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### **A new Achaemenid building-complex in Kerman. Evidence from Mahdiābād-e Oliā (Rigān-Kermān)**

#### *Abstract*

*The present note provides a general overview of the site of Mahdiābād-e Oliā, 250 km SE of the city of Kerman, discussing objects exposed by the flood in 2017 as well as its architectural remains, with special attention to a complex that includes a square structure, inviting comparison with Achaemenid palaces.*

#### *Keywords*

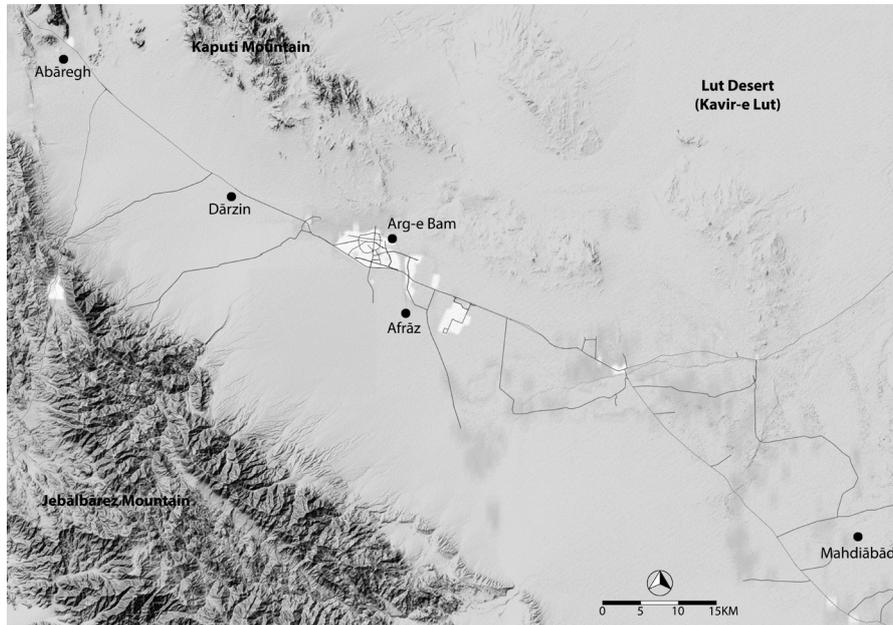
*Mahdiābād-e Oliā, Rigān county, building-complex, Achaemenid period*

### **Introduction**

Over a decade of archaeological fieldwork in the context of the Bam Cultural Landscape project launched after the tragic earthquake of December 26 2003, a number of sites of Achaemenid date were discovered, including Abāreq, Dārzin, Arg-e Bam and Afrāz, established in or shortly before the Achaemenid period and subsequently transformed into urban centers of the region. The site of Mahdiābād is another such settlement (Fig. 1).

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**Fig. 1.** Map displaying the main Achaemenid settlements in the Bam Cultural Landscape.



**Fig. 2.** Aerial photograph of the site of Mahdiābād with the village in the background, seen from the southwest (Photo: A. Eghra, Summer, 2018).



Rigān county, formerly part of Bam county, is in the eastern part Kerman Province in Southeastern Iran. Its central town, Mohammadābād, is about 250 km southeast of Kerman. This is a semi-arid region with little annual precipitation, limited cultivable land, high temperature, extensive wild floral coverage, especially tamarisk. Where water is available it is used to irrigate date palms. Sand, winds and floods often threaten and sometimes destroy houses, agricultural lands, gardens and roads in the county.

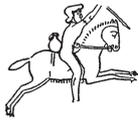
## The Archaeological Site of Mahdiābād

The site of Mahdiābād (N 28 45.526 E 59 02.169), is located between the two villages of Mahdiābād-e Oliā (to the NE) and Shahābābād (to the SW), at an altitude of 615 m above seal level. The region around the site, to the radius of 15 km, has not yet yielded evidence for pre-Achaemenid occupation, but there is ample evidence from the Sasanid and Islamic periods.

In February 2017, a flash flood washed away a vast area next to the village of Mahdiābād-e Oliā, 250 km SE of the city of Kerman, and exposed some archaeological remains, including intact pots. The authors were dispatched by the ICAR (Iranian Center for Archaeological Research) to inspect the site (Atayi & Zare' 2015/1395). Later, in the Summer of 2017 the study of the site continued within the project of "Archaeological Survey of Rigān and Fahraj Region" (Zare' 2018/1397).

Dispersal of pottery can be observed in an area of about 90 hectares throughout the site. Like other large archaeological sites in eastern Kerman, the evolution of human occupation over time has been horizontal, as for other major sites in eastern Iran, and not vertical by superimposing archaeological levels gradually forming a tell/tepe (Fig. 2). Other sites of this type discovered by archaeological surveys in the Bam Cultural Landscape, include Abāreq, Dārzīn, Bidarān and Afrāz (Atayi & Zare' 2012/1391, 2014/1393; Zare' & Atayi 2008/1387; 2012/1391, 2014/1393). Considering the whole Kerman province, the archaeological remains of the Achaemenid period are scanty apart from this Bam area, probably due to lack of survey. Kerman province was occupied and active in that period as demonstrated by the Persepolis tablets (Henkelman 2017, 49-54). The corresponding sites remain to be located and identified.

Mahdiābād extends along the both northern and southern banks of a seasonal stream. A *qanāt* chain runs through the center of the northern part of the site. To the south a natural stream flows seasonally from west to east. Since the area sloping



from north to south a large part of the southern side of the site has been washed out and destroyed by flooding.

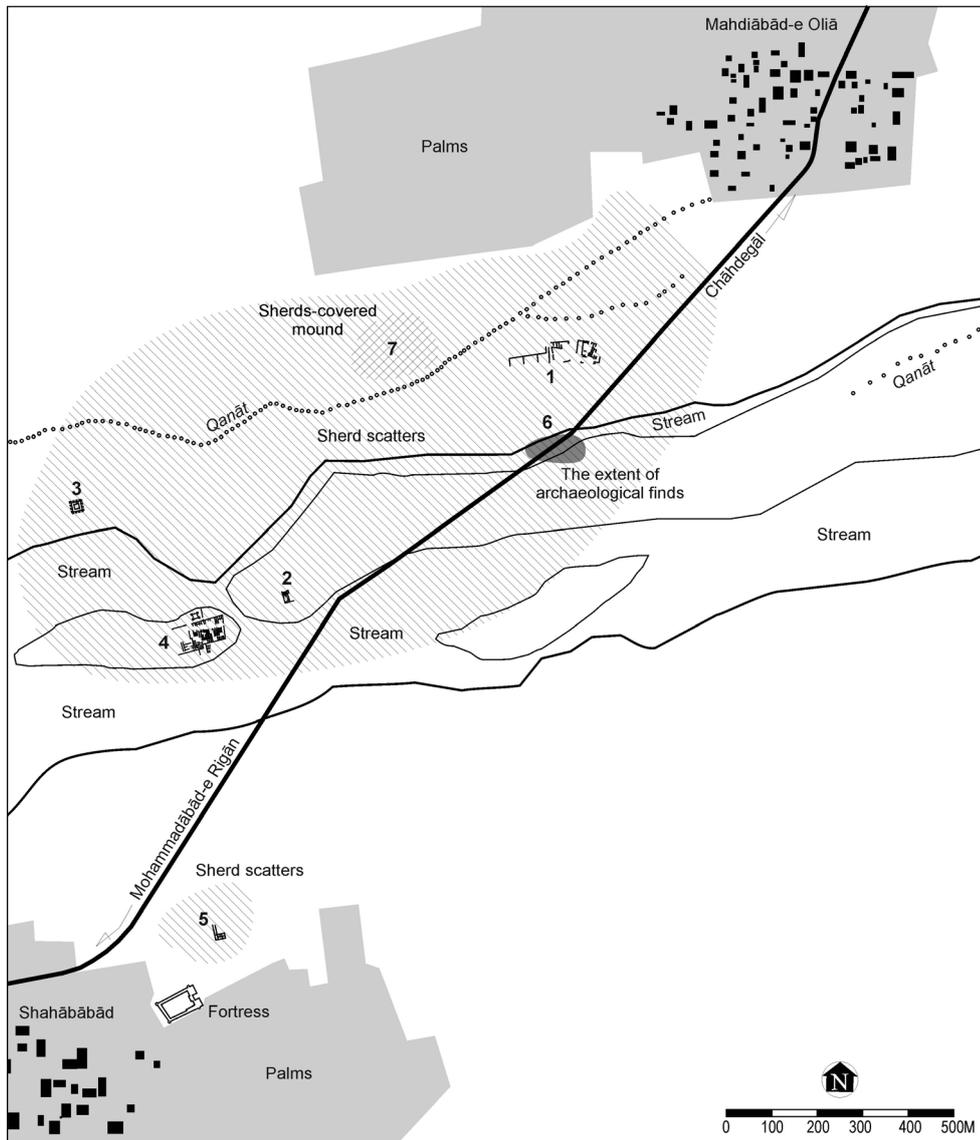
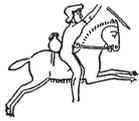
At the center of the northern part of the site sits a large mound (Point 7 on Fig. 3) to the height of about 2 meters. Pottery sherd distribution on its surface is significantly denser than on other parts of the site.

Some parts of the site survive as 'islands' in the broad stream bed, with visible traces of large mudbrick structures on their surfaces. Pot-sherds are distributed over an area of about 85 ha. Another area, 300 m to the southwest of the main site, adjacent to date palm fields of the Shahābābād village, and close to a late Islamic mudbrick fort, also yielded sherds similar to those from the main site (Fig. 3).

The area badly damaged by recent flooding, where most ancient objects have been found, is in the center of the western side of the site, on both banks of the main stream. Here, an asphalt road running through the bed of the stream goes from Mahdiābāb-e Rigān to Chāhdegāl. Following the recent flooding, the surface of the site in the area marked by grey on Figure 3 (point 6), covering an area of about 2 ha, was washed to a depth of about 50 to 100 cm exposing more intact pots on the surface. On the basis of the photos taken of the site shortly after the flooding, it seems that the distribution of complete pots followed a distinct pattern, with groups clustered within rectangular spaces of 70 × 70 to 70 × 100 cm.<sup>3</sup> The remaining filling was composed of a mixture of sand and clay some 10-20cm thick. In some cases, the interior surfaces of these spaces were burnt and turned grey in color (Fig. 4). Since no excavations have been carried out, we don't know whether the floor of the space had traces of firing or not, nor we know how these spaces were filled.

The pots have a common paste with sand temper, i.e., buff or reddish buff in color, are wheel-made and well-fired. The pottery vessels seem to have a wide range of forms, including jugs, jars, spouted vessels and large, medium and small bowls. Most of the vessels are plain, but some shoulders and rims were decorated with incised wavy lines. Two marks, presumably potters' marks, can be seen on two vessels. In addition to pottery, some pieces of metal were discovered, including heavy bronze rings, 8-10 cm in diameter and 2.5 cm thick (Fig. 5).

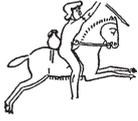
**3** We were told that these intact potteries were recovered within these rectangular spaces. When we came to the site, these potteries had been removed and transferred to Arg-e Bam. Thus we didn't see these vases in situ.



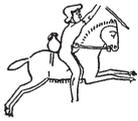
*Fig. 3. Sketch plan of the site of Mahdiābād.*

## Surface Architectural remains

In five points at the site of Mahdiābād, one can see traces of mudbrick walls. At the northeast corner of the site, where the surface is about 1 m higher than at other parts of the site (Point 1 on Fig. 3). Remains of three distinct buildings could be traced. The eastern structure and middle structures are similar, nearly square, about 50 × 40 m, and 45 × 40 m, respectively. The western structure, as far as it is visible on the surface, is rectangular, measuring 80 × 20 m. About 700 m to the south of these buildings, at a



*Fig. 4. Remains of holes in the ground exposed after flash flood; pots (Fig. 4) were usually discovered in holes like this.*



**Fig. 5.** Examples the objects exposed by the flood in January, 2017 from different locations (gray area on Fig. 3) at the site of Mahdiābād.



*Fig. 6. Point 4 on figure 3 traces of archaeological spaces on the surface (top) and some part of the mudbrick wall with mud plaster in the canal section (bottom), (photo Winter, 2017).*



location 70 cm above the surrounding plain, are remains of another building (Point 2 on Fig. 3). The visible part is about 30 x 15m; more is buried under the sand.

At about 450 m to the northwest, the ruins of a rather well built building is visible (Point 3 on Fig. 3). The sand dune in which the building is buried is about 2 m in elevation. Only some poor parts of the walls are visible on the surface. In the satellite photos a rectangular building is identifiable. This building had at least two encased walls. A third outer wall may also have surrounded these two inner walls. The inner square is the about 10 x 10 m and the wall surrounding it is about 19 x 19 m.

## The large architectural complex

At about 350 m to the southeast of this square structure, at the southwest end of the site, several sections of a large building can be discerned (Point 4 on Fig. 3). Here the stream has washed away its banks leaving the traces of this mudbrick building, which is standing as an “island” to a height of about 2 m. A canal running east-west from the northern half of the building has caused severe damage to the building. In the section of this canal traces of a mudbrick wall with mud plaster are clearly visible.

The width and height of the existing walls could not be precisely measured, as they are buried in the sand. In some places, where the modern canal has cut the walls, one can observe they are preserved up to 1 m in height, and their thickness visible in section was at least 70 cm (Fig. 6). The general plan of the building complex is discernable from satellite images. It is composed of two very different parts: to the north a square building with a central room and flanked by corner towers and to the south a large rectangular complex with several rooms. The central hall of the square building measures about 12 x 12 m. It is therefore too large to be roofed without supports, columns or posts. Similarly, the space between the corner towers required similar supports if they were roofed. This is why we propose to restore a hypostyle hall flanked by four porticoes. This hypothesis can only be tested by excavations.<sup>4</sup> Remains of a wall that probably surrounded the square building are visible on its eastern side.

Behind this very likely four-porticoed building, there is a large architectural complex about 120 x 60 m in dimensions (Fig. 8 top). Only parts of the walls were visible during our visit and the majority of the remains were buried under sand. In

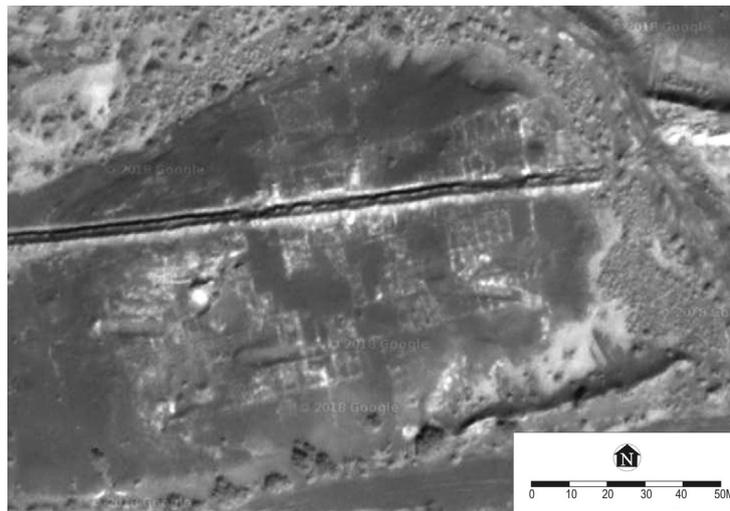
<sup>4</sup> A comparable restitution has been suggested for the rectangular building with four corner towers of Dahan-i Gholaman (Mohammadkhani 2014, 9).



the 2018 survey the structure was still largely buried. The totality of the structure was, however, visible only in the satellite image (Fig. 7) used as the basis for building our sketch plan (Fig. 8; top).

The overall arrangement of this complex (covering a surface of ca. 0,8 hectare) – the combination of a four porticoed hall and the structures behind it – is reminiscent of the palace-complex of Darius the Great at Susa which is much larger however, covering ca. 5 ha (Fig. 8 below). From this area, some potsherds characteristic of the Achaemenid period have been found (Fig. 9).

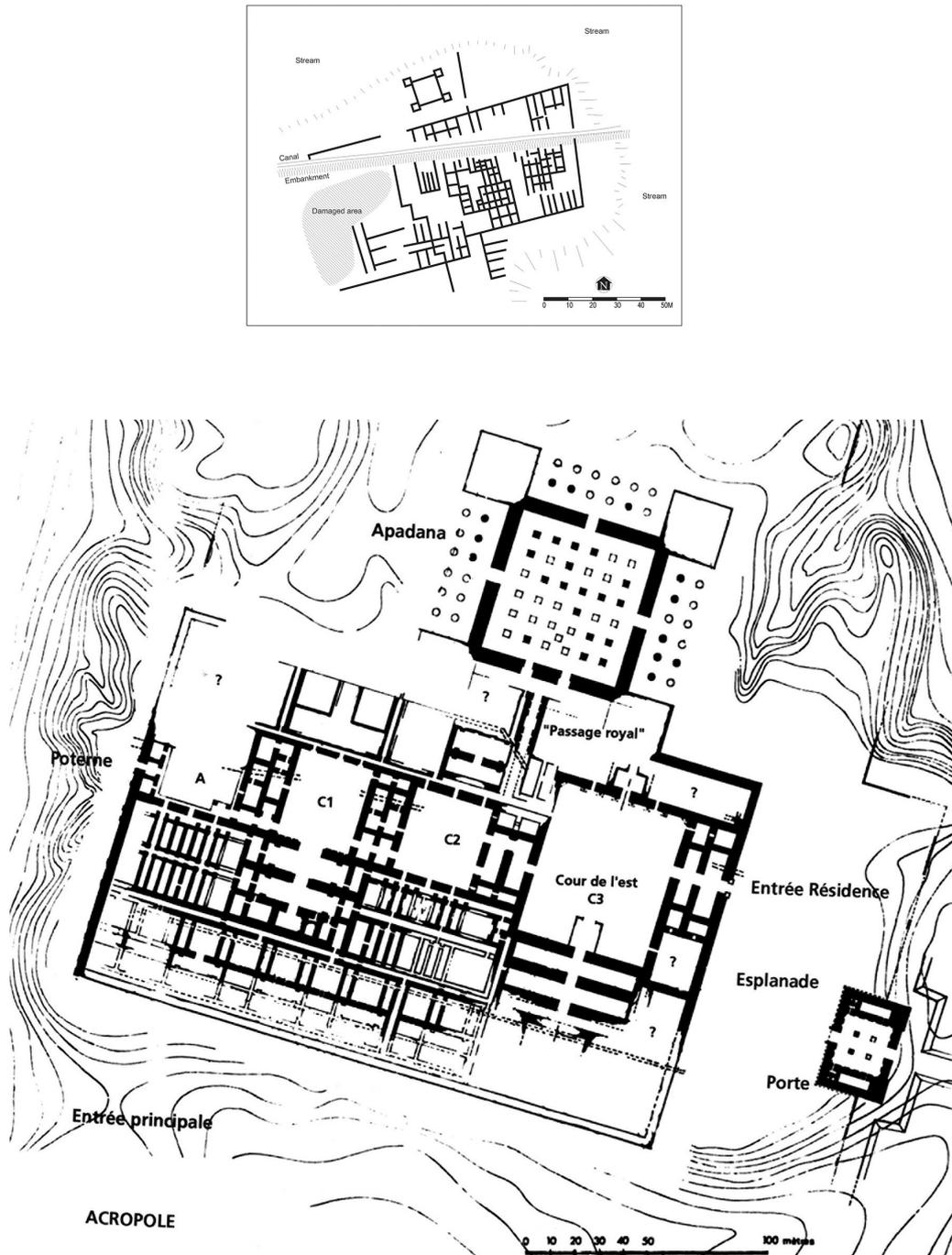
About 450 m to the south, far from the main site, where there is little potsherd distribution, there is another protrusion (Point 5 on Fig. 3). This protrusion, however, could not be identified as an architectural remain, for agricultural activities at this area has obliterated the archaeological remains.



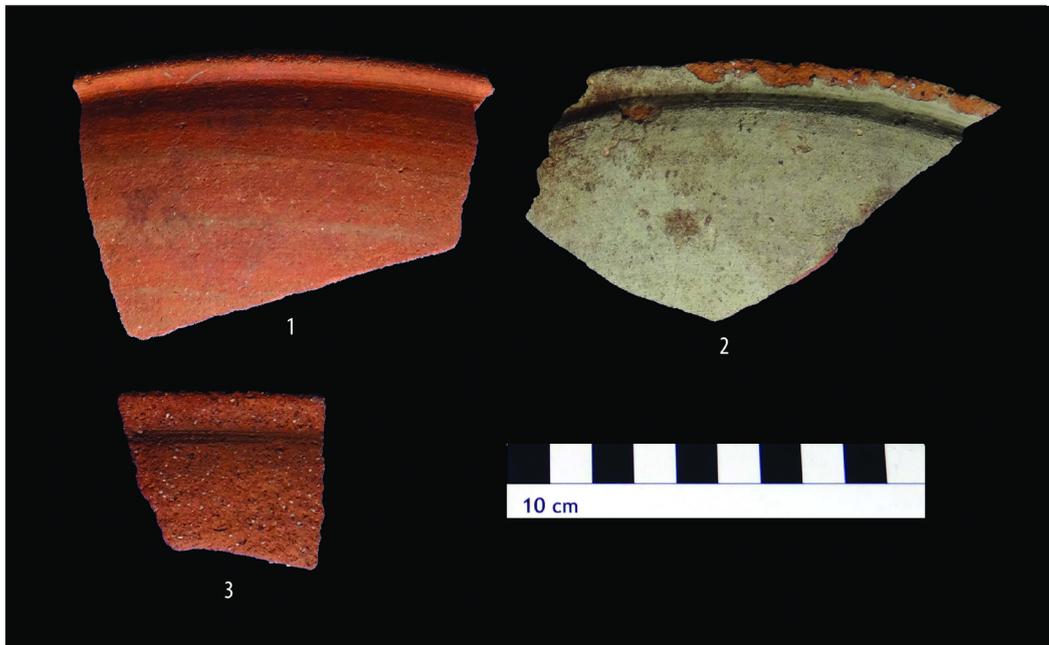
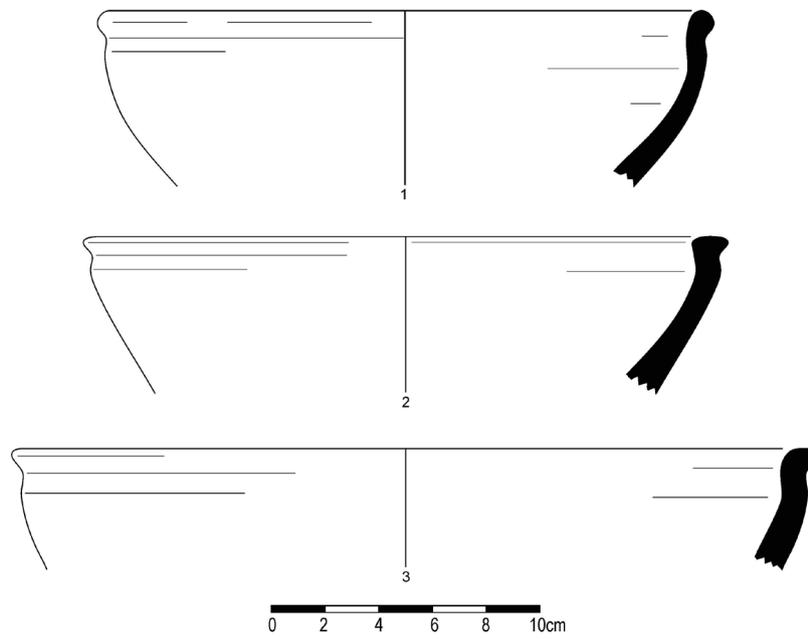
*Fig. 7. The site of Mahdiābād; Satellite image of Site no. 4 (Google Earth 2016).*

## Chronology

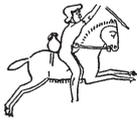
The pots exposed by chance in the flooded area are comparable to pots from the Seleucid/Parthian layers of the “South Fort” in the site of Afrāz (Atayi, 2006/1385; Atayi & Zare’ 2012/1391, 2014/1393). Most of the surface sherds are datable to this time span as well. So it could be said that a great part of the site was occupied during the Seleucid/Parthian periods. Achaemenid pottery was concentrated in southwestern end of the site (Point 4), where the Achaemenid type building was discovered therefore pointing to such a date for the architectural complex.



**Fig. 8.** Plan of the architectural spaces of building (Point 4) at the site of Mahdiābād based on satellite image (top); the plan of the Palace of Darius the Great at Susa (Perrot 2010: fig. 252).



*Fig. 9. Diagnostic potsherds from Achaemenid period from the site of Mahdiābād.*



## The Bam Cultural Landscape during the Achaemenid Period

Archaeological surveys in the cultural landscape of Bam were started by the late Chahriyar Adle following Bam 2003 earthquake in order to complete the dossier needed to designate Bam as a UNESCO world heritage site (Adle, 2005). Then in 2005 intensive and extensive archaeological surveys commenced in Bam, Narmāshir, Rigān and Fahraj, under co-direction of Shahram Zare' and Mohammad-Taqi Atayi, within the framework of joint works of the Archaeological Institute and the World Heritage Base of Bam, going on for four seasons so far (see below for references).

These surveys found that most of the large sites of the region, including Arg-e Bam (2015/1393-1394), Afrāz (Atayi, 2006/1385; Atayi & Zare' 2012/1391, 2014/1393), Abāreq (Zare' & Atayi, 2012/1391) and Dārzin (Atayi *et al.*, 2005/1384) had Achaemenid foundations (Fig. 1). Several small sites, including some forts and watchtowers, were also discovered.

Our systematic survey in the site of Afrāz demonstrated that this site covers an area of over 400 ha (Atayi & Zare' 2012/1391, 2014/1393). Furthermore, at the southern side of the site of Afrāz a number of *qanat* chains were discovered, probably among the oldest *qanāts*, dating to the Achaemenid period (investigation is ongoing). With AMS dating of chaff samples from mudbricks from the Arg-e Bam platform to ca. 7<sup>th</sup>-6<sup>th</sup> centuries BCE, it can be argued that the Arg-e Bam citadel was founded prior to the Achaemenid period and continued to be the fortified center of the region in Achaemenid times.

The identification of a likely administrative complex, including a possible four-porticoed palatial building, at Mahdiābād-e Oliā, would add another node to the Achaemenid political geography of the region, calling for further investigation.

Plate 1. The Site of Mahdiābād: Pottery sherds from the Achaemenid Period.

| No. | Description: Ware, Temper, Exterior and Interior Surface Treatment, Made, Decoration, Comment. | Parallels                     |
|-----|--|-------------------------------|
| 1   | Common red ware, mineral, wet-smoothed on both sides, wheel-made, well baked.                  | Atayi 2005/1384, fig. 137: 14 |
| 2   | Common red ware, mineral, buff-green slip on the exterior, wheel-made, well baked.             | Stronach 1978: fig. 111-18    |
| 3   | Common red ware, mineral, buff wash on interior surfaces, wheel-made, well baked.              |                               |



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