# Paleopersepolis 

# Environment, Landscape and Society 

 in Ancient FarsEdited by Silvia Balatti, Hilmar Klinkott and Josef Wiesehöfer

ORIENS ET OCCIDENS
Studien zu antiken Kulturkontakten und ihrem Nachleben |


## Oriens et Occidens

Studien zu antiken Kulturkontakten und ihrem Nachleben

Herausgegeben von
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# Environment, Landscape and Society in Ancient Fars 

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Edited by Silvia Balatti, Hilmar Klinkott and Josef Wiesehöfer

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Umschlagabbildung:
Relief depicting attendants bearing food and drinks, Persepolis Terrace (photo by Silvia Balatti)

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# New Data for an Updated Archaeological Sequence of Pārsa/Persepolis 

ALIREZA ASKARI CHAVERDI

## 1. Introduction

Pārsa/Persepolis, the ancient city located in the province of Fars, south-western Iran, is best known as a showcase of Achaemenid palatial architecture, but recent studies have applied a new approach, with more attention to archaeological investigation of the surrounding urbanism and material culture. The ancient site of Pārsa (plate 1, Fig. 1), according to World Heritage, measures more than 17,000 ha (marked by the red line), with a 6,000 ha buffer zone (marked by the blue line). These extensive areas include several monuments: the royal area includes the elevated terrace (Takht-e Jamshid), which separates into the large-scale, public northern area and the more private southern area. The site of Pārsa also includes three tombs and fortifications on Mount Mehr, above the site. In the plain, we have the sites of Persepolis West, South Persepolis, Takht-e Gohar, Naqsh-e Rostam, and Kuh-e Hossein; the Firuzi area; and the medieval city of Istakhr (plate 2, Fig. 2). This is a complex array of archaeological sites comprising different phases of settlement that, except for Istakhr, were all formed in the Achaemenid period. The recognition of sub-phases within the Achaemenid period is crucial to the analytical understanding of Pārsa. A detailed archaeological stratigraphy the site provides a new view of the Achaemenid period, with early, mature, and late phases, followed by a sequence of post-Achaemenid phases. Our project aims to establish the Achaemenid settlement sequence in this area by interpreting the function and chronology of the various sites that are now known in the wider landscape.
'From Palace to Town' is the name of the project of field work in Persepolis that was started in 2008 by the Iranian-Italian Joint Archaeological Mission, co-directed by Pierfrancesco Callieri and myself. It includes both archaeology and conservation work. As the project's name suggests, the focus of the work has shifted from the 'palaces' of the imperial 'Terrace', which had attracted the exclusive attention of archaeologists in
the past, to the inhabited settlement known from the written sources, the 'town', but without forgetting about the urgent need for conservation work on the Terrace.'

## 2. Previous archaeological activities

The Iranian-Italian Joint Archaeological Mission is not the first to do research on the ancient town site of Pārsa - as the Elamite tablets call the site for which Western scholars use the Greek name of Persepolis, conforming to the name used in the report by Ernst E. Herzfeld that was published before he started excavations at the site on behalf of the Chicago Oriental Institute. ${ }^{2}$ The settlement, which was complementary to the official buildings, was the object of surface surveys and subsequent further work by William M. Sumner, who had the privilege to name the various sites in the plain to the west of the Terrace. ${ }^{3}$
'Persepolis West' is the name given to of one of the Achaemenid settlements identified by Sumner in the Persepolis plain, ${ }^{4}$ namely within the broad area that Rémy Boucharlat, Tijs De Schacht and Sébastien Gondet named the 'Persepolis settled zone's and that Mohammad H. Talebian named the 'Territory of Parsa,', which extends from the Persepolis Terrace to the Naqsh-e Rostam royal necropolis 6 km farther north. The site of Persepolis West has its eastern limit about 500 m from the foot of the Persepolis Terrace and extends for about 1 km in a westward direction, corresponding to what Boucharlat and his colleagues have more precisely called the 'Persepolis Northwest area'? Sumner, who surveyed this site before the extensive earthworks associated with the construction of the irrigation canals originating at the Dorudzan dam and the subsequent dramatic modification of the Persepolis plain, described the site as a 'complex group of low mounds. ${ }^{8}$ The high concentrations of archaeological structures and materials on its surface, as well as the topography, prompted Sumner to place the location of the settlement of the city of Persepolis in this spot: 'Although Persepolis West is much disturbed, it appears originally to have been a single mound or dense cluster of contiguous mounds, topographically comparable to ordinary Near Eastern town sites, in contrast to the more dispersed, open topography of Firuzi.? Taken together with the nearby Firuzi (see below), Sumner considered Persepolis West to constitute a

[^0]provincial city or town, ${ }^{10}$ which he identified with the locality of Matezzish, frequently mentioned in the Elamite fortification tablets ${ }^{11}$ and that, for him, had been 'temporarily galvanized by the construction of Persepolis. ${ }^{{ }^{12}}$

## 3. Surveys

Geophysical investigation in this area began in 2003, thanks to the efforts of the Parseh-Pasargad Research Foundation, at that time directed by Mohammad H. Talebian, which included geomagnetic surveys carried out by Babak Aminpour. ${ }^{13}$ Because this area is part of the Persepolis Main Buffer Zone, 'Harim-e Yek', as defined in the framework of the inscription of the site on the UNESCO World Heritage List, the need was felt to provide the local office of the Iranian Cultural Heritage and Tourism Organization with documentation of the existence of buried archaeological remains not visible at the surface. After viewing such documentation, the local land owners would accept the imposition of limitations to their use of their lands, imposed by the need to preserve the site. At the same time, the scientific importance of these investigations was very clear from the start, given that they might provide answers to the many unanswered questions, from the position of the Persepolis lines of fortifications, as described by Diodorus of Sicily, ${ }^{14}$ for which the soundest hypothesis concerning their location has been proposed by Ali Mousavi, ${ }^{15}$ to the location of the non-palatial settlement area of town of Pärsa, also mentioned by Diodorus ${ }^{16}$, as well as by the Elamite fortification tablets administrative documents. ${ }^{17}$

In spring 2008, the activities of the Iranian-French Joint Archaeological Mission, directed by Rémy Boucharlat and Kourosh Mohammadkhani, included the 'Harim-e Yek' area in its project of study of the Persepolis plain, introducing the use of other geophysical methods that widened the scope of the research. ${ }^{18}$ The geophysical surveys were resumed from 2012 to 2014 by Sébastien Gondet and Kourosh Mohammadkhani, in the framework of the Iranian-Italian Joint Archaeological Mission, thanks to the support of the European Marie Curie Intra-European Fellowship project Settlement and Landscape Organisation of the Persepolis Region (SELOPerse), managed by Gondet (fellow). This second stage of the survey yielded excellent results.

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10 Sumner 1986,9.
11 Sumner 1986, 23.
12 Sumner 1986, 28.
13 Aminpour 2006; Talebian 2008, 182-184.
1 4 \text { Diod. 17.71.3.}
15 Mousavi 1992; Aminzadeh/Samani 2006.
16 Diod. 17.70.1.
17 See Henkelman 2012.
18 Bouchalat/Mohammadkhani 2008; Gondet et al. 2009; Boucharlat/De Schacht/Gondet 2012.
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## 4. Excavation

In autumn 2008, the Iranian-Italian Joint Archaeological Mission, directed by Pierfrancesco Callieri and myself, also selected the site of Persepolis West for its program of excavations. This project was aimed at discovering traces of the living quarters of the town of Persepolis and obtaining ceramic material from reliable stratigraphic contexts necessary to outline a ceramic sequence of the historic era for the province of Fars, which was still lacking. Prior to that, two excavation seasons on the Toll-e Takht of Pasargadae carried out by the Iranian-Italian team in 2006 and 2007 had produced results of great interest but of limited statistical value given the small number of ceramic sherds found. ${ }^{19}$ The five-year project that was approved by the Iranian authorities in 2008, included both archaeology and conservation work, was titled 'From Palace to Town. The archaeological section of the project concerned stratigraphic investigations in the promising areas evidenced by the previous geophysical surveys over Persepolis West, one of the supposed areas in which to study everyday life in a settled environment (the 'Town'). ${ }^{20}$ These excavations have also resulted in archaeometric research on ceramics and other finds, which have been recently published. ${ }^{21}$

While the archaeological part of the project was being carried out, an exceptional discovery in the area of Firuzi, called Bagh-e Firuzi, brought to a halt the explorations at Persepolis West: the discovery at Tol-e Ajori of what now, after six excavation seasons, is understood to be a copy, but with larger dimensions, of the Babylon Ishtar Gate, built in the Early Achaemenid period. ${ }^{22}$ The urgent need to explore this monument, given its state of preservation, regretfully forced the joint mission to stop its exploration at Persepolis West, where the conservation needs were less urgent. It is hoped that after the end of the excavations at Tol-e Ajori, the exploration of the site will be resumed, with the same methodological approach that has proved fruitful in the past.

The two seasons of excavation carried out at Persepolis West in 2008 and 2009 have indeed confirmed the great potential of the site. The published report includes the results of geophysical investigations, the excavation itself, and the studies of the finds, particularly ceramics, as well as the results of radiometric dating. ${ }^{23}$ The value of this contribution, particularly in view of the light it throws on the actual nature of the anomalies previously evidenced by the geophysical surveys, is evident. At the same time, it represents the first publication of a relevant ceramic corpus from reliable strati-

20 Askari Chaverdi/Callieri 2012.
21 Amadori et al. 2012; Askari Chaverdi/Callieri/Matin 2017.
22 Askari Chaverdi/Callieri/Gondet 2013; Askari Chaverdi et al. 2014.
23 Askari Chaverdi/Callieri 2017.
graphic sequences with several links to absolute chronology, which illuminates the development of the Late Plain Ware as defined by Sumner. ${ }^{24}$

## 5. Updated archaeological sequence of Pārsa at Persepolis West

The results of the two excavation seasons at Persepolis West are twofold. On one hand, they have shown the appropriateness of the methodology adopted, since stratigraphic excavation has allowed the checking of many of the inferences deriving from the geophysical investigations. On the other hand, they have produced the first actual evidence of the existence of an inhabited settlement adjacent to the Persepolis Terrace. Because the excavations at Persepolis West lasted only two seasons, the quantitative aspects of the activity are limited, but the work nevertheless remains fully valid in its approach and in its outcome.

As regards the aspect of verification of the hypotheses formulated as a result of the geophysical surveys, it is particularly the results of excavations in Trenches Tr. 7 and Tr. 8 that show their importance, removing doubts about the interpretation of the regular grid pattern in the area to the north-west of the Terrace. ${ }^{25}$ The excavation of a section of a well-preserved ditch in Trench Tr. 7 and of remains of a built canal in Trench Tr. 8 helped to better define the interpretation of this grid pattern by disproving the presence of streets (Fig. 3). In its turn, this evidence confirms the fact that the part of the plain nearest to the Terrace was not occupied by a neighbourhood of the inhabited settlement but by gardens. That this green area surrounded by a wall is a garden is also suggested by the structure in chineh on a stone foundation brought to light in Trench Tr. 3, which seems to correspond with one of the long linear anomalies appearing along the north-eastern limit of the same area.

On the other hand, actual evidence of the domestic settlement is represented by the area of craft activities of Area B: the kiln and the dump emplacements next to it confirm that the dense pattern of point geophysical anomalies represents a dense emplacement of craft activities, at a distance of circa 1.5 km from the Terrace, i.e. far enough to prevent smoke and noise from reaching the imperial citadel, but at the same time within a settled area, as is usually the case for workshops. The fact that the most probable function of the kiln was linked to the production of a component used on the monuments of the Terrace, despite the gap in the chronology, adds interest to this discovery and allows us to propose that some of the craft activities of Area B were finalised to supply material to the Terrace. ${ }^{26}$

[^1]

Fig. 3 Overview of the Persepolis West area surveyed by geophysical method and excavated by test trenches: Nos. 1-11 (Askari Chaverdi/Callieri 2017, 4)

The results of excavations in Trenches $\operatorname{Tr}$. , $\operatorname{Tr} .2$ and $\operatorname{Tr} .5$ of Area A, on the contrary, are sufficiently clear to show that, to some extent, the destruction of the archaeological layers caused by the field levelling of the 1970 os undermines the interpretation of the archaeological remains seen in the results of the geophysical surveys, which the destruction of the original settlement has scattered over a wider area. Particularly the area of Trenches $\operatorname{Tr} .1$ and $\operatorname{Tr}$. 2, which is interpreted as representing part of the settlement, appears from the archaeological evidence to be an area originally on the outskirts of the settlement, as the absence of structural features in the excavations shows. Given the absence of structures in the underlying layers, the rich presence of artefacts in the upper layers, which was recorded by magnetometers and which also initially gave the
archaeologists hope that they had located the inhabited settlement, undoubtedly originates from a destroyed nearby tepe, whose soil was spread all around by the bulldozers.

In Trench Tr. 2, the evidence of a possible stream that went undetected by the geophysical survey needs further confirmation by the continuation of a comprehensive geomorphological study. ${ }^{27}$ Further data that will be of use for the geomorphological studies are the elevation measurements of the natural ground level, which change in the various areas and indicate that the plain had an irregular ground surface.

One important piece of information deriving from the excavation concerns the diachronic view of the settlement in the plain. As also confirmed by radiocarbon dating, frequently the archaeological evidence continues from the pre-Achaemenid period (in the field where the grid of ditches was excavated) into the post-Achaemenid period, without any interruption linked to the political changes following the arrival of the Macedonian army. This continuity only apparently contrasts with the destruction of the town mentioned in the Greek sources, as this destruction would not have concerned the green areas between built-in areas. ${ }^{28}$ It also recalls the situation evidenced by the Iranian-Italian Joint Archaeological Mission in the trial trench excavated on the Toll-e Takht of Pasargadae. ${ }^{29}$

It must also be mentioned that the recovered artefacts add evidence of an Islamicperiod occupation, perhaps linked to the presence of pastoralists in the fields, which is attested until recently.

## 6. New information from the Firuzi area and Tol-e Ajori

Another area where the Iranian-Italian Joint Archaeological Mission has produced new evidence on Pärsa is that of Bagh-e Firuzi, 3.5 km to the south-west of the Terrace (plate 2, Fig. 2). Here, a new, short archaeological study of the site numbered by Sumner as Firuzi 5 and a long series of excavations at the site known as Tol-e Ajori, 'the hill of the baked bricks', have shown the existence of an imperial architectural project prior to the construction of the Terrace, because it is characterised by a more archaic architecture.

In particular, the unique building discovered at Tol-e Ajori, entirely built in mud brick and baked brick and with decoration of glazed-relief bricks, appears to be of the utmost interest for the evidence it offers of early settlement in the Persepolis area. The site was first excavated in 2011, with works continuing annually until 2017. Preliminary information on the first seasons has appeared in three articles, published in ARTA,

[^2]AMIT and Iranica Antiqua, with a full presentation not only of the excavations, but also of the surveys and their interpretation..$^{30}$

The reas on for the continuation of the activities there were manifold. The need was felt to understand the complete plan of this monumental gate, an interpretation which was finally reached after an initial interpretation as a massive platform (2011), then as a square tower (2012), then as a rectangular tower (2013) and, finally, to the last and final interpretation as a rectangular gate with two accesses on the main axis. As for the outer context, this was better understood only in 2017, with the discovery of an outer mudbrick wall at right angles to the Gate, which unfortunately was completely destroyed in the surrounding fields and was therefore not seen by the geophysical survey (plate 2, Fig. 4).

The study of the glazed-reliefbricks carried out to date has provided evidence of an exceptional similarity with the same materials from pre-Achaemenid Babylon, namely, the brick panels decorating the third building phase of the Ishtar Gate and the Processional Pathway. However, more elements will need to be gathered for a full reconstruction and understanding of the original aspect of the glazed-brick decoration.
'The Tol-e Ajori Gate represents an official building of the Early Achaemenid period built in the area of Bagh-e Firuzi before the construction of the Persepolis Terrace according to a Mesopotamian building tradition.3. It differs from the Babylon Ishtar Gate in dimensions, which are slightly larger, and in the presence of low benches flanking the long walls of the inner room. Its outer and inner faces were decorated with glazed bricks with geometrical and floral motifs, also found in situ, similar to those of the Ishtar Gate (plate 3, Fig. 5). Fragments of glazed-reliefbricks found in the collapse layers show that figural panels representing mythological creatures decorated the parts of the walls above the geometrical and floral patterns; the cuneiform inscriptions, too, were written with glazed bricks. These panels are also similar to those of the Ishtar Gate.

The Gate opened onto monumental buildings. Among them was the large building of Firuzi 5 , very poorly preserved and the object of limited test excavations in 2011 by the Iranian-Italian mission. ${ }^{32}$

Also the so-called Sang-e Surakh or Gowd-e Gavmishi was part of the area and had the same orientation as the site of Firuzi $5 .{ }^{33}$ William M. Sumner interpreted it as a bridge on a canal, ${ }^{34}$ and Ann B. Tilia saw in it the reuse of stone blocks of Early Achaemenid date. ${ }^{35}$

31 Askari Chaverdi/Callieri (in preparation).
32 Gondet 2011, 295.
33 Sami 1970.
34 Sumner 1986, 9.
35 Tilia 1978; Gondet 2011, 301-303.

This area of the plain had been flattened and prepared for cultivation mainly by order of the Buyid governors in 436 A.H. ( 1044 CE). ${ }^{36}$ However, Gondet's close examination of the evidence recorded by Sumner before the construction of the Dorudzan dam in the 1970 has shown evidence of a rectangular defensive ditch all around the site of Firuzi 5 and a defensive wall parallel to it. ${ }^{37}$ The building of Firuzi 5 should thus be in the middle of the rectangular perimeter of the ditch and of the fortifications..$^{38}$ The site of Tol-e Ajori, however, stands outside this perimeter.

Thus, it is necessary to correct this map, by also including Tol-e Ajori in the area centred on Firuzi 5. Tol-e Ajori Gate and Firuzi 5 building indeed have the same orientation, different from that of the Persepolis Terrace. The distance between the Tol-e Ajori Gate and the Firuzi 5 building is circa 360 m , with at least two ditches in between. ${ }^{39}$ Our understanding of Tol-e Ajori must be supplemented by an understanding of the Firuzi $s$ building, because together they may have formed a monumental complex.

The results of the geophysical surveys carried out by the Iranian-French team in the field to the north-west of the ditch and on pathway cutting the northwestern side of Tol-e Ajori, interpreted in the light of the excavations, suggest that another section of the Gate, corresponding to the outer section of the Ishtar Gate in Babylon, existed there.
'We should not forget that the tomb of Takht-e Gohar (Takht-e Rostam) and the palace of Dasht-e Gohar next to it are only 2 km away from the Firuzi area, towards the north-east [plate 2, Fig. 2]. According to Tilia, there is a close correspondence between the palace in Dasht-e Gohar and the building of Firuzi 11, to the west of Tol-e Ajori, both sharing the use of white column bases and the same orientation of plan, suggesting that the occupation of the Firuzi area and of Takht-e Gohar were contemporaneous. ${ }^{[40]}$ The new exploration of the Persepolis plain will add further information for our understanding of the role of the areas of Firuzi and Takht-e Gohar before the construction of the Terrace, in an Early Achaemenid horizon.'4

## 7. Conclusions

In conclusion, the interpretation of all of the new data on the chronology and function of Persepolis West shows that this area was in use in the same period as the Persepolis Terrace, from Darius's time to later phases. In contrast, the results of new excavations

[^3]at the Firuzi sites show us that the large area from Firuzi to Takht-e Gohar is a distinct area, in which archaeological sites were distributed mainly from north to south, along the Sivand River East bulk (plate 3, Fig. 6). According to the topography of the environment from across the Sivand River in the east, Takht-e Gohar in the north, and the archaeological sites complex of Firuzi area in the south, we can obtain an axis from north to south that stretched along the Sivand River. We also have to pay attention to chronology, for the sites in this area present several architectural features, such as plan and architectural elements, that are likely to date to early phases corresponding with Cyrus's and Cambyses's periods (approximately $550-530$ and $530-522$ BCE). Preliminary comparison of the distribution of archaeological sites also shows that they are located like those in Pasargadae, arrayed on a north-south axis along the riverbank as a natural landscape. This preliminary appreciation calls for more actual documentation, with exact details of the function and chronology of each of the sites in this environment. Only with these elements will the interpretation of the area from Firuzi to Takht-e Gohar as Early Achaemenid eventually be confirmed.

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## Plates

## Plate 1

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Fig. 1 The ancient site of Pärsa/Persepolis. The boundaries of the area are marked by a red line and the buffer zone by a blue line (PPRF archive)

## Plate 2



Fig. 2 The complex array of archaeological sites of Pärsa/Persepolis (PPRF archive)


Fig. 4 The general plan of the sites Firuzis and Tol-e Ajori
(Iranian and Italian Joint Archaeological Mission 2017, drawn by S. Tilia)

## Plate 3



Fig. 5 Reconstructed plan of the preserved part of the Tol-e Ajori Gate (drawn by S. Tilia) (left), which shows the impressive similarity with the south section of the Babylon Ishtar Gate (right), in respect of which it is larger
(Iranian and Italian Joint Archaeological Mission 2017)


Fig. 6 Distribution of the archaeological sites of Pārsa/Persepolis in two main areas: Firuzi-Takht-e Gohar (Area 1) and Persepolis-Persepolis West (Area 2) (map by the author)


[^0]:    1 Askari Chaverdi/Callieri 2017.
    2 Herzfeld 1929/1930.
    3 Sumner 1986.
    4 Sumner 1986, 9.
    5 Boucharlat/De Schacht/Gondet 2012, 253.
    6 Talebian 2008, 182.
    7 Boucharlat/De Schacht/Gondet 2012, 260.
    8 Sumner 1986, 9.
    9 Sumner 1986, 9.

[^1]:    24 Sumner 1986.
    25 Gondet 2011.
    26 Askari Chaverdi et al. 2016, 16.

[^2]:    27 Rigot 2008.
    28 On the cityscape of Persepolis according to the Greek sources, see Klinkott, this volume.
    29 Askari Chaverdi/Callieri 2009.

[^3]:    36
    37 Gondet 2011, 305 .
    38 Gondet 2011, 300, Fig. 5-53.
    39 Gondet 2011, 303-305; Askari Chaverdi/Callieri/Gondet 2013, Fig. 32.
    40 Tilia 1978, 8o.
    41 Askari Chaverdi/Callieri (in preparation).

