing governors. Its general purpose was to create a balance between the Yemeni and Qaisi tribes. The governors of Iraq were mostly selected from the "School of Hajjaj". He dismissed Hisham bin Habira from Iraq and appointed Khalid bin Abdullah Qasri from the Yemenis as governor there. Khaled suppressed the Khawarij during 15 years of ruling Iraq. Mughirah bin Saeed Ajali's uprising of the Ghalat of Shia in Kufa was crushed. Khalid was dismissed due to accumulating wealth and under the pretext of disrespecting the caliph and was imprisoned in 120 AH. Yusuf bin Omar Thaqafi, the governor of Yemen, took Khalid's place in Iraq. He entered Iraq secretly because of the fear of sedition. Yusuf severely suppressed the uprising of Zayd bin Ali in Kufa. Hisham died in Rabi al-Akhar 125 AH (Al-Baladhuri, 1417: 8/370, 378-379, 391, 422, 9/75; Tabari, Bita: 7/25-26, 54, 113, 128, 147, 200, 203 Masoudi, 1966: 41-42).

After Hisham, according to the will of Yazid bin Abdul Malik, the caliphate passed to Walid bin Yazid. Waleed II was unruly from the reign of Hisham and even Hisham wanted to transfer the succession from him to his son Muslimah. Because of this, the relationship between Walid and Hisham was strained and Walid did not show up in Damascus when Hisham died. With the caliphate of Walid II, the Umayyad dynasty started to fall. He was clearly in debauchery. Amazing stories have been told from his court, especially about the desecration of the Kaaba. Walid divided the properties that Hisham had gathered among the Shamians. Walid appointed his two young children as successors. He appointed Yusuf bin Muhammad Thaqafi in Mecca and Medina and sent his brother Omar bin Yazid to Cyprus. After reaching the caliphate, he used to hunt and have fun more than before. Some Umayyads and some Yemeni troops objected to him (Al-Baladhuri, 1417: 8/370, 9/160; Tabari, Bita: 7/209, 211, 231; Ibn Asaker, 1415: 23/74; Abolfaraj-Esfahani, Bita: 7/1, 47; Ibn Manzoor, 1409: 26/371).

Yazid bin Walid bin Abdul Malik started enmity with Walid. He incited people to kill the Caliph. Dissatisfied Yemenis also instigated Yazid bin Walid to the caliphate. On the other hand, Abbas bin Walid and Marwan bin Muhammad warned Yazid against opposition. Despite all this, Yazid was secretly active and took allegiance from the Damascus people for his caliphate. In a surprise move, they were able to dominate Damascus. At this time, the Caliph had gone to Tadmor in Jordan for treatment and sent someone to confront Yazid, but that person pledged allegiance to Yazid. Yazid sent an army to Walid's war and invited him to the book, Sunnah, and even Shura. Walid took a position in Jabiyah and was defeated in the war and took refuge in a palace. He was killed in an attack on his shelter in Jumadi al-Akhar 126 AH and his head was sent to Yazid (Tabari, Bita: 7/232, 237, 239-240, 243-245, 252, 270; Al-Baladhuri, 1417: 9/ 169, 171-185, 190; Ibn Manzoor, 1409: 26/372).

Yazid bin Walid was called incomplete Yazid due to the reduction of forgiveness. During his time, the distress of the situation and the differences between the Umayyads increased. His efforts to fix this situation did

not go anywhere. A rebellion broke out in Homs at the instigation of Marwan bin Abdullah and Abu Muhammad Sufiani and they demanded allegiance to the sons of Walid II. The Palestinians also refused to pledge allegiance. Marwan bin Muhammad, the ruler of Armenia, was responsible for an important part of the agitations. However, due to Yazid's promise to give him the governorship of the island, Mosul, Azerbaijan, and Armenia, Marwan pledged allegiance to him. Yazid only rules over Damascus. It has been said that he chose his brother Ibrahim bin Waleed and after him, Hajjaj bin Abdul Malik as his successor, but the authenticity of this news is doubtful. His reign was not more than 6 months and he died in the last days of 126 AH (Al-Baladhuri, 1417: 9/189, 196, 199, 203, 220; Tabari, Bita: 7/261, 266, 281, 298-299).

It is not known whether Ibrahim bin Walid was the caliph or not because, after the death of Yazid, Hakam bin Daba'an called the people in Palestine to pledge allegiance to Sulaiman bin Hisham bin Abdul Malik. The situation in Homs was still chaotic and Ibrahim sent Suleiman bin Hisham to confront the Homsians and besieged the city. On the other hand, Marwan ibn Muhammad moved towards Syria. In Qinnasrin, the Qaisys gathered around him and turned towards Homs. In Ain al-Jar, two armies met. Marwan's efforts for peace did not reach anywhere. Suleiman's army was defeated in the bloody war and he fled to Damascus. Marwan entered Damascus in Safar 127 AH and Ibrahim fled (Tabari, Bita: 7/299-302; Al-Baladhuri, 1417: 9/196-200).

After Marwan arrived in Damascus, the people pledged allegiance to him and shortly after to his two children. Marwan tried to make himself similar to Marwan bin Hakam. His time was full of war and strife. The entire Islamic world was in turmoil. People revolted in Homs and Marwan quelled the revolt and immediately faced problems in Damascus. In Iraq, when Abdullah bin Umar bin Abdul Aziz refused to pledge allegiance, a conflict broke out between the Yamanis and the Mudharis. After that, first Abdullah bin Muawiyah from the Alawites claimed the caliphate in Kufa, but he was defeated by Abdullah bin Umar and went to the Jabal region in Iran and gained control there. After that, Zahak bin Qais Shaibani from Khawarij took over Kufa. Marwan sent Yazid bin Umar bin Habira to fight with him. Ibn Habira conquered Kufa and suppressed the Khawarij. Zahak was killed in Kafar Totha in 128 AH. In Hijaz, Abu Hamzah Mukhtar bin Awf of the Khawarijites encouraged the people against Marwan, and in alliance with Abdullah bin Yahya Abadhi known as Talib al-Haq during Hajj 129 AH, he captured Makkah, Madinah, and Taif. Abu Hamza was defeated by Marwan's army and was killed in Mecca in Rajab 130 AH. Abdullah bin Muawiya, who had conquered Fars, Isfahan, and Ray, and had various groups around him, was defeated by Ibn Habira's army and fled (Al-Baladhuri, 1417: 9/196, 199-200, 203, 227, 230; Tabari, Bita: 299-302, 312, 371-374; Abolfaraj-Esfahani, Bita, 20/99; Ibn Khayat, 1967: 2/583).

Although Marwan was successful in suppressing other rebellions, a strong current slowly formed and was able to overthrow the Umayyads. This network brought the focus of the struggle to Khorasan. With the arrival of Abu Muslim in Khorasan, the anti-Umayyad campaign reached a new stage. He promoted the Invitation by using the tribal quarrels between the Yamanis and the Qaisis. The Mudhari ruler of Khorasan asked for help from Marwan and Ibn Habira, but they were faced with other difficulties. Abu Muslim was able to conquer Merv, the throne of Khorasan, in Jumadi al-Awwal 130 AH and sent Qahtaba bin Shabib Ta'i to other cities. In Rajab 131 AH, Qahtaba defeated Marwan's army sent by Ibn Zabara near Isfahan. With the conquest of Nahavand in Dhu Qadah 131 AH, he moved towards Iraq. After Ibn Habira went out of Kufa to confront the Khorasan army, the city was led by the great claimant of Khorasan, Abu Salama Khalal, and fell into the hands of claimant followers, and the Khorasan army entered Kufa on 10 Muharram 132 AH. A little later, some members of the Abbasid family entered Kufa and finally pledged allegiance to Abu al-Abbas Safah for the caliphate in Rabi al-Awwal 132 AH. On the other hand, a branch of the Khorasan Army, under the command of Abu Aoun, took a position in the Mosul area after the defeat of Marwan's agent in Shahrizor. Marwan was in Harran at this time. He first went to Ras al-Ain and then to Mosul and dug a trench for defense by the Tigris. Abu al-Abbas Safah sent his brother Abdullah bin Ali to help Abu Aun. The Abbasid army could not defeat Marwan in the first battle. But in the battle of Zab River, Marwan was badly defeated and retreated to Haran (Akhbar al-Dawlah al-Abasiyyah, 1971: 197, 321-323; Tabari, Bita: 7/369, 432-433; Al-Baladhuri, 1417: 4/143; Yaqoubi, 1969: 2/413; Kofi, 1405: 4/361; Azdi, 1387: 127).

After that, Marwan was always on the run and because of Abdullah bin Ali's pursuit, he fled from Harran to Qinnasrin, Homs, and Damascus. With the conquest of Damascus, despite the people's resistance, the Umayyad dynasty collapsed in Ramadan 132 AH. In Damascus, Abdullah bin Ali ordered to opening of the graves of the Umayyad caliphs such as Muawiya and Yazid, and whipped the remains of Hisham bin Abdul Malik. Marwan then fled to Palestine. Although Abdullah bin Ali did not reach him, about a hundred Umayyads were killed by his order on the side of the Abu Fitras river. In Dhu Qadah 132 AH, Abdullah handed over the command of the army to his brother Saleh by order of Safah. At this time, Marwan fled to

Egypt and crossed the Nile. Finally, he was killed in Bubasir in Dhu Hijjah 132 AH and his head was sent to the Abbasid caliph (Tabari, Bita: 7/437-432; Al-Baladhuri, 1417: 9/322, 331; Masoudi, 1966: 4/86-87; Yaqoubi, 1969: 2/426).

V. Umayyad Islamic-style dirhams

The first Islamic coins without images, only with Islamic slogans in Kufic script, were minted in 77 AH (gold dinar) and 78 AH (silver dirham), during the reign of Abdul Malik bin Marwan (Grierson, 1960: 247). Tabari mentioned the minting date of these coins in 76 AH (Tabari, 1885: 8/939), but so far no dinar or dirham with this date has been found. Copper coins were minted in Kufic script probably between 78 and 80 AH. According to Bayhaqi (1961: 2/332-336), these types of coins were minted by Abdul Malik bin Marwan under the guidance of Imam Muhammad Baqir. However, according to Moghrizi (1987: 41), Dhahabi (1987: 100), and Imam Shoushtari (1960: 75), the minting of these coins was suggested by Khaled bin Yazid bin Muawiyah.

The writing of Qur'anic phrases on these coins, which were touched by non-Muslims and impure Muslims, resulted in the objections of jurists (Moghrizi, 1987: 50). Despite this, after minting these types of coins, Abdul Malik bin Marwan ordered their use and threatened the violators with painful punishment, long imprisonment and even execution. At that time, gold coins were called dinars, silver coins were called dirhams, and copper coins were called fals. The word dinar, which was pronounced "denar" in Pahlavi, was taken from the Latin word "denarius nummus" meaning "tenth coin, decimal coin" (Rezaie Baghbidi, 2014: 93).

It is worth noting that so far only two Umayyad dirhams dated 78 AD have been found, one minted in Shaqq al-Taymara and the other minted in Jey (Album, 2011: 42). Islamic-style coinage spread rapidly throughout the Islamic realm, from Spain and North Africa in the west to Central Asia and Transoxiana in the east. The new design of Islamic dirhams was used in 97 AH in Ifriqiya and 100 AH in Andalusia (Rezaie Baghbidi, 2014: 94).

In the beginning, the dinar weighed about 4.25-4.26 grams (equal to one shekel), and the dirham about 2.85 grams. After some time, the weight of the dirham increased for an unknown reason and reached about 2.97 grams (seven-tenths of a shekel) in the 90s AH (Sears, 1997: 404; Album, 2011: 7, 39). In the old sources, "Dinar" is often mentioned in the reports about Egypt and Syria, and "Mithqal" is mentioned in the reports about Iran and Iraq (Sears, 1997: 265-266). Recent studies of dirhams left over from the Umayyad and Abbasid periods show that from the late 80s AH until at least a hundred years later, the weight of the dirham was about 2.94 grams, not 2.97 grams (Album, 2011: 7). The examination of a number of Umayyad dirhams that were minted in the city of Wasit between 90 and 124 AH shows that the amount of silver used in them has gradually increased. This amount, which was about 90.76% in the dirhams of 90 AH, reached 94.10 percent in 96 AH and 98.93 percent in 124 AH (al-Saa'd, 1999: 357).

Since the minting of copper coins was a local matter from the very beginning, no specific weight standard can be considered for copper coins. The weight of the fals varied from less than one gram to about ten grams or even more (Album, 2011: 7). Despite this, the average weight of most of the samples found is between 1 and 3 grams, but sometimes similar samples with 50% less weight or even 100% more weight have been seen. After Abdul Malik bin Marwan, all the Umayyad caliphs continued to mint coins in the Islamic style (Rezaie Baghbidi, 2014: 94).

The design of Umayyad coins is derived from Quranic verses and Islamic expressions (Fig. 1). The text on the coin, in the center, Quran, Surah Tawheed:

الله احد الله الصمد لم یلد ولم یولد و لم یکن له کفوا احد یا الله احد الله الصمد لم یلد و لم یولد و لم یکن له کفوا احد

In the margin, Quran, Surah Towbah, 33:

محمد رسول الله ارسله بالهدی و دین الحق لیظهره علی الدین کله ولو کره المشرکون

On the back of the coin, in the center:

لا اله الا الله وحده لا شریک له

In the margin:

بسم الله ضرب هذا الدرهم ... (mint place) [فی] سنه ... (mint date)

(Rezaie Baghbidi, 2014: 94).

Figure 1. One of the first dirhams of the Islamic style, minted in Shaqq al-Taymara, in the year 78 AH (Morton and Eden, 2012: 38).

One of the interesting features of Umayyad dinars and dirhams is that some letters are dotted. These points cannot be easily considered as points that distinguish letters, because this distinction is not shown everywhere. It seems that the punctuation of some letters was a contractual sign and a code that only the employees of the mints knew its meaning. For example, in 83 AH, in all dinars there are two dots under the letter "ی" in the word "یولد" and in all Damascus dirhams there is a dot under the letter "ب" in the word "بدمشق". Besides, in the year 90 AH, in dinars, the letter "ب" in "ضرب" and in dirhams, the letter "ب" in "بدمشق" has a dot. In addition, in all dinars and dirhams struck between 99 and 101 AH, the letter "ب" in the word "ضرب" has a dot. On the other hand, in 94 AH, none of the letters of dinars and dirhams have dots (Bates, 1986: 30).

The name of the caliph is not written on the Umayyad coins, and the caliph of the time can only be identified by the minting date. For this reason, in this research, the coins are classified based on the place of minting, and for better recognition, the year of the Umayyad caliphs is included (Table 1). As we know, the year 126 AH coincided with the caliphate of three caliphs: Walid bin Yazid, Yazid bin Walid, and Ibrahim bin Walid. All dinars minted in 126 AH are attributed to Walid bin Yazid. In addition, all the dirhams minted in the year 126 AH, except for some dirhams minted in Wasit, are attributed to Walid bin Yazid. According to the number of rings on the outer edge of both sides of the coins, the dirhams minted in 126 AH in Wasit are attributed to each of these three caliphs. Dirhams with 5 rings belong to Walid bin Yazid, dirhams with 4 rings belong to Yazid bin Walid, and dirhams with 7 rings belong to Ibrahim bin Walid (Album, 2011: 43). It is worth mentioning that the number and type of arrangement of rings on the edge of Umayyad coins are considered to indicate the reign period of the governors of each province, or perhaps also the tenure of the officials of each mint (DeShazo & Bates, 1974: 110-118; El- Hibri, 1993: 64).

Table 1. Chronology of the Umayyad caliphs (Rezaie Baghbidi, 2014: 95).

Abdul Malik bin Marwan	65-86 AH	Hisham bin Abdul Malik	105-125 AH
Walid bin Abdul Malik	86-96AH	Walid bin Yazid bin Abdul Malik	125-126 AH
Soleiman bin Abdul Malik	96-99 AH	Yazid bin Walid bin Abdul Malik	126 AH
Omar bin Abdul Aziz	99-101 AH	Ibrahim bin Walid bin Abdul Malik	126-127 AH
Yazid bin Abdul Malik	101-105 AH	Marwan bin Muhammad bin Marwan	127-132 AH

The minting of new dirhams also spread rapidly, so that in 79 AH it almost replaced Arab-Sasanian dirhams in many mints. The new Islamic dirham was minted in about a hundred mints throughout the Islamic territory. Only in Iran and Iraq, from 79 to 84 AD, almost fifty different mints were active (Sears, 1997: 408). After the establishment of the city of Wasit in Iraq, halfway between Basrah and Kufa, and Hajjaj bin Yusuf's move to his new capital in 83 AH, Wasit became the main minting place for Umayyad dirhams. Of course, a few samples from the years 85 and 87 AH minted in Basrah have also been found (Shams Eshraq, 1990: 150). Despite this, Arab-Sasanian coins were still minted in some mints in Jabal, Fars, Kerman, and Sistan. These mints were either closed or minted new dirhams until 86 AH (Bates, 1987: 225-227; Album et al., 1993: 18; Sears, 1997: 43).

In 90 AH, most of the former mints were reactivated and new mints were also created, but once again in 98 AH, the mints of central and southern Iraq, Jabal, and Khuzestan, except for the mints of the important administrative centers of Wasit, Kufa, and Basrah were closed. In 99 AH, the mints of Fars and Khorasan were also closed. In 102 AH, the mints of Basrah, Kufa, and Sistan were closed, and in 103 AH, the mints of Kerman were closed. As a result, the minting of coins once again took place exclusively in the Wasit Mint. It was only in the 110s and after that, following the unrest and the reduction of the Umayyad control over the east, the mints of the eastern provinces, followed by some other

mints, were reactivated. Despite this, many of the coins minted in these mints bear the slogans of the rebels and this shows that the Umayyads did not supervise those mints (Sears, 1997: 408).

In 131 AH, only 8 mints of new Umayyad dirhams were still active: Andalus, Ifriqiya, Bab, Basrah, Jazeera, Damascus, Samia (founded in 131 AH), and Wasit (Miles, 1975: 368). On the other hand, the mints of Ifriqiya and Andalus minted Umayyad dirhams even until a few years after the death of Marwan ibn Muhammad in 132 AH and the collapse of the Umayyad caliphate. The minting of Umayyad dirhams was resumed in 148 AH during the Umayyad rule in Andalusia and continued until 285 AH. Of course, gradually there was a significant change in the calligraphy style. Despite this, the type of writings and their arrangement were the same (Album, 2011: 39-40).

VI. Umayyad dirhams of the Grand Museum of Southeast Iran

In this part, the identification and classification of 42 Umayyad dirhams preserved in the Grand Museum of Southeast Iran is discussed. As mentioned in the numismatic overview of Umayyad dirhams, since the caliph's name is not minted on these coins, the best way to classify them is the mint place. The coins of this collection were minted between 128 and 82 AH in the mints of Basrah, Darabgerd, Damascus, Kerman, Merv, and Wasit (Table 2).

Table 2. Characteristics of Umayyad dirhams preserved in the Grand Museum of Southeast Iran.

 2172: Basrah, 100 AH, 2.82 grams, 250 mm بسم الله ضرب هذا الدرهم بالبصره سنه مئه	1	 4114: Basrah, 82 AH, 2.51 grams; 250 mm بسم الله ضرب هذا الدرهم بالبصره فی سنه سنتین و ثمنین	2
 2165: Darabgerd, 94 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بدربجرد فی سنه اربع و تسعین	3	 2167: Basrah, 101 AH, 2.81 grams, 250 mm بسم الله ضرب هذا الدرهم بالبصره سنه احدی و مئه	4
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 2178: Kerman, 94 AH, 2.70 grams, 250 mm بسم الله ضرب هذا الدرهم بكرمان فی سنه اربع و تسعین	7	 2151: Damascus, 101 AH, 2.82 grams, 250 mm بسم الله ضرب هذا الدرهم بدمشق سنه احدی و مئه	8
 2181: Merv, 95 AH, 2.80 grams, 260 mm بسم الله ضرب هذا الدرهم بمرو فی سنه خمس و تسعین	9	 2159: Merv, 95 AH, 2.83 grams, 250 mm بسم الله ضرب هذا الدرهم بمرو فی سنه خمس و تسعین	10
 2158: Wasit, 88 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط فی سنه ثمان و ثمنین	11	 2171: Wasit, 85 AH, 2.82 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط فی سنه خمس و ثمنین	12
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2174: Wasit, 92 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط فی سنه اثنتین و تسعین		2147: Wasit, 92 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط فی سنه اثنتین و تسعین	
	17		18
2152: Wasit, 93 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط فی سنه ثلث و تسعین		4218: Wasit, 92 AH, 2.23 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط فی سنه اثنتین و تسعین	
	19		20
2155: Wasit, 95 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط فی سنه خمس و تسعین		2153: Wasit, 95 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط فی سنه خمس و تسعین	
	21		22
2168: Wasit, 95 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط فی سنه خمس و تسعین		2156: Wasit, 95 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط فی سنه خمس و تسعین	

	23		24
2166: Wasit, 104 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه اربع و مئه		2179: Wasit, 97 AH, 2.60 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط فی سنه سبع و تسعین	
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2176: Wasit, 107 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه سبع و مئه		2160: Wasit, 107 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه سبع و مئه	
	27		28
2149: Wasit, 111 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه احدی عشره و مئه		2144: Wasit, 110 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه عشر و مئه	
	29		30
2157: Wasit, 117 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه سبع عشره و مئه		2150: Wasit, 115 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه خمس عشره و مئه	

	31		32
2173: Wasit, 118 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه ثمان و عشره و مئه		2180: Wasit, 117 AH, 2.70 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه سبع عشره و مئه	
	33		34
2164: Wasit, 121 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه احدى و عشرين و مئه		2154: Wasit, 121 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه احدى و عشرين و مئه	
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2175: Wasit, 122 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه اثنتين و عشرين و مئه		2170: Wasit, 122 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه اثنتين و عشرين و مئه	
	37		38
2162: Wasit, 123 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه ثلث و عشرين و مئه		2161: Wasit, 123 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه ثلث و عشرين و مئه	

 2143: Wasit, 126 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه ست و عشرين و مئه	39	 2148: Wasit, 125 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه خمس و عشرين و مئه	40
 2145: Wasit, 128 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه ثمان و عشرين و مئه	41	 2169: Wasit, 126 AH, 2.80 grams, 250 mm بسم الله ضرب هذا الدرهم بواسط سنه ست و عشرين و مئه	42

VII. Quantitative analysis of mint places in the Grand Museum of Southeast Iran

In this section, the graph of the relative frequency (in percentage) of the coins of each mint is presented. Frequency in statistics is the occurrence (or repetition of observation) of data. In statistics, to repeat the results of an experiment, frequency is defined and frequency is divided into three groups: absolute, relative, and cumulative. The absolute frequency of data is the number of times that data is repeated. The absolute frequency of data xi is represented by fi. If the data are grouped, the absolute frequency of the category i will be equal to the number of members of this category. If the category i has an absolute frequency of fi resulting from n data, the relative frequency of this category is defined as fi/n. The cumulative frequency of a category is the number of occurrences whose amount is less than the upper limit of that category or the cumulative frequency of a category or range is the sum of the absolute frequency of the same category with the absolute frequency of the previous category or categories. The frequency of data is usually displayed in the form of tables and graphs. Here, relative abundance is represented with bar graphs (Figure 2). The first type of graph is that the number 100, which indicates the percentage, is divided by the total number of coins, that is, the number 42, and the result is approximately 2.38. This is the percentage number of each coin in this statistic. Then, 2.38 is multiplied by the number of coins in each mint. For example, the number of Wasit mint coins is 32. 32 multiplied by 2.38 is 75.16, so the percentage of Wasit mint coins is 76.16%.

$100 \div 42 = 2.38$

$2.38 \times 32 = 76.16$

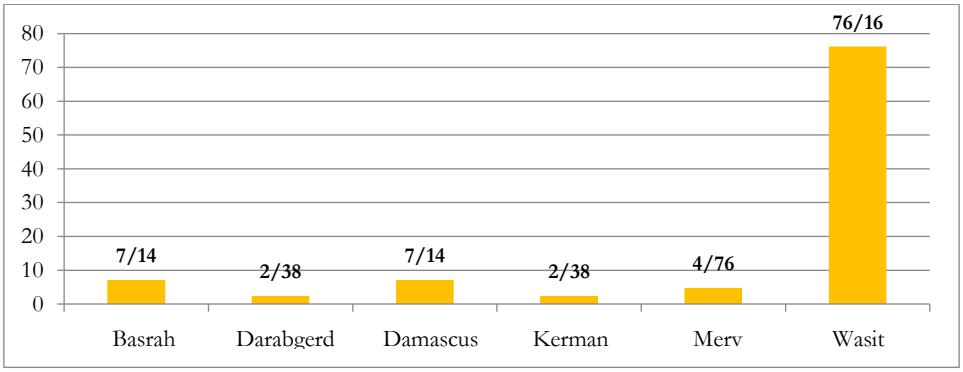

Figure 2. The graph of the relative frequency of coins of each mint (Authors).

VIII. Conclusion

With the formation of the reform era of Abdul Malik bin Marwan, changing the shape of coins was given priority, and from the year 77 AH, gold dinars and from the year 78 AH new Islamic silver dirhams were minted. In the Great Museum of Southeast Iran, 42 coins from the period after the Umayyad reforms are preserved. In this article, in addition to identifying these types of coins, their characteristics were also prepared using the "Stephen Album" method, which includes the property number, minting period, mint place, mint date, weight and diameter of the coin, and scripts. Coin statistics are as follows: 3 coins from the Basrah Mint dated 82, 100, and 101 AH; 1 coin from the Darabgerd Mint dated 94 AH; 3 coins from the Damascus Mint dated 88, 98, and 101 AH; 1 coin from the Kerman Mint dated 94 AH; 2 coins from the Merv Mint dated 95 AH; and 32 coins from the Wasit Mint dated 85, 88, 90 AH (2 coins), 92 AH (3 coins), 93, 94 AH (4 coins), 97, 104, 107 AH (2 coins), 110, 111, 115, 117 AH (2 coins), 118, 121 AH (2 coins), 122 AH (2 coins), 123 AH (2 coins), 125, 126 AH (2 coins), and 128 AH. In addition, the relative frequency graph showed that the Wasit Mint accounted for 76.16%, Basrah and Damascus each 7.14%, Merv 4.76%, and Darabgerd and Kerman each 2.38% of the coins.

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ANTHROPOLOGICAL STUDY OF NOWRUZ DARYA, THE RITUAL OF FISHERMEN IN SOUTHERN IRAN

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Abstract: Examining Iranian celebrations and rituals and the time of their celebration shows common features among all of them. These celebrations are related to natural, cosmic, and climatic phenomena, and for this reason, their time coincides with the natural calendar. The Persian Gulf region has witnessed the formation of various rites, customs, celebrations, and traditions in the context of history, each of which, in addition to its own beauty, has played an important role in the cultural and civilizational developments of the region and the world. In the formation of these rituals and traditions, factors and elements such as the productive way of life of the people caused by the living conditions and geographical determinism (coastal life), the use of individual taste and talent, as well as two important social phenomena, i.e. maritime trade and migration (displacement of populations), have been influential. Some of these customs and traditions have either been created in the framework of common beliefs among the people of other regions, or their formation has its roots in the customs of their ancestors in ancient times. This research has investigated the ritual of Nowruz Darya in Qeshm by a qualitative method and through direct observation. This research shows that these rituals, in addition to increasing solidarity and national identity in this region, are also very effective in attracting tourists.

Keywords: Nowruz Darya, Qeshm, Ritual, Persian Gulf.

چکیده: بررسی جشن‌ها و آیین‌های ایرانی و زمان برگزاری آن‌ها نشان‌دهنده ویژگی‌هایی مشترک در میان همه آن‌هاست. این جشن‌ها در پیوند با پدیده‌های طبیعی، کیهانی و اقلیمی هستند و به همین دلیل زمان برگزاری آن‌ها با تقویم طبیعی منطبق است. منطقه‌ی خلیج فارس در بستر تاریخ شاهد شکل‌گیری آیین‌ها، آداب و رسوم، جشن‌ها و سنت‌های گوناگونی بوده که هرکدام از آن ها علاوه بر زیبایی‌های خاص خود، نقش مهمی در تحولات فرهنگی و تمدنی منطقه و جهان ایفا نموده‌اند. در شکل‌گیری این آیین ها و رسوم عوامل و عناصری مانند: نحوۀ زندگی تولیدی مردم ناشی از شرایط زیستی و جبرجغرافیایی آن‌ها (زندگی ساحل‌نشینی)، بهره‌گیری از ذوق و استعداد فردی و همچنین دو پدیدۀ مهم اجتماعی یعنی تجارت دریایی و مهاجرت (جابجایی جمعیت‌ها) تأثیر گذار بوده است. برخی دیگر از این آداب و رسوم و سنت‌ها، یا در چارچوب عقاید رایج در میان مردم سایر مناطق به وجود آمده‌اند و یا شکل‌گیری آن‌ها ریشه در آداب و رسوم نیاکان آنان در دوران باستان دارد. این تحقیق به روش کیفی و از طریق مشاهده مستقیم به بررسی آیین نوروز دریا در قشم پرداخته است. منایج این تحقیق نشان می‌دهد که این آیین علاوه بر آن که همبستگی و هویت ملی را در این منطقه افزایش می‌دهند، در جذب گردشگر نیز بسیار موثر است.

کلیدواژه: نوروز دریا، قشم، آیین، خلیج فارس.

I. Introduction

In general, the beliefs, traditions, and customs of the Persian Gulf coast dwellers have transformed over the years. But at the same time, they have not lost their essence and the original form of the ceremony has been preserved in some rituals. Various factors have influenced the formation, change, and continuity of these rituals. The Persian Gulf has also been a meeting place of cultures and beliefs of different nations throughout history, which sometimes reached the coast through the sea or, on the contrary, were transported from ports and coasts to distant places. The ancient sailors of the Persian Gulf and its islands, who traveled to distant seas, i.e. the coasts of India, Africa, Indonesia (Java), and China, carried the customs of their lands with them. In addition, they spread the culture of other lands on the shores of the Persian Gulf (Bahadori, 2013). As a result, the culture and folklore of the people of the Persian Gulf coasts have undergone transformations and changes over time. This historical process shows the effect of maritime trade activities on the formation of customs. The Nowruz Darya ceremony is one of the rituals that have been held in the Persian Gulf countries for a long time.

The fishermen of the southern region of the country, like other Iranian tribes, have their own calendar and chronology, and it is based on this calendar that the custom of Fishing Nowruz or Sea Nowruz is held. Since this ceremony has a strong connection with the chronology and the local calendar of the fishermen of this region, first the chronology of Qeshm will be examined, then the description of this ceremony will be discussed.

II. Methodology

In this research, according to the nature of the subject, the documentary method was used first. The Nowruz Sayadi (Fishing) ceremony was researched using field studies and in-depth methods. In this study, techniques such as interviews, participatory

observation, imaging, sources, and documents were used to collect information. The time of conducting this research was in August 2018, when The Nowruz Sayadi ceremony was held in Selakh Village of Qeshm Island. This is a research project for the Anthropology Research Institute of Cultural Heritage and Tourism Research Institute.

III. The natural location of Qeshm Island

Qeshm Island has a long hot season and a short mild season. The winter season in this region is short and mild and most of the rains occur in this season. The climate of Qeshm Island is hot and humid like other islands of the Persian Gulf and it rarely rains there. The rains in this area are torrential and it rains a lot in a short period. From the second half of the spring season, the air temperature gradually increases as well as the humidity rises due to the long sunlight on the sea level. In August, the humidity and temperature reach their maximum and naturally, life in such conditions is difficult and exhausting. For this reason, many people migrate to other places. The annual rainfall (according to the 1983 report) was about 125.2 millimeters (Blokbashi, 2000: 12).

Figure 1. Map of the villages of Qeshm Island, Google Map, 2024.

IV. Chronology and local calendar of Qeshm fishermen

In addition to the official chronologies that have been popularized in Iran at some point in time according to a specific situation, some chronologies have also been used in various areas depending on geographical, linguistic, or religious factors. There is a special local calendar in Qeshm Island, which is based on their livelihood system (seafaring and fishing). The people of Qeshm divide the year into two periods in terms of weather.

a) Cold period that includes the months of December, January, February, and March.

b) Warm period that covers the months of April, May, June, July, August, September, October, and November.

Therefore, the warm period of the year is longer and eight months and the cold period is shorter and four months (Table 1) (Asadian, 1993: 49).

In the local calendar of this island, the year has 365 days, including 36 ten-day sections and 5 remaining days, and divides into four seasons. Three seasons are one hundred days and one season is 65 days. Each of these ten days is called meyhun. Seasons in the local calendar are called Shahrimah, Zemestun, Juvâ, and Heat. The table below shows the local calendar of Qeshm Island.

Table 1. Qeshm local calendar

The names of the seasons	Decimal division	Comparison with today's calendar
Shahrimâ is equal to autumn, which lasts one hundred days.	Ten, twenty, thirty	July 25 to August 23
	Forty, fifty, sixty	August 24 to September 22
	Seventy, Eighty, Ninety	September 23 to October 22
	hundred	October 23 to November 1
Zemestun is equal to winter, which lasts one hundred days.	Ten, twenty, thirty	November 2 to December 1
	Forty, fifty, sixty	December 2 to December 31
	Seventy, Eighty, Ninety	January 1 to January 30
	hundred	January 31 to February 9
Juva (Juvâ) is equal to spring, which lasts one hundred days.	Ten, twenty, thirty	February 10 to March 10
	Forty, fifty, sixty	March 11 to April 10
	Seventy, Eighty, Ninety	April 11 to May 10
	hundred	May 11 to May 20
The heat is equal to summer and its duration is sixty-five days.	Ten, twenty, thirty	May 21 to June 19
	Forty, fifty, sixty	June 22 to July 19
	Sixty-five	July 20 to July 24

At the end of the hot season, which coincides with July 20 (July 21 in a leap year), Nowruz Arbabi or Sayadi (Fishing) begins. "In the past, these five days have been celebrated as Nowruz Arbabi (Falsafi Miab, 2000: 255). This event coincides with the end of the fishing season for "Hoor" and "Shark". The Nowruz Sayadi Day starts from sunrise and lasts until the end of the night. This ceremony has been held on all the beaches of the Qeshm district for a long time (Fig. 1).

V. A historical look at the Nowruz Darya (Sayadi) celebration

Ancient Iranians called the first day of August by the name of Nowruz Darya and made it the day of the beginning of seafaring. They used to celebrate this day, which is the beginning of calm waters, sea spring, and seasonal winds, and they went to the middle of the sea with flowers, plants, and green branches of trees, especially bananas, coconuts, and tropical fruits. After giving thanks to God, who created the sea for them and placed it under their control, they offered flowers, plants, and fruits to God as a vow to the angel of water, sea, and the endless waters of the sea. They barked and rejoiced. According to Iranians, the Persian Sea included the Red Sea, the Persian Sea, the Makran Sea, the Indian Sea, and the China Sea. After a day of happiness, they would return to the ports, islands, and beaches of their place of residence, and the next day, they would start their long sea journeys with great hope for God's grace (Karimi & Shaikh Mohammadi, 2012: 439).

Furthermore, according to Vadadi (2010: 29), Nowruz Darya is a day to celebrate time. The calm day of the sea and the time when fishing, trade, and travel should be started. In Avesta, this day is known as Ameretat. The celebration of Amordadegan is inspired by the role of water, with splashing water in Iran and throwing bananas and coconuts into the water in India and some African coasts. This sea festival has two physical and non-physical dimensions. In the non-physical dimension, it speaks of immortality and passing away, and in the physical dimension, it is the guardian of plants and growths.

Sadid al-Saltaneh also writes (1992: 25-26): The Arab Nowruz or Nowruz Darya, according to which the captains travel by sea, starts on the first day of August. According to the experiences of the captains, the following changes appear in the air these days:

- Sixty days after Nowruz, there will be a storm.
- Eighty days after Nowruz, the Surayya star rises and the Lahimir storm occurs.
- Lahimir storm will end on the 90th day.
- On the 110th day, the weather becomes northerly and winter begins.
- On the 150th day, the weather becomes stormy.
- The 160th to 190th day will be in the midst of winter.
- The 230th day is the first day of the wind.
- On the 260th day, the star Surayya will set.
- The 310th day will be the first day of the storm.
- On the 340th day, the air will turn into a bow.
- The 365th day is the end of the year.

VI. Nowruz Darya

1. Start of the Nowruz Darya Ceremony

On the night of July 20, i.e., the night before the Nowruz Darya celebration, they put water, barley, and

dates in the amount of one pint equal to one-sixth of a Charak [750 grams] in the yard of the house and the open air. Tomorrow morning, they will weigh each one separately. An increase in the weight of each is a sign of its abundance and a decrease in its weight is a sign of its scarcity in that year. As if the weight of water has decreased, it will be a dry year with little rain (Asadian, 2001: 80). Salakh village, the main venue for Nowruz Darya, is known as one of the oldest fishing centers in Qeshm. According to the residents, the name of this village was derived from the word Maslakh, which means a place for skinning. Since Salakh was once a special place for killing huge sharks, which in the local language is called Kolikar, and since several skilled people were needed to catch it, most of the men in the village were employed as fishermen. After the banning of Kolikar fishing to prevent its decline and extinction in the waters of the Persian Gulf, Salakhi men continued to catch smaller fish for a living. Therefore, the sea and fishing are among the priorities of life for these people, and Nowruz Sayadi is a celebration to remember this link between the sea and people. It should be noted that the Nowruz Darya ceremony is also held in other villages of Qeshm, but now the main place of this ceremony is Salakh Village, which also plays a special role in attracting tourists.

2. Rubbing Gelak

On the morning of the start of this ceremony, people take their sheep out of the pen and put red soil or in the local language, Gelak, on the foreheads of their animals. This soil is brought from Hormuz Island and has many uses for the people of the south. Hormoz Island has many mines, the most famous of which is the red clay mine, and this mine has been exploited for many years. This soil has various uses such as making rustproof and red paint (Falsafi Miab, 2000: 19). Fishermen who go to Hormuz Island for fishing, always bring some of this soil for souvenirs and uses such as spices. This red spot indicates the beginning of the ceremony, and they believe that rubbing Gelak on the forehead of animals keeps livestock from disease, and rubbing it on trees and palms makes it produce better crops and sweeter dates. Rubbing Gelak is not only for animals and trees, but this custom is also applied to houses, and people paint the doors of their houses with red soil. Of course, most of them write the word "Ya Allah", believing that halal sustenance will enter their homes. In the belief of the natives of Qeshm, wooden doors also have spirits, so they should be marked with the Gelak. If someone is not literate, they draw a mark like a circle or several lines on the door (Fig. 3). The color red is a sign of renewal and life force, and usually, gods were depicted in red to represent supernatural, sacred, or solar powers. Rubbing Gelak in Nowruz Sayadi signifies the reappearance of the sun and warmth, which also promises the beginning of a new season.

3. Reading Luban

Reciting the Luben prayer for the health of livestock is also one of the traditions of Nowruz Sayadi. Luben means "to close the mouth" in the local language. They close the mouths of the animals that attack the livestock with the reading Luban. On this day, residents who are engaged in raising livestock along with fishing, go to one of the few Nowruz prayer singers with their livestock to recite "Luban" for them. As mentioned, "Luban" is a prayer that increases the blessings of livestock and keeps them safe from disasters. According to them, this supplication is effective only for six hours after the beginning of the fishing year (from morning call to noon call) and after the end of the specified time, the supplication will lose its effect. The one who sings "Luban" for any animal ties a green thread. In the end, the knotted thread, which is the number of animals, is given to the owner of the animals to hide in a hole in the wall and cover it so that no one can find it or untie it. If they pray Luben for several goats and one of them is killed, the Luben prayer for the rest will be invalidated. In each village, only two or three people can recite this prayer. Whenever one of the reciters decides to teach it to another person who is usually younger than himself, after learning the prayer, he will not pray again because according to their beliefs, his prayers will no longer have an effect. This belief has its roots in the totemic tribes to believe in the power of magic and enchantment because it binds the wills together like links of a chain and encourages them to follow a single idea.

In addition to Luben, which is sung in Nowruz Sayadi and is known as the annual Luban, there is also daily Luban. If an animal is lost in the desert, to find it, they go to the reciter of the Luban prayer, and he recites the Luben prayer. This is the daily Luban. They believe that the animal will be found safe after reading Luban's prayer. Luban prayer is a prayer that is recited together with some surahs from the Holy Quran. The prayer that is recited is as follows:

O Shah Sultani, O Owais Qarani, for myself and my benefit, I tied the tail of this goat or sheep in the color of ... (the color of the animal that is lost and the general characteristics of the animal are mentioned). According to the decree of Almighty God and Prophet Muhammad peace be upon him, no dog or predator should tear or eat it. Then Surahs Shams, Falaq, Tawheed, and Hamd are recited.

4. Washing the body with seawater

People believe that in Nowruz, all the springs of mineral water pour into the sea, so on this day they go to the sea and immerse themselves in the water to wash off their illness with mineral water. On this day, children sit their elderly parents down in the sea and pour water on their heads and clothes with the intention of healing. Everyone wears colorful and new clothes, and to get rid of the oldness, everyone puts the old clothes into the seawater. The people of this island believe that Nowruz is the day of the birth of fishes and the fertility of the sea, so no boat goes to the sea. If someone goes, he will not catch fish. No one eats fish or any seafood on this day. After washing their bodies, people return home to perform Razif and Shushi performances in the cool evening (Fig. 2).

5. The Razif Ceremony

The poems they read in Razif are full of mention and praise of God and Naat of the Holy Prophet (PBUH). During the performance of the ceremony, Razif's group is placed in two rows. All the people are wearing Dashtasha. The band is present in the middle of the square. The members of the music group include two drummers, one Kasser player, four circle players, and two Shalenj players. First, one of the drummers starts the beautiful and expressive poem of Razif in Swahili-Arabic language, then they sing two groups of poems in order. Two standing groups, each group of about 20 people, each holding bamboos. The form of their movements is such that the left hand of each person is wrapped around the waist of the next person and in their right hand is a bamboo. Along with the rhythm of the song being played, they move their bamboos forward and above their heads. The duration of the Razif ceremony lasts from the afternoon to the evening. Razif's poems are in the form of questions and answers or debates, which are read in different languages, including Farsi with the dialect of Bandari, Swahili, and Arabic. The theme of these poems is sometimes the bitter and sweet story of one year of sailing a boat from the beginning to the end of the journey, which is performed in three separate forms called "Ezva", "Harbi" and "Liva". Ezwa is special for joys and it is sung when pulling the nets full of fish on the boat. Harbi is performed when the sailors have survived the stormy sea and come out of the war with the sea. Liva, the third part of Razif, was originally one of the famous games of the southern people, which was performed on the beach and next to the boats. The Razif ceremony has been performed at weddings (Fig. 4).

6. Shushi

On this day, a ritual and traditional show called "Shushi" is also performed. When Razif's music is playing, two people wearing black clothes and their faces whitened with flour enter with a mat hat and a beard made of palm leaves (Seys Mogh) (Fig. 5). At first, the black-clad people walk among the people, stunned and unaware, as if they don't like the instrument. Suddenly, they attack people while screaming. With two branches of palm leaves (Pish Mogh) along with beating the people, they try to collect the instrument and drum, but the fleeing crowd continues to play the drum. Whoever does not run away, the Shushis will hit him with a palm leaf branch, even if he is one of the musicians. The congregation runs away with their instruments and songs. The white-clad people get hit by the black-clad people but they don't stop playing. Calming the Shushis is one of the necessary parts of this ceremony, which is usually done by one of the elders of the ceremony. The fishermen say that they are Shushi and came from behind the mountain. They woke up from the noise of the celebration and came to see what happened. Of course, the actors of this show are neither ignorant nor come from behind the mountain. They are local fishermen and natives of the same area. Usually, the prelude music of Shushis is performed with reed Jafti and drum. Some say that Shushi is a word with Arabic roots meaning to confuse. Some others say the word Shushi comes from "Shavash" or "Shabash" of the wedding. Shushi in the local language means louse, which means someone very dirty. Since the Shushis try to wear torn clothes and disheveled appearance, this term is not meaningless. Gradually, the heads and heads of the next roles of this ceremony are found. A small camel with a camel rider, coming from behind the crowd, reaches the beach and goes towards the sea, ignoring the people and noises. The role of the camel is played by two men together. The front one holds the animal's head and neck, and the rear one holds the legs. They put a board on their shoulders to make the body of a camel look real (Fig. 6). The Shushis do not attack it. A seagull appears behind the two-person caravan, whose camel and camel rider are young people from the village. It opens and closes its long beak and goes to the beach. The black-clad men, the camel and camel rider, the boy, and the seagull are the members of the show.

Good powers such as cows and camels are considered sacred animals and receive their power from this religious sanctity. These two animals are considered to be among the first created animals because they easily satisfy people's needs. Besides, in the agricultural life of different religions, there are many myths about cows, including Vedic myths that consider cows equal to women (Bahar, 1997: 131) and ancient Indo-European myths.

Figure 1. Beginning of Nowruz Sayadi ceremony, Jila Moshiri, 2018.

Figure 2. Washing in the sea, Jila Moshiri, 2018.

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Figure 3. Rubbing Gelak on the door, Jila Moshiri, 2018.

Figure 4. Reading Razif, Jila Moshiri, 2018.

Figure 5. Shushi ceremony, Jila Moshiri, 2018.

VII. Conclusion

Many of the customs and rites that have been remembered from the past and are popular today on the shores of the Persian Gulf, and the things that are said about the secrets of the sea, undoubtedly have their roots in the maritime culture of Iranians. Investigating and studying the traditions and customs related to sea life shows the importance, longevity, durability, and beauty of the sea culture of Iranians. As it belongs to tradition and immutable structures, the ritual of Nowruz Sayadi also strengthens national identity and social solidarity. In this article, the Nowruz ritual of fishermen in Qeshm was investigated and its performance rituals such as holding the Shushi ritual, reading Luban, rubbing Gelak, and reading Razif were studied. Each of these rituals is a representation of ancient rituals and myths. For example, in the Shushi ceremony, besides Shushi itself, there are other elements such as cow, fox, camel, camel rider, and seagull. As the fox has been the symbol of evil in most myths, the cow and the camel have been the symbols of good. Behind every ritual action, there is a meaning, a purpose, and a function. Nowruz Sayadi is full of meaning and these meanings cause order in the social structure. Basically, mystery is a part of the action of rituals, which in addition to the art and beauty it gives, with the role it plays in society, also causes its own life and cohesion. Holding a palm tree branch in the hands of Shushi symbolizes the thinking of a farmer. In ancient society, the farmer's harvest was connected with the life of plants and seeds. Over the ages, this mental

perception has been transformed into a myth and manifested in the form of the myth of the death of a plant god and his re-emergence or resurrection. Plant life depends on burying the seed under the soil, and if the seed does not bury (disappear), it will not be resurrected or reborn. This objective experience of the farming communities of ancient times, which was obtained from agriculture, has also influenced their worldview (Mishiri, 2020, 54).

The Nowruz Sayadi ritual is a long-standing ritual in which three types of totems can be seen before the Shushi ceremony. First, rubbing Gelak on animals, palms, and houses; Second, Reading Luban for animals; And third, washing with seawater. Rubbing Gelak in Nowruz Sayadi means reimagining the sun and heat, which promises the beginning of a new season. This act is a symbol of the passing of the winter season and entering the summer season, and among ritual myths, it has a social value equal to rebirth and another season. Reading Luban by mentioning prayers and supplications is an act to protect domestic animals and plants from predators and pests because the speech has a certain rhythm or weight. For this reason, it has legendary power (Ansari Nasab, 2020, 70-71). Washing and purification have a special place in all religions. The ritual of holy washing took place in the cult of the great goddesses of fertility (Eliade, 2010, 195). In recent years, the Nowruz Darya ceremony, due to its attractions, has played an effective role in attracting tourists, even when this island is almost empty of tourists due to the hot and humid weather. This role can be very effective for investment and policy in attracting tourists, especially cultural tourists.

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