



Achaemenid Period Ceramic Typology from the Ramhormoz Plain in Southwest Iran: Eastern Anatolia, Southern Mesopotamia Relations

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Submitted: 22.09.2023

Revision Requested: 04.10.2023

Last Revision Received: 11.10.2023

Accepted: 14.10.2023

Citation: Afshar, L., Afshari, S., & Omrani, B. (2023). Achaemenid period ceramic typology from the ramhormoz plain in Southwest Iran: Eastern Anatolia, Southern Mesopotamia relations. *Anadolu Arařtırmaları-Anatolian Research*, 29, 67–94. <https://doi.org/10.26650/anar.2023.29.1364956>

ABSTRACT

The Ramhormoz Plain and large portions of its northern piedmont are part of modern-day Khuzestan province. A season-long survey was conducted in this region in 2020. During this survey, cultural artifacts were identified and recorded at 36 sites from the Achaemenid period. This identification was based on the pottery seen on the surface. The identification of Achaemenid settlements in the Ramhormoz plain was made possible by taking into account the local pottery of Khuzistan reported from the Tappeh Darough. This study both describes the types of pottery from the Achaemenid period as well as introduces various settlements of this period. Two of the most diagnostic vessel forms of the Achaemenid period in the Ramhormoz collection are carinated bowls and jars with everted rims. Most of the pottery discovered is local, but the overall study of the Achaemenid pottery of the Ramhormoz Plain shows the limited influence of the pottery tradition of the Persians and of northwestern Iran. Pottery traditions of eastern Anatolia and southern Mesopotamia can only be identified to a limited extent in the Ramhormoz Plain.

Keywords: Southwest Iran, Khuzestan, Ramhormoz Plain, Achaemenid Period, Ceramic Tradition, Settlement

Introduction

The Ramhormoz Plain is one of the least investigated regions in southwestern Iran. Even in its brevity, the results of the 1969 Wright-Carter survey (Wright & Carter 2003, pp. 61-82) showed that the Ramhormoz region is promising in shedding light on the relationship between the highlands and lowlands of southwest Iran. (Alizadeh 2014, pp. 230). The Ramhormoz region and large portions of its northern piedmont are part of the modern-day Khuzestan province (Alizadeh 2014, pp. 3).

The intensive production of pottery for everyday use, its exportability, and its use in the transportation of trade goods make it the best cultural material for understanding ethnic groups and communities, and pottery plays an important role in communication between regional cultures (Majidzade 1991, pp. 4). One of the essentials of a methodical study of Achaemenid pottery is to focus on understanding the pottery traditions of indigenous societies. The focus of Achaemenid material culture studies on royal artifacts has long hindered the study of rural and indigenous communities in the region. This process also weakened targeted research aimed at recognizing non-royal pottery traditions. Today, archaeological research has accelerated efforts to fill this gap in the Achaemenid geography, as in other regions.

The recognition of the Achaemenid period pottery in the Ramhormoz Plain is based on the archaeological survey of the Tappeh Darougeh. Tappeh Darougeh is located in the southwestern region of Iran, to the west of the Mianab Shushtar Plain and near the Karun River. The survey of Tappeh Darougeh yielded remains from the Achaemenid, post-Achaemenid (Atayi 2006) and Seleucid-Parth periods (Khosrowzadeh & Ali 2006).

The Ramhormoz region did not attract archaeological attention until the late 1948s. Archaeological research in this plain began with surveys and excavations by Donald McCown (McCown 1954, pp. 56-67). In the 1960s, archaeological excavations began at Tol-e Bormi, one of the most important Elamite settlements in the region (Alizadeh 2014, pp. 230). Later, in 1969, a series of regional scientific surveys were conducted by Henry Wright and Elizabeth Carter (Wright & Carter 2003, pp. 61-82). In 2006, Lily Niakan of the Archaeological Research Institute and Abbas Alizadeh of the Chicago Institute of Oriental Studies conducted more extensive archaeological research on this plain (Niakan & Alizadeh 2007). Later, between 2007 and 2009, the Ramhormoz Plain was studied further by Loghman Ahmadzadeh and Mehdi Omidfar, the final results of which were published under Alizadeh's supervision (Alizadeh, 2014). The most recent archaeological survey on this plain was conducted in 2020 under the direction of one of the authors of this present study (L. Afshari)¹ (Afshari 2021).

¹ The archaeological survey of the Ramhormoz Plain was carried out for one season in February 2020 under license number 98103611 of the Research Institute of Cultural Heritage & Tourism.

In 2020, an archaeological survey was conducted in the central area of the Ramhormoz Plain, on both sides of the Ala River, in an area of approximately 530 square kilometers. In this survey, 36 Achaemenid settlements were identified. This result is important and significant in the archaeology of the Achaemenid period in southwest Iran and it will change common views about the area. The survey suggests that the settlement pattern in the center of the Ramhormoz Plain was clustered in two areas, northwest and southeast, on both sides of the Ala River. The table below lists basic information for each site (Table 1, Map 1-2).

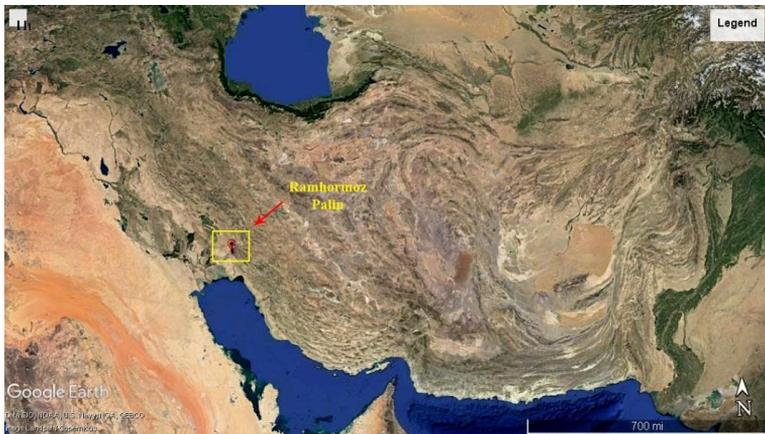
With the end of archaeological research in the Ramhormoz Plain and the analysis of the findings and data from this study, an overview of the distribution of cultural remains and settlements of the Achaemenid period can be provided.

The distribution of the potsherds identified in our study provides us with a substantial amount of data on the character and policy of the settlements. First of all, the settlements are located near, or connected to, the Susa-Persepolis trade route. The rich geographical conditions of the plain affected the dynamics of the settlements in the historical period. The archaeological studies conducted under the direction of Ismail Yaghmaei (Yaghmaei 2016, pp. 4), which were important in the identification of the remains of settlements on the Susa-Persepolis Royal Road, revealed the nature of this settlement policy. Examples of similar settlements include Tol-e Ishan Gazo, Tappeh Mehr Al-Nesa and Tappeh Kheyr Al-Nesa. The settlements are located at short distances from each other along the route of the Royal Road. This shows that the road was decisive in the settlement concept in the region. These settlements provided economic relations with the caravans passing along the Royal Road. This led to the economic progress and prosperity of the plain. In other words, the most important factor that brought the Ramhormoz Plain into prominence during the Achaemenid period was its location on the Susa-Persepolis Royal Road.

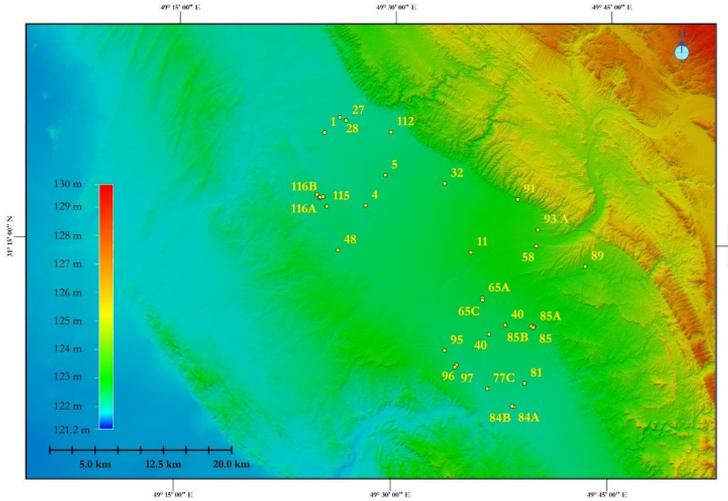
Table 1: Achaemenid Period settlements in the Ramhormoz Plain

No	Settlement Name	Settlement Code	Elevation (above sea level)	Area (ha)	Geographic Reference: UTM Zone
1	Tol-e Geser	RH001	55 m	12.8	E 34 96 48 N 34 70 416
2	Tol -e Quvileh	RH 004	350 m	8.6	E 35 41 54 N 34 62 351
3	Tol-e Ishan Gazo	RH 005	243 m	3.6	E 35 63 25 N 34 65 691
4	Tol-e Bormi	RH 011	158 m	18	E 36 57 37 N 34 57 164
5	Char Peer	RH024	103 m	15	E 34 94 02 N 34 64 276
6	Tappeh Ariz Ahmadi	RH027	68 m	1.6	E 35 20 01 N 34 71 733
7	Tappeh Cham Rejy or Cham Hendevehaneh	RH028	77 m	1.6	E 35 13 30 N 34 72 098
8	Tol -e Abbas	RH032	136 m	2.3	E 36 28 67 N 34 64 791
9	Tol -e Mava	RH040	126m	0.9	E 36 95 23 N 34 49 099
10	Tol -e Mokhtari	RH045	90 m	1.7	E 34 87 89 N 34 63 559
11	Tappeh Qaravol	RH048	96 m	1.3	E 35 10 97 N 34 57 411
12	Jobaji	RH058	215 m	62.2	E 37 29 45 N 34 57 852

13	Tappeh Mehr Al-Nesa	RH065 A	123m	1.1	E 36 69 98 N 34 52 083
14	Tappeh Kheyr Al-Nesa	RH065 C	131m	1.4	E 36 70 04 N 34 51 856
15	Tol-e Ishan Seyyed Shebeiyb or Tol-e Toppi	RH071	120 m	2.6	E 36 55 71 N 34 46 874
16	Tol -e Gapo Cham	RH077C	87m	3.6	E 36 75 34 N 34 42 087
17	Tappeh Ishan Embrij or Tappeh Selsebil	RH081	90 m	2.1	E 37 16 27 N 34 42 667
18	Tol -e Gobeir A	RH084 A	98 m	8.7	E 37 02 54 N 34 40 124
19	Tol -e Gobeir B	RH084 B	84 m	0.2	E 37 04 32 N 34 40 067
20	Tol -e Rigi (Tol-e Suz)	RH085	154 m	3.8	E 37 2591 N 34 48 843
21	Tol -e Rigi A	RH085 A	138 m	3.7	E 37 26 84 N 34 48 946
22	Tol -e Rigi B	RH085 B	143 m	0.7	E 37 23 76 N 34 48 973
23	Qale Sefid	RH086	208 m	10.2	E 37 48 63 N 34 54 951
24	Ab Mahak/ Abshar Mahak	RH089	237 m	1.8	E 37 83 23 N 34 55 596
25	Pacheh Kuh	RH091	193 m	1.4	E 37 08 81 N 34 63 031
26	Tol -e Gur Piyazi	RH093 A	223 m	1.4	E 37 31 15 N 34 59 678
27	Char Taqi/ Char Taq	RH093 B	231m	1.1	E 37 33 51 N 34 59 645
28	Ein Korreh	RH095	103 m	10.2	E 36 28 40 N34 46 298
29	Tappeh Bulaibul	RH096	109 m	0.5	E 36 41 61 N 34 44 679
30	Tappeh Dimeh Sadat	RH097	99 m	4.1	E 36 39 87 N 34 44 468
31	Tol-e Kayd	RH104	96 m	0.6	E 36 63 71 N 34 59 444
32	Shifeh	RH112	89 m	0.4	E 35 69 42 N 34 70 474
33	Tol -e Mentar	RH115	92 m	5.6	E 34 98 86 N 34 62 254
34	Tol -e Kaviri	RH116 A	97 m	1.8	E 34 90 89 N 34 63 212
35	Tol-e Karami B	RH116 B	97 m	1.1	E 34 91 68 N 34 63 270
36	Tol -e Karami C	RH116 C	97 m	0.4	E 34 94 83 N 34 63 330



Map 1: Location of the Ramhormoz Plain (Google earth.com)



Map 2: Distribution of Achaemenid period settlements in the Ramhormoz Plain (Afshari 2020)

Achaemenid pottery from the Ramhormoz Plain

In order to analyze the pottery of the Achaemenid period, we first classified the items in terms of form. At this stage, comparative studies were carried out to date the pottery. According to the research, the pottery traditions of the Achaemenid period continued until some time after the end of this period.

Thus, it is important to note that the material and settlements presented in this paper could potentially span the period from the Achaemenid period to a century later.

After the relative certainty of dating the pottery to the Achaemenid period, the types in the collection were dated. The Achaemenid pottery from the Ramhormoz Plain can be divided into five different types: 1- Common ware, 2- Light green slipware, 3- Red slipware 4- Eggshell ware 5 - Painted ware. The pottery is also divided into 5 different groups in terms of form: 1- Carinated bowls 2- Bowls with simple rims 3- Jugs 4- Short necked jars 5- Storage jars.

Pottery Typology and Classification

Light green slip ware

The thick light green slip on the exterior and interior surfaces of the vessel is the most distinctive feature of this ware group. Only one example shows the use of a light green slip on the outer surface and a red slip on the inner surface. The paste color of the light green

slip ware, which occurs in coarse, medium or fine versions, is predominantly orange and brown, and to a lesser extent orange-brown, buff and gray. The paste is tempered with fine, medium and coarse grit, sand, white particles (lime?) and chaff fragments. All of the sherds in the light green ware group were fired at high temperatures. Although most of the sherds are wheel-made, a few examples were hand-shaped. In terms of green coating, there is a similarity between this type of ceramic and the ceramics from the Tappeh Darougeh in the Mianab Shushtar Plain. This type is typical of local ceramics made in the Ramhormoz Plain (Atayi 2006, pp. 143-164).

Red slip ware

The most prominent feature of the red ware group is its red surface color. In terms of paste inclusions and firing characteristics, the majority of red ware items are composed of medium ware with fine and medium inclusions which were fired at high temperatures. The medium samples of the red ware group have predominantly orange and to a lesser extent camel and light brown paste colors. The medium and fine ware is tempered with grit, sand and white particles (lime?). All of the pottery in the red ware group was fired at high temperatures. The paste color of the medium ware of this group is predominantly orange with buff and brown tones to a lesser extent. The clay of the fine ware is better levigated than the coarse ware and is tempered with fine grit and sand. All fine and medium specimens of the red ware group are covered with red slip. Most specimens of this ware are wheel-made. However, some sherds were found to be hand-made.

Common ware

The sherds belonging to this group have a predominantly orange paste, but to a lesser extent brown, gray and buff colors as well. The paste is well levigated, medium to fine, tempered with grit, sand, white particles (lime?) and chaff. All pottery fragments in the non-slip plain ware group were fired at high temperatures. Some of the samples show color variations on the exterior and interior surfaces due to firing; mostly orange, light brown, gray and buff are quite dominant. Most of the sherds belonging to this group are wheel-made but a few were made by hand and most of them are of medium quality. The exterior surface of the sherds belonging to this group is decorated with horizontal bands or stepped decoration. Some specimens of the common ware bear incised and or applique decoration (Figure 1).



Figure 1: Motifs of the decorated non-slip ware group (Afshari 2020)

Eggshell ware

Eggshell ware accounts for 1% of the pottery types found on the Ramhormoz Plain. Only two sherds of this pottery were recovered from two sites. One of these sherds belongs to a carinated bowl with an everted rim and was recovered from Mehr al-Nesa settlement; the other is a fragment of a simple bowl with a simple rim and was recovered from Ishan Seyyed Shebeyb or Tol-e Toppi settlement. This type of thin-walled eggshell pottery is mostly found in Southern Mesopotamia (for this type in Southern Mesopotamia see Fleming 1989).

Painted ware

This group of ware was found on the surface of a handful of settlements. The painted sherds are tempered with fine grit and sand. The paste color is predominantly orange and buff and all sherds are well-fired. The painted pottery is wheel-made and fine in quality. The motifs are usually found on the exterior surface. The motif repertoire consists of geometric and thin horizontal bands. On the monochrome-painted sherds, the motifs are painted in red in parallel lines on the rim or body. In some examples, geometric motifs are painted on light green slip. Tol-e Karami B, Tol-e Mava and Tol-e Suz or Tol-e Rigi provided this pottery (Figure 2).

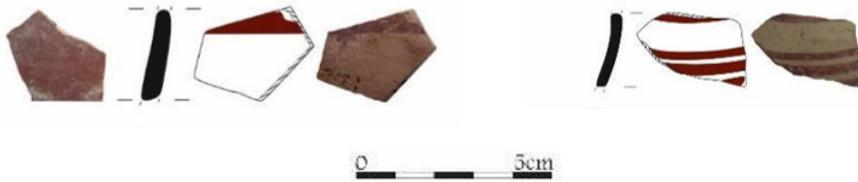


Figure 2: Painted ceramics recovered from the Ramhormoz Plain (Afshari 2020)

Forms of Achaemenid pottery from the Ramhormoz Plain

Carinated Bowls or S-Carinated Bowls

A significant portion of the vessels from the Ramhormoz Plain are bowls, which are discussed here together with their subtypes. Of all the ceramics recovered from the Ramhormoz Plain settlements attributed to the Achaemenid period, it can be said that the S-carinated bowl was the most widespread throughout the Achaemenid Empire.

Visual images of these bowls can be seen in the reliefs of the eastern staircase of the Apadana at Persepolis (Schmidt 1963, Loh 32). Although this type of bowl was produced to a limited extent in other cultural periods, by the middle of the 1st millennium BC it was clearly distinguished from other examples from other periods by its paste color, additives, firing temperature and exterior characteristics (Farjami 2022, pp. 59).

A bowl with a carinated body and an everted rim from Tappeh Mehr Al-Nesa (Plate 1, no. 1) is similar to bowls from the Choghamish site in Iran (Delougaz & Kantor 1996, Plate 74, no. A) and from the Karakoyunlu Kale II settlement (Özfirat 2019, Figure 10, no. 11). Of special note is a bowl (Plate 1, No. 2) with an inverted rim and a carinated body. Parallel examples of this bowl were recovered from Level I of Kultepe Hadishar in Iran (Abedi et al 2014, Fig 59, no. 1) and from Tetikom in Eastern Anatolia (Senyürt & Ekmen 2005, Type 1.8., no. 1).

Another example of the Achaemenid pottery culture is a sherd from the Tol-e Gapo Cham settlement with a carinated body and a flared rim (Plate 1, no. 3). Similar examples have not been reported from other sites.

A bowl with a thickened rim from Cham Reji (Plate 1, No. 4) is similar to one from the royal city of Susa II, level 5A in Southwest Iran (de Miroschedji 1987, Figure 8, no. 11).

A bowl from the Tol-e Abbas site with a slightly inverted rim and a carinated body (Plate 1, no. 5) is similar to examples found in the Mianab Shushtar Plain in southwestern Iran

(Atayi 2006, Fig. 13, no. 22), as well as at Saz Tape (Cimin Tape II) in eastern Anatolia (Summers 1993, Fig. 9, no. 8). Other samples of pottery from the period include another sherd with an everted rim from Tol-e Abbas (Plate 1, no. 6). Parallel sherds to this come from a survey conducted on the Mianab Shushtar Plain (Atayi 2006, Fig. 13, no. 13, Fig. 14, no. 8). They also come from the Choghamish site (Delougaz & Kantor 1996, Plate 74, no. I) and from excavations carried out at Tetikom in Eastern Anatolia (Şenyürt & Ekmen 2005, Type 1.20., 8) as well as from the Choghamish settlement (Delougaz & Kantor 1996, Plate 74, no. I), from the excavations conducted at Tetikom in Eastern Anatolia (Şenyürt & Ekmen 2005, Type 1.20., no. 7), from level III of Karagündüz Höyük (YiğitPaşa 2016, Plate 18, no. 1) and from level II B of Sös Höyük (Kalkan 2008, Plate I, no. 2).

A bowl sherd, similar to the bowl sherd from Tol-e Rigi or Tol-e Suz with a carinated body and everted rim (Plate 1, No. 7) was recovered from the Tetikom excavations (Şenyürt & Ekmen 2005, Type 1. 20: 11). Similar bowls to the one with a carinated body from the Jobaji site (Plate 1, no. 8) (Plate 1, no. 8) were found at Tol-e Nurabad in the Fars region of Iran, in phase B5a (Weeks et al 2009, Fig 3.132, no. TNP 2215) and at the Karagündüz Höyük dating to the Late Iron Age/Achaemenid period in Eastern Anatolia (Kalkan 2013, Abb 5, no. 13,25).

This ceramic form has been found in most of the settlements of the Achaemenid Empire, and its distribution in the east and west of the empire appears to have been uniform and to have been influenced by both indigenous and local influences.

Bowls with a simple rim

Similar to the bowl with a simple rim from Tol-e Ishan Seyyed Shebeiyb or Tol-e Toppi (plate 2, no. 1) are those found in level 4 of the royal city of Susa II (de Miroschedji 1987, Figure 10, no. 1) and among the ceramics from the Saz Tape surveys (Işıklı & Özdemir 2019, Figure 1, no. m).

These bowl types are among the common forms of bowls found both in southwestern Iran and in Eastern Anatolia.

Similar to the bowl with an everted rim from the Char Taqi/Char Taq site (Plate 2, no. 2) are the ones recovered from the royal city of Susa II, level 5A (de Miroschedji 1987, Fig 7, no. 15) and from the Karakoyunlu fortress II in Eastern Anatolia (Özfirat 2019, Fig 10, no. 12).

Another bowl with an inverted rim and a globular body from Tappeh Mehr Al-Nesa (Plate 2, no. 3) is similar to the one recovered from Persepolis in Iran (Atayi 2004, Loh-e 31, no 8) and to the one from Zivistan (Lower Elmalık) in Eastern Anatolia (Kalkan 2008, Plate, ZİV-I, no 10).

A sherd bowl with a simple rim from Tappeh Mehr Al-Nesa (plate 2, no. 4) is similar to one found in the Mianab Shushtar Plain in southwestern Iran (Atayi 2006, Fig. 15, no. 20).

A similar bowl with an inverted rim (plate 2, no. 5) was also found in the excavations at the Persepolis fortification (Atayi 2004, Loh-e 13, no. 13).

Within this group of samples, mention should be made of the bowl with an inverted rim (Plate 2, No. 6) from Tol-e Quvileh. Similar bowls of this form were recovered from level 3 of Karagündüz Höyük (Kalkan 2008, levha KGH XXXI, no. 2) and from the excavations at Tetikom (Şenyürt & Ekmen 2005: Type 2. 13., no. 10).

Similar bowls with simple rims (Plate 2, No. 7) were recovered from Karakoyunlu Kale II (Özfirat 2019, Fig. 10, no. 1) and from İmikuşağı levels 5b-a (YiğitPaşa 2016, Plate 6, no. 3).

Similar examples of the bowl with a simple rim from Ein Korreh (Plate 2, no. 8) were also found at Tappeh Darougeh Level 5 (Atayi 2006, Figure 136, no. 10, 13) in Iran and at phase B5a of Tol-e Nurabad (Weeks, et al 2009, Fig 3.132, no. TNP 2246) in the Fars Region. Other similar bowls with a simple rim (Plate 2, no. 9) were recovered from phase B5a at Tol-e Nurabad (Weeks et al 2009, Figure 3.132, no. TNP 2246) and from layer 5 at Tappeh Darougeh (Atayi 2006, Fig. 136, no. 10,13) in Iran.

Jugs

Along with all the Achaemenid ceramic forms from this plain mention should also be made of jugs. A parallel example of a long-necked jug with an everted rim from the Jobaji site (Plate 3, no. 1) was also found at the Tol-e Espid site in the Fars region of Iran. Others were found at phase 12 (Asgari Chaverdi, Petrie & Seyedin 2014, at Tasvire 4.97, no. 499) and at the Van Kalesi mound in Eastern Anatolia as well as from Level Ila-2 (Kaygaz 2002, Plate 63, no. 3; Kalkan 2008, pp. 118).

Similar to the example of a long-necked jug with an inverted rim (Plate 3, No. 2) from Ein Korreh were the ones recovered from the Mianab Shushtar Plain in Iran (Atayi 2006, Figure 18, no. 17) and from the survey at Zivistan (Aşağı Elmalık) in Eastern Anatolia (Kalkan 2008, Plate ZIV-I, no. 4).

Worthy of note is a fragment of a long-necked jug with an inverted rim recovered from the Kheyr Al-Nesa site (Plate 3, no. 3). A similar example of this jug was recovered from level 5 A of the royal city of Susa II (de Miroschedji 1987, Fig 17, no. 2).

The jugs with everted rims found at Tol-e Geser reveal another characteristic form of the Achaemenid Period ceramics. Parallel examples of these thickened long-necked jugs with everted rims (Plate 3, no. 4) were also discovered at the Choghamish archaeological site in Iran (Delougaz & Kantor 1996, Plate 75, no. AA) and at the tombs of Ur in Southern Mesopotamia (Woolley 1962, Plate 51, No. 159b, Plate 42, no. 62).

Mention should also be made of the long-necked jugs with thickened rims recovered from the Tol-e Abbas settlement (Plate 3, no. 5); similar examples have not been reported from other sites.

Another sherd recovered from Shifeh, which has a parallel in Pasargad (Stronach 1978, Fig 106, no. 7), is a jug with an everted rim (Plate 3, no. 6). The fragment of a cup (Plate 3, no. 7) with an exquisitely shaped and everted rim, which has a very important form, is similar to the ones from layer 6 of Tappeh Darougeh (Atayi 2006, Fig. 136, no. 21), from the Choghamish site (Delougaz & Kantor 1996, Plate 75, no. B&C), from Tol-e Takht in Pasargad (Stronach 1978, Fig. 106, no. 2), and from level II of the Achaemenid architectural remains of Nippur in southern Mesopotamia (Gibson 1975, Fig. 49, no. 020127).

The jug with an inverted rim from the Tol-e Mentar site has a long-necked form (Plate 3, No. 8) and its parallel was found at Level 5 A of the royal city of Susa II (de Miroschedji 1987, Figure 17, no. 2).

Short Necked Jars

A storage jar with an everted rim (plate 4, no. 1) was recovered from Tappeh Bulaibul in the Mianab Shushtar Plain in southwestern Iran (Atayi 2006, Figure 17, no. 6). Similar examples to the one with a spherical body and everted rim from the Pacheh kuh site (Plate 4, no. 2) were also found at Level 10 of Tille Höyük (Fuensanta & charvat 2013, Tasvire 6, no. B) and at Level 3 of Karagündüz Höyük (Kalkan 2008, Plate XI, no. 4).

Another example of the spherical body storage jar from Tol-e Bormi (Plate 4, no. 3) with an inverted rim and a spherical body was found at level 2B at Yanik Tape in northwestern Iran (Summers & Burney 2012, Fig 17, no. 27). Similar examples of storage jars with everted rims found at Tol-e Bormi (Plate 4, no. 4) were also found during the excavations of the Persepolis fortification (Atayi 2004, Loh-e 49, no. 12).

Another fragment from the Cham Raji site is a storage jar (Plate 4, no. 5) with an everted rim. A similar example of this storage jar was found in layer 5A of the royal city of Susa II (de Miroschedji 1987, Figure 15, no. 7).

Similar to the sherd with a short neck and an everted rim from Tol-e Gobeir B (Plate 4, no. 6) were those recovered from Saz Tape (Cimin Tape II) (Summers & Burney 2012, Fig 8, no. 7), Karakoyunlu Kale II (Özfırat 2019, Fig. 10, no. 13) and from the tombs of Ur in Mesopotamia (Woolley 1962, Plate 47, no. 118).

Among the other pottery types, the sherd with a flat rim, short neck and spherical body from Tol-e Gobeir B (Plate 4, no. 7), which is a common form in both Iran and Eastern Anatolia, is similar to the sherds found at Saz Tape (Summers & Burney 2012, Fig 8, no. 7), Level

IIB of Sös Höyük, (YigitPaşa 2016: Plate 27, no. 1) and Karakoyunlu Kale II (Özfirat 2019, Fig. 10, no. 10).

Storage Jars

Among all the Achaemenid ceramic forms from the Ramhormoz Plain mention should also be made of storage jars. Of note among these is a thickened storage jar with an inverted rim from the Tol-e Bormi site (Plate 5, no. 1). A similar example was recovered from the Mianab Shushtar Plain in southwestern Iran (Atayi 2006, Figure 17, no. 2). Other examples of this type of vessel are the two storage jars (plate 5, no. 2,3) with inverted rims from the Tol-e Bormi site. Similar examples of these vessels are those found at Dahane Gohlaman (Zehbari, Mehr Afarin & Musavi Haji 2015, Fig 21, No. 41) in southeastern Iran. Another example of these jars has an everted rim and it was found at Tol-e Bormi (Plate 5, no. 4). Parallel examples were recovered from the royal city of Susa II, from level 5 A (de Miroschedji 1987: Figure 17, no. 4) and from the Van KaleMound, level Ila-2 (Kaygaz 2002, Plate 63, No. 2; kalkan 2008, pp. 118). Another sherd, also of a special form and with an inverted rim, was found at the Pacheh Kuh site (plate 5, no. 5), and is similar to the one from level 4 of the royal city of Susa II (de Miroschedji 1987, Figure 8, no. 3).

A similar example to the one with a short neck from the Dimeh Sadat site (Plate 5, no. 6) was found in the Mianab Shushtar Plain (Atayi 2006, Figure 17, no. 6).

Another example of these storage jars is a thickened sherd with an inverted rim from Tappeh Dimeh Sadat (Plate 5, no. 7). The closest parallel of this sherd is reported from layer 7 of Tappeh Darougeh (Atayi 2006, Figure 140, no. 6). A similar storage jar with an inverted rim (Plate 5, no. 8) was also recovered from phase 11 of Tol-e Spid (Asgari Chaverdi et al 2014, Fig. 4-101: TS 340) and from Level II a-2 of the Van Kalesi Mound (Kalkan 2008: Plate VKH-III, No. 6) dating to the Late Iron Age / Achaemenid period in Eastern Anatolia.

Among these, a storage jar with an inverted rim (Plate 5, no. 9) from Tol-e Gobeir A is similar to the finds from the tombs of Ur (Woolley 1962, Plate 44, no. 90).

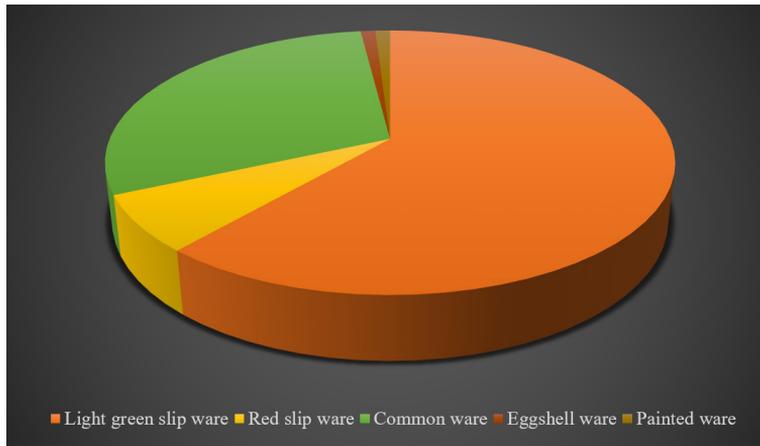
Conclusion

In this paper we have tried to provide at least basic information about the Achaemenid settlements and the pottery of the Ramhormoz Plain. The importance of this research is that it shows that paying attention to local pottery traditions and knowing the local characteristics of each region can increase our archaeological understanding.

The number of settlements indicates that this plain was one of the prosperous regions of Khuzistan during the Achaemenid period. Comparing the number of sites in this plain with Shushtar (23 site) (Moghaddam 2005, pp. 143-164; map 9), with the Khuzestan Plain (23

site) (de Miroschedji 1981: 171, tab. 1, Fig. 56) and with the Patak-Imamzadeh Abbas region (5 site) (de Miroschedji 1981: 174, tab 2, Fig. 60), a significant numerical superiority is evident. Of course, this context should be approached with caution, since there was a period when there was not enough information about local pottery traditions in, for example, the Susiana Plain, Khuzistan (Vanke 2003, pp. 497-562; Figure 74). Therefore, these plains need to be re-examined with new methods and in terms of indigenous species. Of course, this issue is not specific to the Achaemenid period, but should be considered for all cultural periods, especially the historical and Islamic periods.

The Achaemenid pottery from the Ramhormoz Plain can be divided into five different types: 1- Light green slipware 2- Red slip ware 3- Common ware 4- Eggshell ware 5- Painted ware. The pottery is also divided into 5 different groups in terms of form: 1- Carinated bowls 2- Bowls with simple rims 3- Jugs 4- Short necked jars 5- Storage jars. The light green slipware was recovered from the excavations at Tappeh Darougeh and has been identified as the local ware of this region (Atayi 2006, pp. 477-496). Most of these vessels were produced for daily use. The decorations used on the surface of the ceramics are embossed parallel horizontal bands or fingerprinting. 61% of the Achaemenid ceramics of the Ramhormoz Plain are light green slip ware and 7% are red slip ware. Painted wares with horizontal parallel lines account for only 1% (Graph 1). Among the Achaemenid ceramic forms of the Ramhormoz Plain, we can mention the bowls with an everted rim and carinated body (S-Carinated), which is one of the characteristic forms of the Late Iron Age and the Achaemenid period. The study shows that the regional pottery of the Achaemenid period is similar to that of Khuzistan, Fars and to some extent the northwestern region of Iran. The comparisons also show that the pottery of this period was not entirely local and was influenced by neighboring regions such as Eastern Anatolia and Southern Mesopotamia; however, some of this pottery was also entirely local and not influenced by other regions. Regarding the technique of manufacture and the tempering agent, the red slip ware collections of the Ramhormoz survey are different from those of the eastern Anatolian sites, but they are similar to those found at Jubaji in the Ramhormoz plain, which date to the Neo-Elamite period (Shishegar 2015). In terms of form, they are, however, comparable to the Late Iron Age /Achaemenid pottery of eastern Anatolia (Şenyurt, kamiş & Akçay 2011). Therefore, we may conclude that, despite the long distance between these two regions, the tradition of making such pottery vessels was initiated in eastern Anatolia and then reached the Ramhormoz plain via the Royal Road. Moreover, since eggshell ware is mostly found in Southern Mesopotamia, it was probably imported from this region to the Ramhormoz Plain.



Graph 1: Percentages of Achaemenid Period Ware Groups Found in the Ramhormoz Plain

Peer-review: Externally peer-reviewed.

Author Contributions: Conception/Design of Study- L.A., S.A., B.O.; Data Acquisition- L.A., S.A., B.O.; Data Analysis/ Interpretation- L.A., S.A., B.O.; Drafting Manuscript- L.A., S.A., B.O.; Critical Revision of Manuscript- L.A., S.A., B.O.; Final Approval and Accountability- L.A., S.A., B.O.

Conflict of Interest: The authors have no conflict of interest to declare.

Grant Support: The authors declared that this study has received no financial support.

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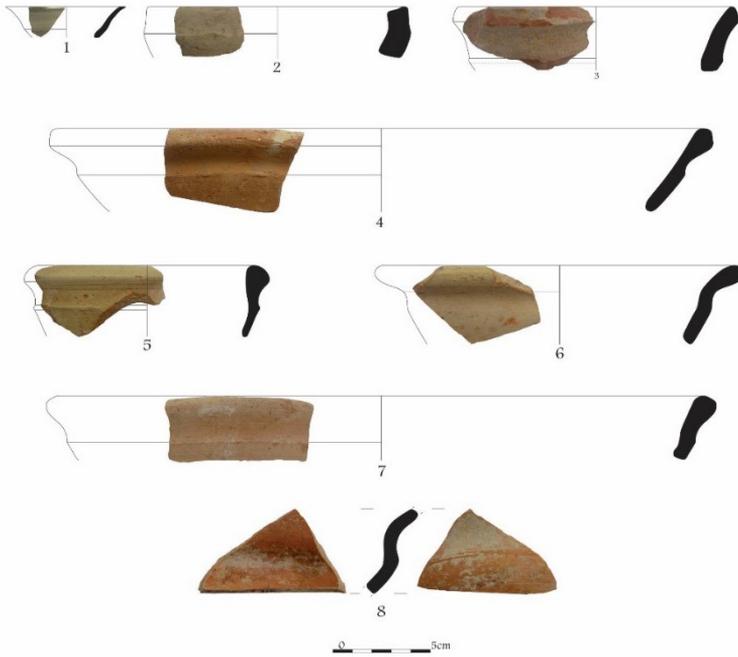


Plate 1: Achaemenid carinated bowls from the Ramhormoz Plain

Plate 1: Technical characteristics of the Achaemenid Carinated bowls from the Ramhormoz Plain

No.	Settlement Code	Settlement Name	Form	Manufacture	Interior Color	Exterior Color	Paste Color	Firing	Temper	Surface treatment		Quality		Decorations	Parallels
										Interior Surface	Exterior Surface	Interior	Exterior		
1	065A	Tappeth Mehr Al Nesa	Carinated Bowl	Wheel-made	Buff	Buff	Buff	adequate	Grit, sand	-	-	fine	fine	-	Delongaz, Kantor 1996: Plate 74, No. A., Senyurt, Kamus ve Akcey 2005: Tip 6.3., No. 193, Özlirat 2019: Resim 10, No. II Abedi et al 2014: Fig 59, No. 1, Senyurt, Ekmen 2005: Tip 1.8., No. 1
2	065A	Tappeth Mehr Al Nesa	Carinated Bowl	Wheel-made	Buff	Buff	Buff	adequate	Grit, sand	-	-	medium	medium	-	-
3	077C	Tol-e-Grapu Cham	Carinated Bowl	Wheel-made	Light green	Light green	Orange	adequate	Grit, sand	Slipped	Slipped	medium	medium	-	-
4	028	Cham Rejy	Carinated Bowl	Wheel-made	Light green	Light green	Orange	adequate	Grit, sand, white particles, chaff	Slipped	Slipped	medium	medium	-	Kalkan 2008: levha I, No. 2
5	032	Tol-e-Abbas	Carinated Bowl	Wheel-made	Light green	Light green	Orange	adequate	Grit, sand	Slipped	Slipped	medium	medium	-	Atayî 2006: Sekle 13, No. 22, Summers 1993: Fig 9, No. 8)
6	032	Tol-e-Abbas	Carinated Bowl	Wheel-made	Light green	Light green	Orange	adequate	Grit, sand	Slipped	Slipped	medium	medium	-	Atayî 2006: Sekle 13, No. 13, Sekle 14, No. 8, Delongaz, Kantor 1996: Plate 74, No. 1, Senyurt, Ekmen 2005: Tip 1.20., No. 7, YigitPaşa 2016: levha 18, No. 1, Kalkan 2008: levha I, No. 2
7	085	Tol-e Rigi	Carinated Bowl	Wheel-made	Light green	Light green	Orange	adequate	Grit, sand, chaff	Slipped	Slipped	medium	medium	-	Weeks et al 2009: Fig 3.132, No. TNP 2215, Kalkan 2013: Abb 5, No. 13,25
8	058	Jobaji	Carinated Bowl	Wheel-made	Red	Red	Dark buff	adequate	Grit, sand	Slipped	Slipped	fine	fine	-	-

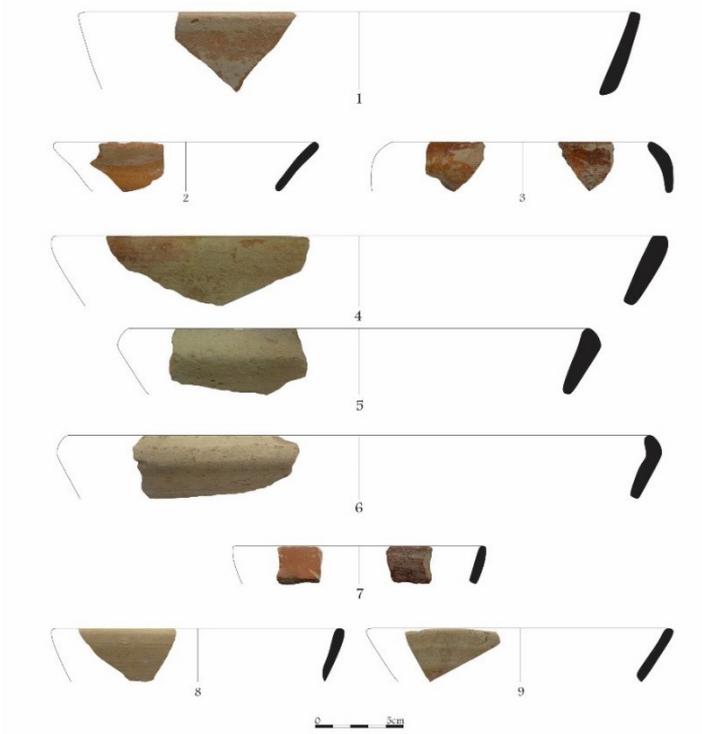


Plate 2: Achaemenid bowls with simple rim from the Ramhormoz Plain

Plate 2: Technical characteristics of Achaemenid bowls with simple rims from the Ramhormoz Plain

No.	Settlement/Code	Form	Manufacture	Interior Color	Exterior Color	Paste Color	Firing	Temper	Surface treatment		Quality		Decorations	Parallels	
									Interior Surface	Exterior Surface	Interior	Exterior			
1	071	Tol-e Toppl	Simple Bowl	Wheel-made	Light green	Light green	Orange brown	adequate	Grit, sand	Slipped	Slipped	medium	medium	-	de Miroschedji 1987: Figure 10, No. 1, Işık, Özdemir 2019: Figür 1, No. m
2	093 B	Char taghi	Simple Bowl	Wheel-made	Orange	Light green	Orange	adequate	Grit, sand, white particles	-	Slipped	medium	medium	-	Özfrat 2019: Resim 10, No. 12
3	065A	Tappch Mehr A1 Nesa	Simple Bowl	Wheel-made	Red	Red	Orange	adequate	Grit, sand	Slipped	Slipped	medium	medium	-	Atayı 2004: Loh-e 31, No. 8, Kalkan 2008: levha, L, No. 10
4	065A	Tappch Mehr A1 Nesa	Simple Bowl	Wheel-made	Light green	Light green	Orange	adequate	Grit, sand, white particles	Slipped	Slipped	medium	medium	-	Atayı 2006: Şekle 15, No. 20
5	065A	Tappch Mehr A1 Nesa	Simple Bowl	Wheel-made	Light green	Light green	Orange	adequate	Grit, sand	Slipped	Slipped	medium	medium	-	Atayı 2004: , Loh-e 13, No. 13
6	004	Tol-e Quvileh	Simple Bowl	Wheel-made	Orange	Light green	Orange	adequate	Grit, sand, white particles	-	Slipped	medium	medium	-	Kalkan 2008: levha XXXI, No. 2 Şenyurt, Ekmen 2005: Tip 2.13., No. 10
7	116 B	Tol-e Karami B	Simple Bowl	Wheel-made	Reddish brown	brown	Orange grey	adequate	Grit, sand	Slipped	Slipped	fine	fine	-	Özfrat 2019: Resim. 10, No. 1, YığıtPaşa 2016: levha 6, No. 3
8	095	Ein Korreh	Simple Bowl	Wheel-made	Orange	Light green	Orange	adequate	Grit, sand	-	Slipped	medium	medium	-	Atayı 2006: Şekle 136, No. 10, 13, (Weeks, et al 2009: Fig 3.132, No. TNP 2246),
9	095	Ein Korreh	Simple Bowl	Wheel-made	Orange	Light green	Orange	adequate	Grit, sand, white particles	-	Slipped	medium	medium	-	Weeks et al 2009, Figure 3.132, no. TNP 2246, Atayı 2006, Şekle 136, No. 10, 13,

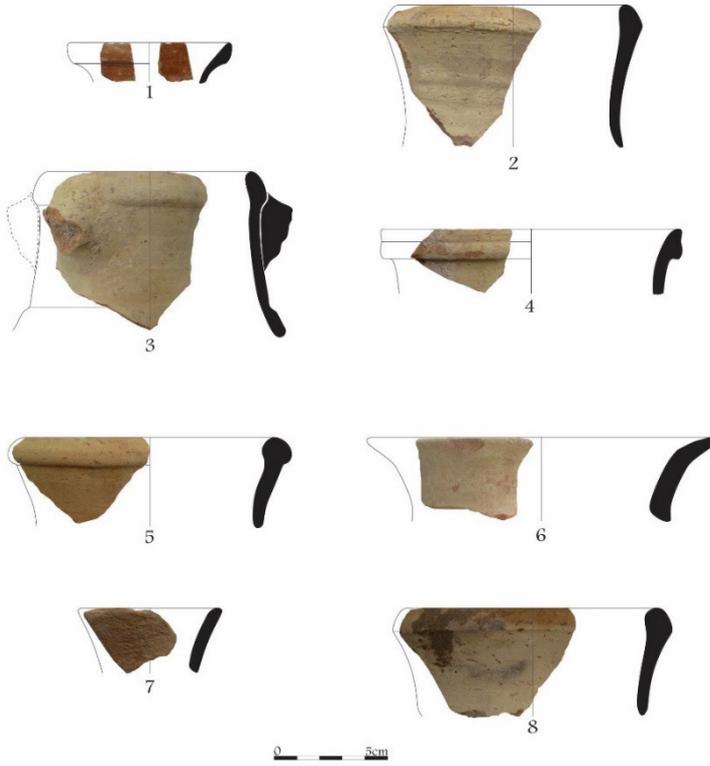


Plate 3: Achaemenid jugs from the Ramhormoz Plain

Plate 3: Technical characteristics of Achaemenid jugs from the Ramhormoz Plain

No.	Settlement Code	Settlement Name	Form	Manufacture	Interior Color	Exterior Color	Paste Color	Firing	Temper	Surface treatment		Quality		Decorations	Parallels
										Interior Surface	Exterior Surface	Interior	Exterior		
1	058	Jobaji	Jug	Wheel-made	Red	Red	Buff	adequate	Grit, sand	Slipped	Slipped	fine	fine	-	Asgari Chaverdi, Perie , Seyedin 2014; Tasvire 4,97, No. 499, Kaygez 2002: levha 63, No. 3
2	095	Ein Korreh	Jug	Wheel-made	Orange	Light green	Orange	adequate	Grit, sand, chaff	-	Slipped	medium	medium	-	Atayi 2006: Sekle 18, No. 17, Kalkan 2008: levha I, No.4
3	065 C	Tappeh Kheyr Al Nesa	Jug	Wheel-made and hand-made	Orange	Light green	Orange	adequate	Grit, sand	-	Slipped	medium	medium	-	de Miroshedji 1987: Fig 17, No. 2
4	001	Tol-e Geser	Jug	Wheel-made	Light green	Light green	Orange	adequate	Grit, sand, chaff	Slipped	Slipped	medium	medium	-	Delougez , Kantor 1996: Plate 75, No. AA, Woolley 1962: Plate 51, No. 159b, Plate 42, No.62
5	032	Tol-e Abbas	Jug	Wheel-made	Light green	Light green	Orange	adequate	Grit, sand	Slipped	Slipped	medium	medium	-	-
6	112	Shifch	Jug	Wheel-made	Light green	Light green	Orange	adequate	Grit, sand	Slipped	Slipped	medium	medium	-	Stronach 1978: Fig 106, No. 7
7	112	Shifch	Jug	Wheel-made	Brown	Brown	Brown	adequate	Grit, sand, white particles , shiny particles	-	-	medium	medium	-	Atayi 2006: Sekl-e 136, No. 21, Delougez , Kantor 1996: Plate 75, No. B&C, Stronach 1978: Fig 106, No. 2, Gibson 1975: Fig. 49, No. 020127
8	115	Tol-e Mentar	Jug	Wheel-made	Brown	Light green	Brown	adequate	Grit, sand, chaff	-	Slipped	medium	medium	-	de Miroshedji 1987: Figure 17, No. 2

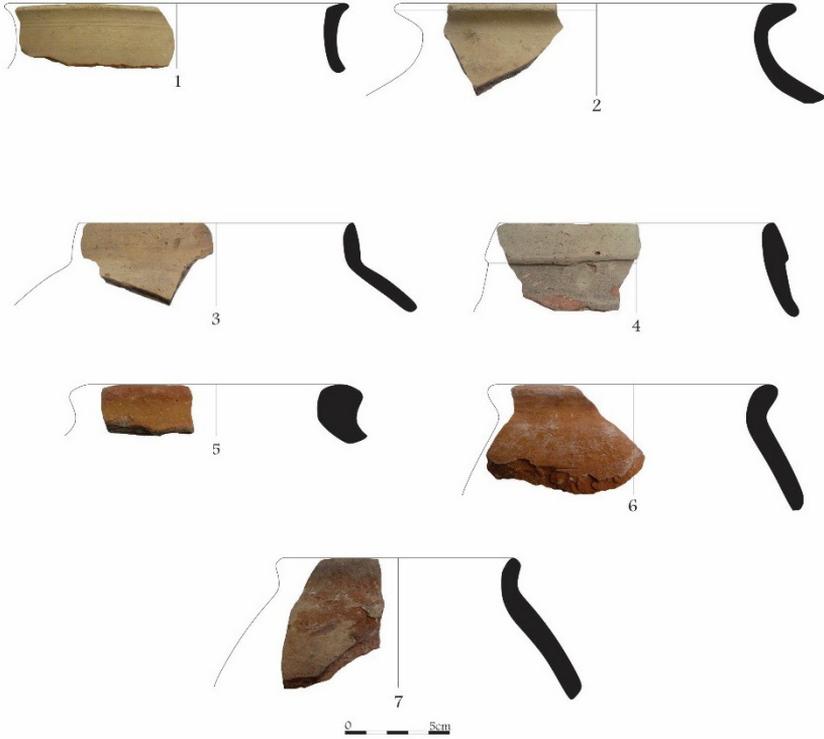


Plate 4: Achaemenid short-necked jars from the Ramhormoz Plain

Plate 4: Technical characteristics of Achaemenid short-necked jars from the Ramhormoz Plain

No.	Settlement Code	Settlement Name	Form	Manufacture	Interior Color	Exterior Color	Paste Color	Firing	Temper	Surface treatment		Quality		Decorations	Parallels
										Interior Surface	Exterior Surface	Interior	Exterior		
1	096	Bulabul	short-necked jar	Wheel-made	Orange	Light green	Orange	adequate	Grit, sand	-	slipped	medium	medium	-	Atayi 2006: Şekle 17, No. 6
2	091	Pacheh kuh	short-necked jar	Wheel-made	Light green	Light green	Orange	adequate	Grit, sand, chaff	slipped	slipped	medium	medium	-	Fuensanta, charvat 2013: Tasvire 6, No. B Kalkan 2008: levha XI, No. 4
3	011	Tol-e Borimi	short-necked jar	Wheel-made	Light green	Light green	Dark gray	adequate	Grit, sand, white particles	Slipped	Slipped	medium	medium	-	Summers, Burney 2012: Fig 17, No. 27
4	011	Tol-e Borimi	short-necked jar	Wheel-made	Light green	Light green	Orange	adequate	Grit, sand, chaff	Slipped	Slipped	medium	medium	-	Atayi 2004: Lohe 49, No. 12
5	028	Cham Reyj	short-necked jar	Wheel-made	Orange	Orange	Orange	adequate	Grit, sand, white particles	-	-	medium	medium	-	de Miroschedji 1987: Figure 15, No. 7
6	084 B	Tol-e Gobeir	short-necked jar	Wheel-made	Dark orange	Dark orange	Dark orange	adequate	Grit, sand, white particles	-	-	medium	medium	-	Summers, Burney 2012: Fig 8, No. 7, Ozfrat 2019: Resim. 10, No. 13, Woolley 1962: Plate 47, No. 118
7	084 B	Tol-e Gobeir	short-necked jar	Wheel-made	Dark orange	Light green	Dark orange	adequate	Grit, sand, white particles	-	slipped	medium	medium	-	Summers, Burney 2012: Fig 8, No. 7, YigitPaşa 2016: levha 27, No. 1, Ozfrat 2019: Resim. 10, No. 10

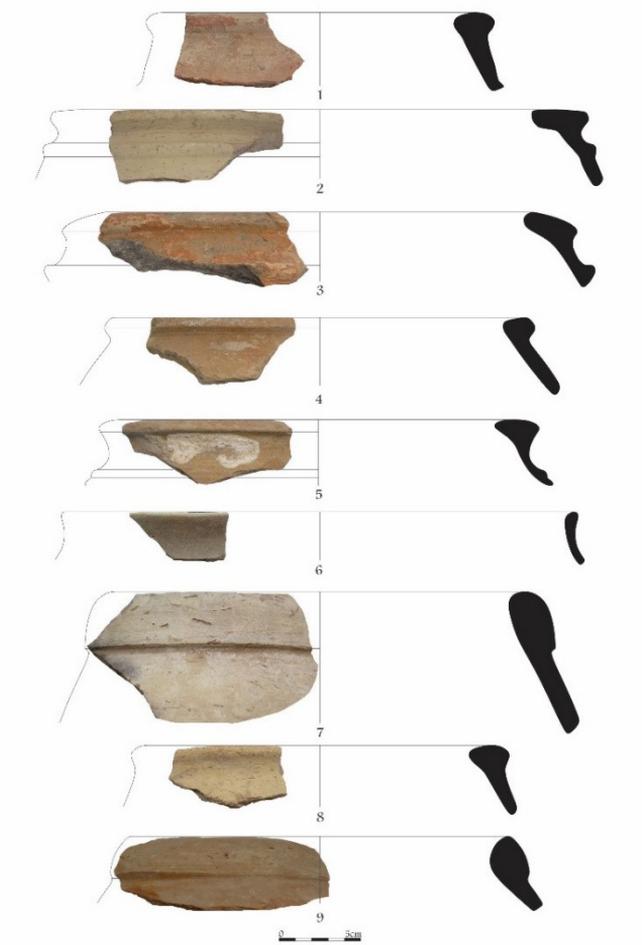


Plate 5: Achaemenid storage jars from the Ramhormoz Plain

Plate 5: Technical characteristics of Achaemenid storage jars from the Ramhormoz Plain

No	Referenses	Settlement Name	Form	Manufacture	Interior Color	Exterior Color	Paste Color	Firing	Temper	Surface treatment		Quality		Decorations	Parallels
										Interior Surface	Exterior Surface	Interior	Exterior		
1	011	Tol-e Borini	storage jar	Wheel-made	Light green	Light green	Dark orange	adequate	Grit, sand, white particles	Slipped	Slipped	medium	medium	-	Atayi 2006: Sekle 17, No. 2
2	011	Tol-e Borini	storage jar	Wheel-made	Light green	Light green	Light brown	adequate	Grit, sand, chaff	Slipped	Slipped	medium	medium	Applique decoration on the exterior	Zehbari, Mehr Afarin, Musavi Haji 2015: Fig 21, No. 41
3	011	Tol-e Borini	storage jar	Wheel-made	Dark gray	Light green	Dark gray	adequate	Grit, sand, white particles	-	Slipped	medium	medium	-	Zehbari, Mehr Afarin, Musavi Haji 2015: Fig 21, No. 41
4	011	Tol-e Borini	storage jar	Wheel-made	Light green	Light green	Brown	adequate	Grit, sand, white particles	Slipped	Slipped	medium	medium	-	de Miroschedji 1987: Figure 17, No. 4, Kaygaz 2002: levha 63, No. 2
5	091	Pache kuh	storage jar	Wheel-made	Light brown	Light green	Light brown	adequate	Grit, sand, white particles	-	slipped	medium	medium	-	de Miroschedji 1987: Figure 8, No. 3, Atayi 2006: Sekle 17, No. 6
6	097	Dimch Sadat	storage jar	Wheel-made	Gray	Gray	Gray	adequate	Grit, sand	-	-	medium	medium	-	Şenyurt, Kamus, Akçay 2005: Tip 12.1., No. 241
7	097	Dimch Sadat	storage jar	Wheel-made	Brown	Light green	Brown	adequate	Grit, sand	-	Slipped	medium	medium	-	Atayi 2006: Sekle 140, No. 6
8	095	Ein Korreh	storage jar	Wheel-made	Orange	Light green	Orange	adequate	Grit, sand, chaff	-	Slipped	medium	medium	-	Asgar Chaverdi et al 2014, Fig. 4-101: TS 340, Kalkan 2008: levha III, No. 6
9	084 A	Gobeir A	storage jar	Wheel-made	Dark orange	Light green	Dark orange	adequate	Grit, sand	-	Slipped	medium	medium	-	Woolley 1962: Plate 44, No. 90

