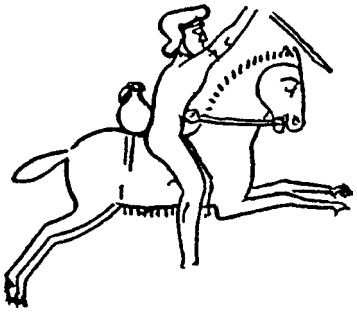

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# A newly discovered building complex north of the "Frataraka" Complex. Consequences for the spatial definition of the Persepolis-Parsa Royal Area

***Abstract***

*From 2012 to 2014, geophysical and pedestrian surveys were implemented in fields located north of the Persepolis Terrace in the framework of the current Iranian-Italian archaeological mission working on the Persepolis, or Parsa, area. Surveys were carried out north of the so-called "Frataraka" Complex and revealed part of the plan of an almost 1 ha building. This large complex presents distinctive features for suggesting a dating back to the Achaemenid period and for interpreting it as an official building. Being located 600 m north of the Terrace, this discovery led us to approach the question of the occupation dynamics around the "Frataraka" Complex and beyond the limit of the Royal Area, defined in a broad sense as the core district of Parsa hosting most of the official buildings.*

***Keywords***

*Iran, Fars, Persepolis, Parsa, Achaemenid, Post-Achaemenid, survey, geophysics, fieldwalking, city layout, Royal Area*

# Framework of the 2012-2014 surveys north of the Persepolis Terrace[1]

## Reconstructing the Persepolis landscape around the Terrace

To this day, Persepolis, or Parsa,[2] is still often seen as restricted to the monumental Terrace, while in fact this terrace was only the core part of a larger Royal Area and beyond of a city,[3] that is to say the Achaemenid capital of the province of Persia from the Darius I reign (521-486 BCE). Reconstructing the overall ancient landscape of Parsa requires the scope of a zone larger by several square kilometers bordered to the south by the Terrace and its surroundings, and 6 km farther north by the Persepolis royal necropolis of Naqsh-e Rustam. It was suggested to call this region the 'Persepolis Settled Zone' (Gondet 2011; Boucharlat, De Schacht, Gondet 2012: 253, Askari Chaverdi, Callieri 2017). It is at this scale that the archaeological programs on Persepolis have been conceived by the PPRF since the early 2000s (Talebian 2008, 2010). Several teams took, and still take, part in this project: since 2003 the PPRF research team (Atayi 2004; Aminpour 2006; Jafari 2006); from 2005 to 2008 the joint Iranian-French mission of the "Shiraz" project (Gondet 2011; Boucharlat, De Schacht, Gondet 2012); and since 2008 the joint Iranian-Italian mission of the "From palace to town" project (Askari-Chaverdi, Callieri 2012; Cereti, Gondet 2015; Gondet 2015; Askari Chaverdi, Callieri (eds.) 2017; Askari Chaverdi, Callieri, Matin 2017). The main goal of these projects is to combine complementary and multiscalar archaeological approaches for revealing the remains of the antique layout of Parsa.

1 The data reported in this paper result from survey fieldwork implemented from 2012 to 2014 within the framework of the still ongoing, joint Iranian-Italian archaeological project entitled "From palace to town: an integrated multidisciplinary approach to Persepolis Terrace and town". It is co-directed by Prof. Dr. Alireza Askari Chaverdi and Prof. Dr. Pierfrancesco Callieri (University of Bologna). This collaborative project was agreed upon and was supported by the Parsa-Pasargadae Research Foundation (PPRF), recently becoming Persepolis World Heritage Center, as well as the Iranian Center for Archaeological Research (ICAR), a department of the Research Institute of Cultural Heritage and Tourism (RICHT)/Iran Cultural Heritage, Handicrafts and Tourism Organization (ICHHTO). The surveys were funded from 2012 to 2014 thanks to a European IEF Marie Curie fellowship led by Dr. Sébastien Gondet and hosted by the Department of Heritage Studies of the Ravenna Campus of the University of Bologna (Project call: FP7-PEOPLE-2011-IEF-Marie-Curie Action; Project acronym: SELOPerse - ID: 299665).

2 Parsa, a toponym in the Elamite archives of the Fortification naming both the province and the city, refers in the present article only to Persepolis.

3 This hypothesis was evidenced early by several scholars: Herzfeld 1929, and later, among others, by Sumner 1986; Boucharlat 2003; Shahbazi 2004; Talebian 2008.

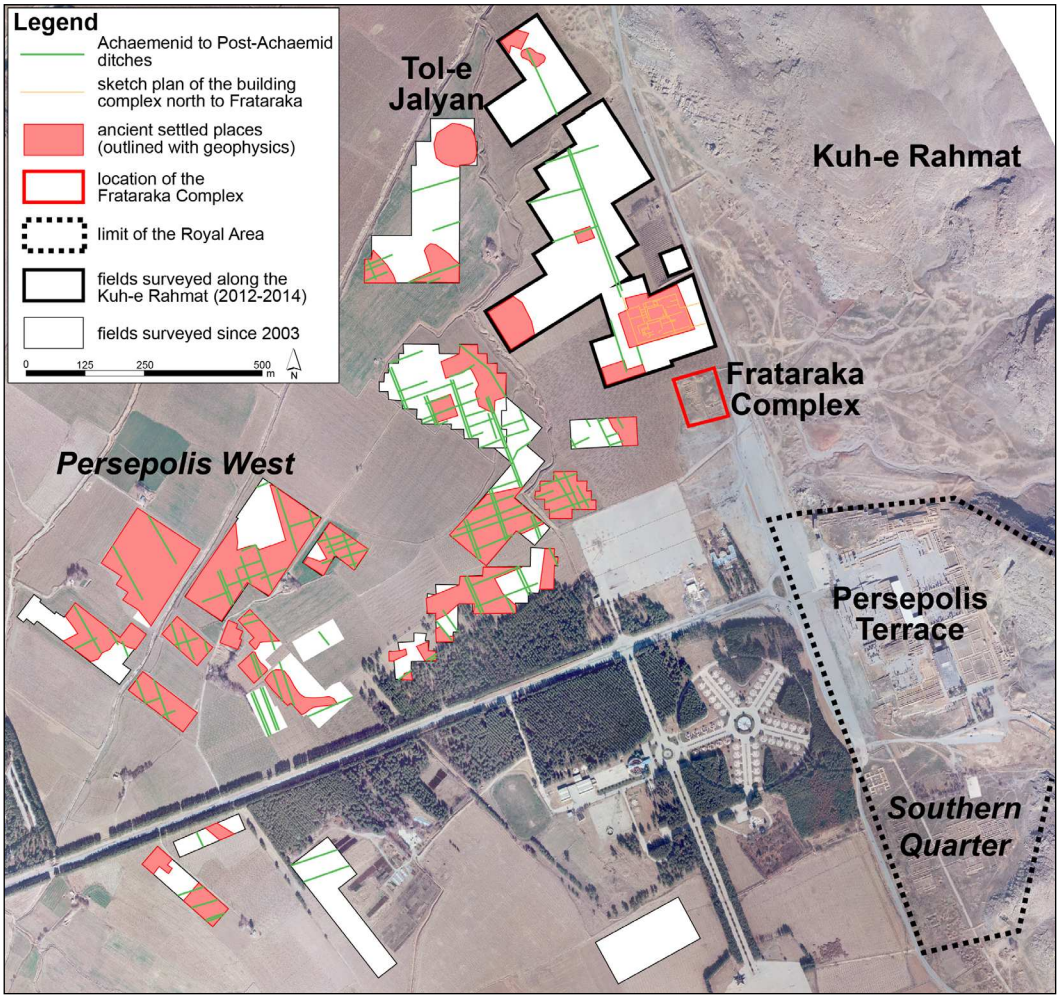


*Fig. 1. Proposed reconstruction map of the Achaemenid/post-Achaemenid Parsa layout west of the Persepolis Terrace, over the Persepolis Northwest settled sector, after surveys implemented by the PPRF, Iranian-French and the Iranian-Italian missions (2003-2014). Locations of three fields surveyed from 2012 to 2014, encompassing the newly discovered building complex, are delineated with bold, black lines.*

For investigating such a large area, the first stage was to extensively map visible and buried archaeological remains. It was decided to focus methodically on surveys and especially on geophysics that, through measurements of the subsoil's physical properties, thereby provided plans of the preserved buried archaeological remains. A more complete analysis of geophysical results requires complementary topographic and field-walking surveys to map out the remains and artifacts visible on the surface.

After the first stages of the PPRF and the Iranian-French surveys, a first reconstruction hypothesis of the Parsa cityscape, i.e. the spatial organization of the city components and their integration in the environment, was suggested (Boucharlat, De Schacht, Gondet 2012).After results obtained west of the Terrace, Parsa might not be reconstructed as a 'classic' city, but more appropriately a densely built urban center. Here the surveys revealed an open and mosaic landscape of settled (red areas on **Fig. 1**) and green areas encompassed in a drainage network made of a rectangular mesh of ditches (green lines on **Fig. 1**). This network was mapped from 400 m west of the Terrace to at least 1.5 km farther, as far as the 'Persepolis West' described by W. Sumner (1986: 9). We name this large area as the 'Persepolis Northwest' settled sector (Boucharlat, De Schacht, Gondet 2012: 260) hosting parts of the everyday life of the capital. The Terrace together with the Southern Quarter [4] and the Kuh-e Rahmat slope shape a separated Royal Area, of at least 50 ha, that aside from hosting the royal residence was most probably the main official, administrative and government district of Parsa.

Based on this first attempt to reconstruct the Parsa layout, the second stage of the town study was implemented by the Iranian-Italian mission. For the 'Persepolis Northwest' settled sector, the team refined the picture of Parsa by opening targeted trenches (Askari Chaverdi, Callieri 2012; Askari Chaverdi, Callieri [eds.] 2017). Among others, the main results were to firmly date parts of the network of ditches back to the Achaemenid period and, 1 km west of the Terrace, to bring to light a craft activities area of Parsa (Askari Chaverdi *et al.* 2016; Mercuriali 2017). The team also demonstrated, through radiocarbon dating, a continuous occupation of the area during the Achaemenid/Post-Achaemenid periods (from at least the end of the 6th until the mid-1st cent. BCE). The mission also continued the survey tasks to better map the area. Further geophysical surveys were carried out between 2008 and 2010 by B. Aminpour (2017) and afterwards between 2012 and 2014 by S. Gondet and K. Mohammadkhani (2017). Among several other objectives for enhancing our above-described reconstruction of Parsa, this 2012-2014 second survey phase included fieldwork north of the Persepolis Terrace whose results will be detailed and discussed in following parts of the article.

4 As named by Tadjvidi 1976 looking through excavations for the remains of the Parsa city around the Terrace.

## Objectives for surveying north of the Royal Area

For the 2012-2014 survey, our main objective was to better define the layout of Parsa over a broader scale. Within this framework, one of the tasks was to better map the transition spaces in between the Persepolis Northwest settled sector and the Royal Area. The goal was first to determine the presence of buildings and settled places in these spaces in order to refine the outline of these two sectors. One of the characteristics of the Parsa landscape should have been a clear separation between popular and royal/aristocratic areas (Sumner 1986: 258-31; Boucharlat, De Schacht, Gondet 2012). Consequently an important issue for the survey was to determine if Royal Area and Persepolis Northwest were actually separated and, if so, by what. On the one hand, the limit between the two areas could have been well defined by walls, fences, and hedges or by water infrastructures, canals or basins, as was the case for Pasargadae.[5] On the other hand, limits could have been set by only leaving free and unconstructed spaces around the Royal Area. Finally, within these transitional fields located in between the two sectors, we were looking for continuity or discontinuity in the rectangular layout of ditches as observed over Persepolis Northwest and then the development of a comprehensive drainage and irrigation system which would include the canal running along the Kuh-e Rahmat from Estakhr.

The main challenge for surveying the Royal Area surroundings is the present-day landscape. The facilities built around the Terrace in the framework of the 1971 Jubilee and, above all, the pine forest planted in the 1960's forbids the survey of this strategic area. While trenches excavated during the 1960's and 1970's by Iranian archaeologists A. Sami and A. Tadjvidi revealed remains west of the Terrace and the Southern Quarter, for example walls or drainage infrastructures (Tadjvidi 1976: 80-84, Mousavi 1992: 217-220), the 2003-2005 geophysical survey implemented next to the Terrace certainly showed their possible destruction by the modern land reshaping (Aminpour 2006). Then, looking for free and promising spaces around the Royal Area, the last, partly preserved, and still unsurveyed area is located northwest of the Terrace along the Kuh-e Rahmat foothill, towards the so-called "Frataraka Temple Complex", hereafter referred as the "Frataraka" Complex, and, 1.5 km farther, the Tol-e Jalyan mound (**Fig. 1**).

5 See Gondet et al. 2016 for an example from Pasargadae of the large, trapezoidal basin that would have served also as a limit between Royal area and a possible contemporaneous settled area.

Taking into account the known archaeological context in this area, surveying there brings together interesting issues for the development dynamics of Persepolis. The north of the Terrace reveals several reasons to assume a Late-Achaemenid and mostly Post-Achaemenid occupation: the "Frataraka" Complex; a building located in the valley north of the Terrace and partly excavated by Ernst Herzfeld but never published in detail (Schmidt 1953: 55-56); and the Persepolis Spring Cemetery excavated by E.F. Schmidt (1957: 115-123; Farjamirad 2015: 11-12). The mapping of the fields north of the Terrace means approaching the question of the changing or unchanging patterns of organization after the fall of Persepolis.

## Survey settings

During the fieldwork north of the Royal Area, we mainly used geophysical surveys in order to get a large base map of the preserved remains. Given the previous, encouraging outcomes obtained over Parsa, we chose the magnetic survey method that enables us to create maps of the small variations in the Earth's magnetic field that are linked to differences of properties found in the subsoils. Among these variations, or anomalies, some can be linked to archaeological remains whose shape can be outlined on this magnetic map, also called magnetogram. The instrument used was a Geometrics G858 magnetometer (Geometrics Company) loaned by the UMR 5133 Archéorient team (CNRS/University of Lyon 2, France). It was set up in gradiometer configuration with two sensors placed in vertical position one above the other for measuring the vertical gradient of the vertical component of the Earth's magnetic field. The data were recorded along profiles located 1 m one from each other with an average sampling gap of 10 cm.

From 2012 to 2014, we carried out surveys over more than 15 ha split in three zones, following the present layout of the fields, distributed from the Terrace as far as the Tol-e Jalyan site (**Fig. 1**). The survey grid was staked by S. Tilia, topographer of the Iranian-Italian mission. These geophysical investigations were carried out by S. Sébastien Gondet and K. Mohammadkhani with the help of two local workers. The topographic base map used for the figures as well as the aerial view, a mosaic composition of low-altitude colour aerial pictures, were kindly provided by the PPRF. At the same time as the geophysics, we recorded and mapped in the surveyed fields all visible artefacts on the surface by means of a GPS. We did not draw ceramic density maps over the area, like we did on other fields farther west (Gondet, Mohammadkhani 2017), because potsherds are quite rare. Instead we computed the density on squares at randomly distributed points over the area.

# Survey results and description of the newly found building complex

## Overview of the 2012-2014 survey results north of the Royal Area along the Kuh-e Rahmat

The results obtained in the fields located along the Kuh-e Rahmat need to be compared to those on the overall Persepolis Northwest sector[6] (fields are delineated with black bold lines on interpretative **Fig. 1**). The 2012-2014 magnetic maps revealed that the network of ditches that designs the Achaemenid/Post-Achaemenid layout west of the Royal Area stretches over a much larger area than previously mapped in 2005-2008. The network of ditches extends as far as the Kuh-e Rahmat foothill and includes all the settled sectors and constructions located in the plain west of the Terrace within a same drainage network. Then, to the north, this network covers the Royal Area. This observation might demonstrate the integration of the Royal Area within the overall Persepolis Northwest drainage system developed in the plain. This outcome tends also to confirm the interpretation of the coincidence between the construction of the Royal Area and the development of the town to the west due to the similar orientation of the ditches with all the royal monuments (as already suggested by Boucharlat, De Schacht, Gondet 2012: 263-264). When detailing the shape of some newly revealed anomalies related to the network of ditches, the northwest/southeast line that transects all the fields surveyed along the Kuh-e Rahmat is a set of parallel ditches that might have run alongside pathways located between. This is similar to the pattern of ditches already revealed farther west (Boucharlat, De Schacht, Gondet 2012: 263) that suggests main northwest/southeast moving axes throughout Persepolis Northwest run as far as the Kuh-e Rahmat range.

Concerning water management, we did not detect any feature that could demonstrate a connection of this drainage system to the partly rock-cut canal running along the Kuh-e Rahmat foothill from Estakhr (Kleiss 1994; Moradi-Jalal et al. 2010; Boucharlat, De Schacht, Gondet 2012: 276-279). Possible connecting channels may have been obliterated by the asphalt road that runs along the mountain. Farther north and near the Tol-e Jalyan site is a spring that gave its name to the cemetery mentioned above, partly excavated by E.F. Schmidt and that today is dry. For us, it would have also been a source for irrigating the plain west of the Royal Area.

6 For a more detailed discussion on results obtained in the overall area see Gondet, Mohammadkhani 2017: 18-22.

This hypothesis would need further geoarchaeological investigations to determine if it had already spouted during the Achaemenid period. After mapping the area, we observed that starting from this spring are numerous qanat well lines, certainly later than the Achaemenid/Post-Achaemenid period because not connected nor in the same orientation as the network of ditches. Unfortunately these dense wells hide earlier features and complicate asserting a link between this spring and the network of ditches. As a final remark on the ditches, the magnetic maps along the Kuh-e Rahmat reveal that the mesh appears less tight towards the mountain than farther southwest. This observation goes together with the changing patterns in the distribution of settled places, sparser along the Kuh-e Rahmat foothill than over Persepolis Northwest where settlements and activities were more concentrated and needed a tighter drainage network.

Concerning the settled sectors, they can be detected as more magnetic areas, a common and reliable tool for mapping ancient settlements in the Persepolis present landscape where most of the architectural features were leveled because of modern farming practices (Gondet, Mohammadkhani 2017). After the 2012-2014 survey along the Kuh-e Rahmat, as mentioned above, the results clearly show more sparsely settled places towards the mountain. Two areas were outlined to the south and southwest corners of the surveyed fields and seem to correspond to the extension of areas outlined earlier and found farther southwest. Three new settled places were revealed (light red on **Fig. 1**). Two of them, one to the north and a second in the middle, are isolated and small. The third one, located to the south some 100 m north of the "Frataraka" Complex, is the biggest revealed North of the Royal Area. It corresponds to the most striking result from this survey as it is the location of a large building complex, described with more detail in the following parts of the article.

## Description of the plan of the building complex

The newly discovered building complex is the largest of the settled places discovered along the Kuh-e Rahmat after the 2012-2014 geophysical surveys. It is situated in a field located in between the "Frataraka" Complex to the south and a fenced orchard to the north (**Fig. 2**). This building complex appears to be quite isolated from other edifices or settled sectors, especially towards the north. The closest building is the "Frataraka" Complex placed 90 m farther to the south.

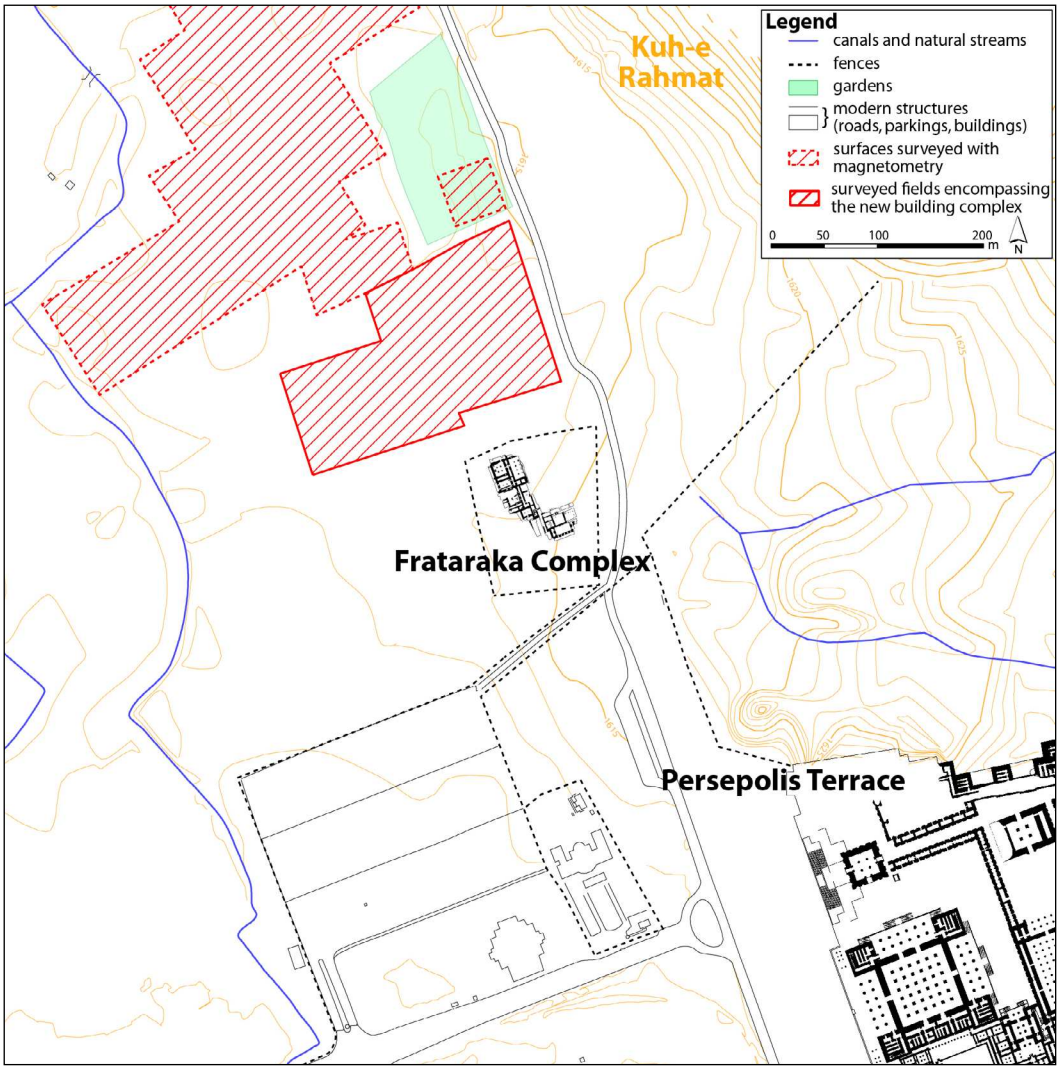


*Fig. 2. Topographic map north of the Terrace and location of the fields surveyed in 2012-2014 filled with red hatches. The location of the field encompassing the newly discovered building north of the "Frataraka" Complex is delineated with bold red lines.*

As a preliminary, general observation, the most surprising result was to be able to observe a quite detailed plan of this newly found building complex on the magnetic map. Most often over the whole Persepolis Northwest area, we face highly disturbed contexts where recurring ploughings leveled the buried archaeological remains. The reasons for this better preservation are probably of two kinds. First, the sediment inputs from the nearby Kuh-e Rahmat slope would have covered and protected the constructed remains from farming works. Second this good state of preservation would suggest a preliminary hypothesis to interpret this building complex: maybe its foundations were deeper than in other places farther west and if so, this might demonstrate that they correspond to a more monumental construction.

This characteristic also gains importance because of its size. The building complex occupies a rectangular area of almost 1 ha (80 x 120 m). It has the same orientation as the ditches of the grid visible nearby. The results of the magnetic survey are clear enough to detail parts of its plan (**Fig. 3** for magnetic map; **Fig. 4** for interpreted design).

On the magnetic map, the plan of the northwest half of this building complex appears more accurately than the south half. In the northwest half, several rooms surround a large central space measuring about 34x25 m, or 850 m². Such a large inner space may be interpreted as a columned hall or a courtyard. We prefer the second option considering the following arguments. This central space is distinctly outlined by almost continuous linear features that show high magnetic positive and highly polarized anomalies, those combining strong black and white responses. Compared to the less magnetic anomalies defining the other remains revealed within the building complex, the construction material of these features is obviously of a different nature. The intensity and the shape of the anomalies suggest the presence of baked material and consequently the use of buried clay water pipes or canals covered by baked bricks surrounding the large rectangular space. If such drainage infrastructures were needed, it necessarily shows that water ran off inside the central space and that it would have been a courtyard. Rainwater seems to have been drained outside the central space towards the southeast as we can observe a continuing linear high magnetic feature in that direction.

The other visible features in the northwest half of the building complex show lesser magnetic anomalies and probably correspond to foundations of mud brick walls. The negative value of anomalies tends to demonstrate that the remaining foundations are made maybe with pebbles, material less magnetic than the surrounding soil. The supposed courtyard is surrounded by a first line of elongated rectangular narrow spaces of about 5 m in width. These spaces might be corridors or porticoes framing the courtyard. Towards the southwest and the northwest, a second line of surrounding spaces consists on series of rectangular spaces or rooms. Towards the southwest, three rooms appear as quite regular in size with dimensions of about 9x6 m. Towards the northwest, the size of the rooms is less regular with a longer 17x9 m space framed by two smaller ones. Towards the northeast corner of the complex, the remaining plan is more difficult to read. Linear features running towards the foothill design an overall space division into large rectangular units, but their interior layout does not appear on map.

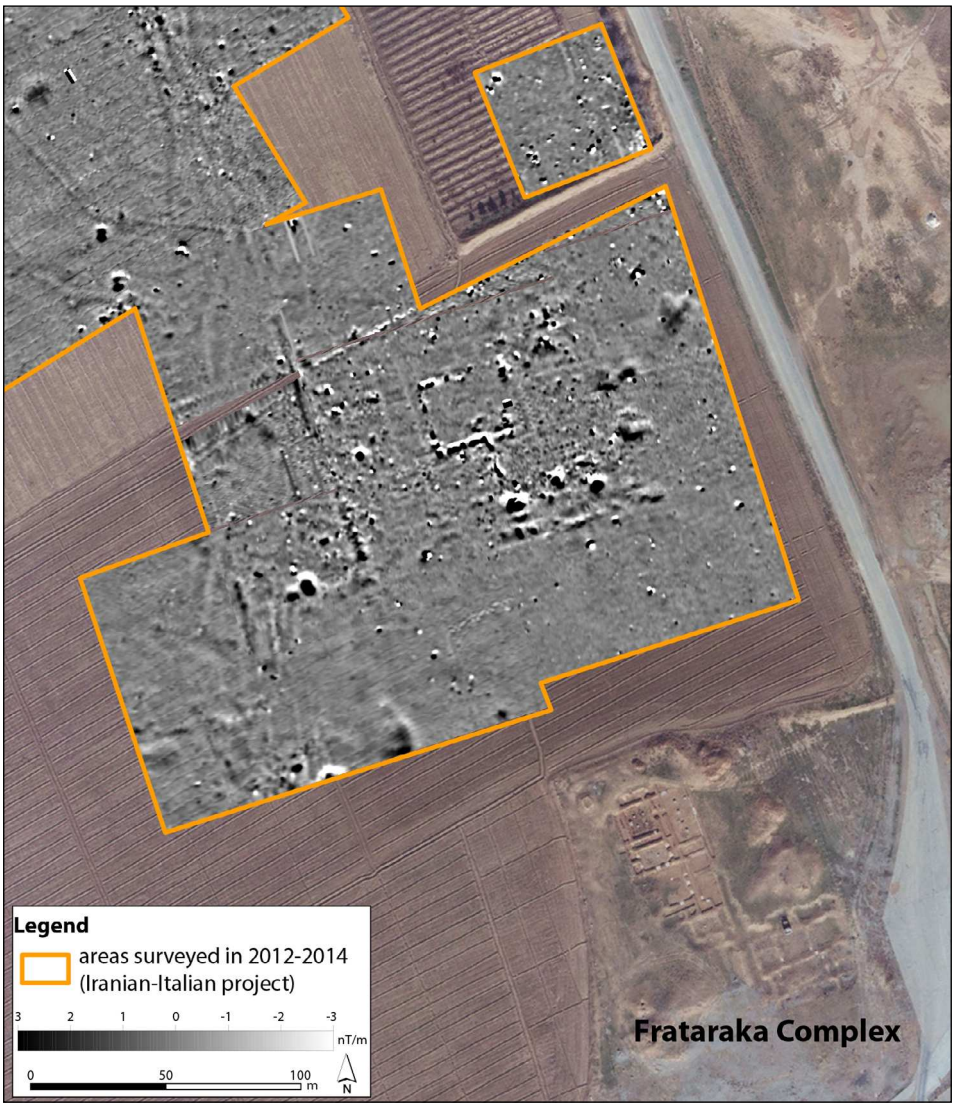


*Fig. 3. Magnetic map showing the new building complex north of the "Frataraka" Complex.*

The plan of the south half of the building complex appears less accurately on the magnetogram. In the southwest quadrant, a second large rectangular space of approximately 18x28 m is visible. This second large inner space is not surrounded by anomalies that could be clay water pipes and, given its size, would be a roofed and probably columned room. Next to its southwest edge several rooms are visible including a row of three smaller spaces of approximately 5x4 m. For the southeast quadrant of the building complex, the plan does not appear with enough accuracy. Clusters of unshaped magnetic anomalies hide the architectural remains. The building complex does seem to extend towards the road along the Kuh-e Rahmat range as two long linear features run in that direction.

Towards southwest, the limit of the building complex distinctly matches a long linear feature which is highly magnetic in some of its sections. The recorded magnetic values are almost similar to those of the features surrounding the supposed courtyard mentioned above, and could also correspond to clay water pipes. This hypothesis is strengthened by the fact that this feature runs in a line and seems connected to one of the long ditches, part of the grid layout described above, running northwest/southeast and crossing all the fields surveyed along the foothill. Through this information, the southwest limit of the building complex is certainly connected to the extensive drainage system stretching over the whole Persepolis Northwest. This possible drain might serve to collect the rainwater from the roofs of the building complex and to carry it away through the network of ditches.

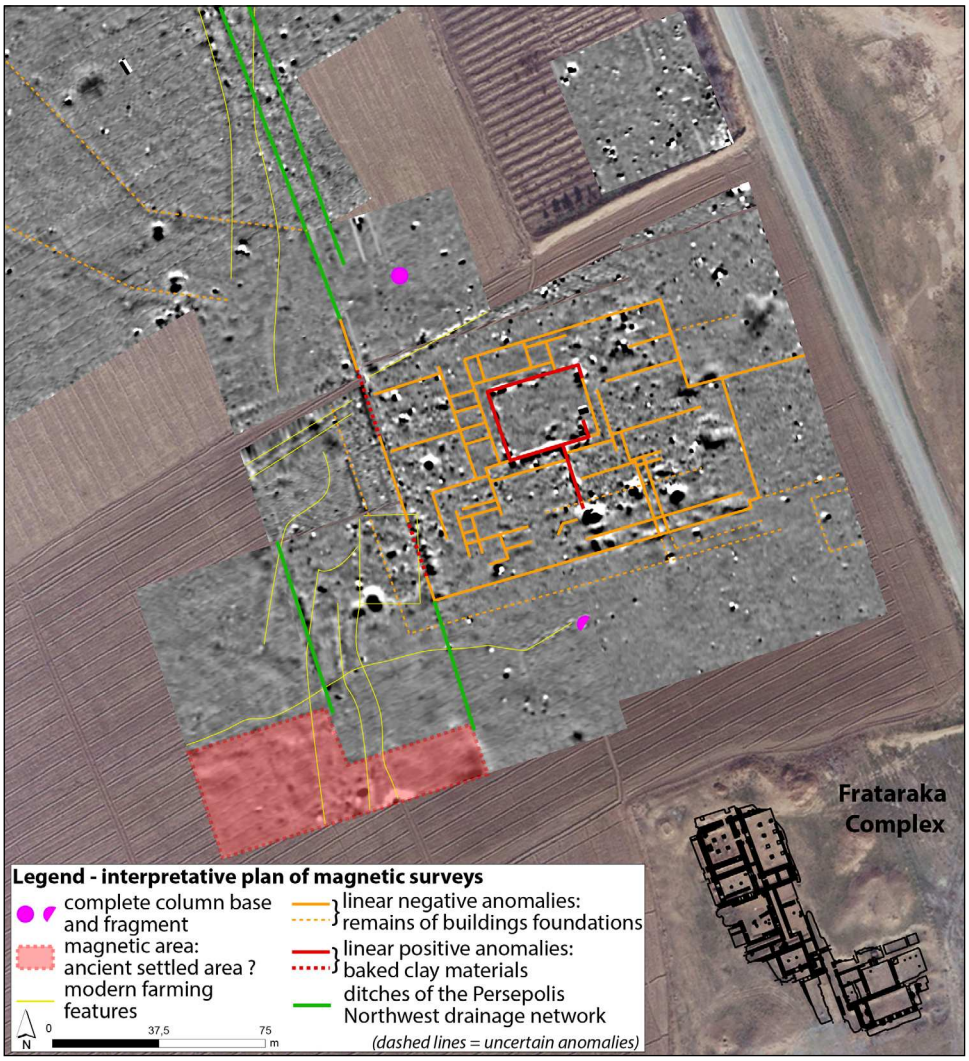


*Fig. 4. Interpretative map of the new building complex and surroundings (plan of the excavated part of the "Frataraka" Complex is adapted from Callieri 2007: 54-Fig. 26).*

The magnetic survey enables us to draw general conclusions concerning the plan and the state of conservation of the building complex. The building complex is a very large construction that would be organized around at least two large inner spaces, of which the one to the northwest, probably a courtyard, is surrounded first by corridors or porticoes and further by a row of rooms. The complex is equipped with a drainage system, for a part built with clay water pipes, connected to the network of ditches extending throughout the whole Persepolis Northwest. However, about half of the plan is difficult to read, especially towards northeast, and then it becomes incomplete. This is probably due to differences in the preservation state of the buried remains. In the northeast half of the building complex, several undefined anomalies are probably indications about destructions as they look like later pits, maybe for reusing construction materials. Another explanation for the differences of preservation state is the ploughings. It was demonstrated farther west for the ditches of the grid excavated by the Iranian-Italian team that only their bottom end remains. For the building complex we probably face the same preservation state and only the bottom of the foundations is still preserved. Slightly deeper ploughings could explain preservation differences within the same building complex. However, compared to the whole Persepolis Northwest, the general preservation state of this building complex is easily considered to be much better, certainly thanks to deeper foundations.

## Surface finds

As for the surface finds spread out in the area of the building complex, pottery sherds are almost absent, unlike the settled sectors revealed farther west in Persepolis Northwest (Gondet, Mohammadkhani 2017). However we were able to record a higher density of grey limestone chips. Along the limits of the fields and particularly near the modern road running alongside the Kuh-e Rahmat, numerous heaps of stones, made after the fields were cleared, are also present. In a first instance and because no traces of rock-cutting are visible on these blocks, we suppose that the main part of these stones came from the nearby rocky slope. Another part might also have come from the progressive erosion of the stone or pebble foundations of the building complex. Among the stone fragments on the surface, we recorded two pieces of stone architectural elements. The first one was found on a field located northwest of the building complex (**Fig. 4** for its exact location plotted with a purple point; **Fig. 5** for a picture of the context of the find).


*Fig. 5. Torus column base found on the surface northwest of the new building complex in a freshly ploughed and harrowed field.*

It is a complete torus column base made of white limestone, swelling in shape and without a plinth, with one badly preserved astragal molding on top (**Fig. 6**). Its size is 66 cm as a maximum diameter, 48 cm for the shortest diameter at the bottom and the top of the base and 25 cm in height. The proportion value between the longest diameter and the height is 1:3.8. Its faces were much too eroded to observe tools traces. The second piece was located southeast of the building complex (**Fig. 4** for its exact location plotted with a purple half point). It is a fragment of bell-shaped column base. It measures 15 cm in length and is made of grey limestone. Its outer face is decorated with a section of egg-and-dart motif: a complete egg and the left part of another one as well as the upper part of dart pointed down are still preserved (**Fig. 7**). These two pieces were deposited in the storeroom of the Persepolis museum.

Of course, these two pieces remind us of Achaemenid, architectural elements found in the Persepolis Royal Area and this point will be discussed further in detail. In the framework of the present description of the survey results concerning the new building complex, we will only pay attention to the location of these two pieces of architectural elements. Because they were located outside the building complex area as revealed by the geophysics and visible on the magnetic map, we aim to discuss their possible origin as the newly discovered building complex.


*Fig. 6. Surface find from northwest of the building complex. Top and side view of the torus column base.*


*Fig. 7. Surface find from southeast of the building complex. Fragment of column base with egg-and-dart motif.*

The decorated fragment laid 20 m south of the building complex and 50 m north of the "Frataraka" Complex. Such a small fragment can move over a long distance because of farming and earth removing work. Moreover, in the "Frataraka" Complex, E. Herzfeld excavated several rooms with bell-shaped column bases decorated with egg-and-dart motifs (Herzfeld 1941: Pl. LXXXV; Callieri 2007: 56, 57-Fig. 29; Type B in Boardman 2000: 70). Then, the decorated fragment might come from the "Frataraka" Complex rather than from the newly discovered complex. As for the complete torus base, the location of this find is also outside the limits of the building complex as plotted from geophysical survey. However it was found 20 m farther northwest. It is certain that the torus was recently moved from its original place as several fresh scratches are visible on its sides. Some of them, appearing whiter on the pictures (**Fig. 6**), were certainly made after recent ploughings that brought the base to the surface. Older scratches are visible on the base and they show that the block had already been moved earlier while remaining embedded in the subsoil. On the other hand, moving this architectural piece over dozens of meters due to modern farming works is hard to suppose. The base weighs several dozen kilograms and even repeated ploughings would not have been able to move it over a long distance. If it was moved after a field clearing, the stones are generally put on the edges; however, the torus was found within a field. This complete torus base is located clearly not in-situ but probably not far (some meters?) from its original location. However, on the magnetic map, where the base was found no architectural feature is visible. Nevertheless, the absence of anomalies on a geophysical map cannot be interpreted as an absence of site, especially taking into account the present day topography of the fields around the building complex. The neighbouring field north of the one encompassing the new building complex was recently leveled to a deeper mean level, about 50 cm lower, in order to make irrigation easier, and this deep leveling work would have destroyed all the buried remains. As a conclusion, two hypotheses rise from these observations. First, the complete torus was probably used or reused in a newer construction, the traces of which have disappeared today and it was coincidentally built near the newly discovered building complex. Second, which seems to us the most probable hypothesis, the base originates from the building complex. A first argument is the proximity of the base to the building complex that for the moment is the only known edifice in the area for which we suppose the presence of columned halls or rooms. The second argument is taphonomic. Considering that the foundations of the building complex are probably preserved only on a thin layer, the deeper leveling works in the north field would explain a complete destruction of the remains of a possible extension or a con-

nected outbuilding towards the north. It seems indeed quite unlikely that the limits of modern field match those of the building that would have extended farther north. As a consequence, while keeping in mind the above discussion, we have decided to integrate this torus base within the following discussion on the dating and functioning of the newly discovered building complex.

## Elements for interpreting the newly discovered building complex

One should keep in mind that geophysics do not allow for a direct dating of revealed archaeological remains. Their dating needs to be approached by considering their archaeological context, their shape, and the nature of the artifacts recorded on the surface. Concerning the newly discovered building complex, there are three main dating elements that will be discussed in the following lines: first, the integration of the new building complex within the general layout revealed by previous work over Persepolis Northwest; second, its plan compared to the known buildings in the surroundings; and third, the complete torus found on the surface. These elements will enable us to discuss the nature and function of the building complex.

### Integration within the Persepolis Northwest layout

As mentioned above, the building complex follows the same orientation as the network of ditches, corresponding to the large drainage network, revealed over Persepolis Northwest (Boucharlat, De Schacht, Gondet 2012: 259-264). The northwest/southeast orientation of the ditches and of all the known features in the area, except the southeast wing of the "Frataraka" Complex, tilts on average of 20° towards west from north. Above all, the southwest edge of the building complex overlays a long linear feature, one of the above-mentioned ditches, which runs across the fields at least for 500 m towards the northwest and 60 m towards southeast (**Fig. 1**). To interpret this, we suggest that parts of the anomalies corresponding to the western edge of the building complex would be clay pipes draining and/or supplying water from/for the new building. These pipes are then clearly connected to the large drainage network of Persepolis Northwest dated back to the Achaemenid period by radiocarbon in trenches open across two of the ditches (Askari Chaverdi, Callieri 2012: 236-237; Colliva 2017; Iori, Karami 2017). The building complex is best considered as contemporary to the time of use of this drainage system that, given the results of soundings, would match with the Achaemenid/Post-Achaemenid period.

## Plan and comparisons with buildings of the Royal Area

While not relying upon a complete plan of the building complex, its revealed parts from geophysics are sufficient for drawing comparisons with known examples and to suggest functional hypotheses. The building complex is a large construction of at least 1 ha. In the region, i.e. the whole Marv Dasht plain, monumental buildings are indeed not restricted solely to the Achaemenid period.[7] However, the excavations on sites other than Persepolis, those quite restricted in size, did not provide extensive plans of these buildings. In addition, the location of the new complex next to the Royal Area leads us to draw comparisons with the monumental Achaemenid buildings of Persepolis. Here, we deliberately leave aside the Post-Achaemenid "Frataraka" Complex as we will discuss it in the conclusion of this present article.

Given the elements of the plan known from geophysics, we can dismiss comparisons with buildings of the Royal Area which present a large, columned, hall-centered plan, that is to say all the constructions on the Terrace defined as palaces, including the Apadana and the Hundred Columns halls as well as buildings C, D, E, and F of the Southern Quarter.[8] The other buildings of the Royal Area are of another plan type from linear and symmetric (the so-called "Harem" on the Terrace), to more clustered plans (for example the Treasury on the Terrace or the Edifice H in the Southern Quarter). Their layout might include large, columned halls, especially for the Treasury, but they do shape the central space and are part of complexes made up of halls, rooms or courtyards of various sizes and shapes. Considering the general aspect of the plan of the newly discovered building complex, it is clearly of the clustered type. The building complex shows series of small-sized rooms, at least 20 m², surrounding two well-identified larger spaces located in the southern and northern halves of the complex. Its composite plan looks like the Treasury one, even though rooms of 20 m² are quite rare inside the Treasury; it better resembles the clustered buildings of the Southern Quarter with spaces more varied in size.

7 For earlier periods, Sumner 2003: 2-3 mentions a building "constructed on a monumental scale" brought to light in the trench ABC at Malyan/Anshan site; for later periods, Chegini et al. 2013 investigated the Early Islamic governmental palace of Istakhr that from the interpretation of aerial pictures by Whitcomb 1979 measured about 8500 m².

8 Name of the buildings for the Southern Quarter refer to those given by A. Tadjvidi as seen in Boucharlat 2010: 435-Fig. 503

As for the two larger spaces of the newly discovered building complex, the southernmost one appears to have been roofed because it lacks visible drainage infrastructures. Considering these comparisons and its size of about 500 m², this space would have been columned. It is smaller than the columned halls of the northern half of the Treasury but quite similar to the halls of the southern half. The second and largest space of the building complex, structuring its northern half, is interpreted as a 850 m² courtyard owing to the possible presence of a water drainage system made with clay pipes around it. Whereas less prevailing than the elements in Susa, where they are central in the Darius residence (Boucharlat 2010:434; Perrot 2010: 471), large inner courtyards are also present at Persepolis. Compared to the size of the two courtyards of the Treasury (200 and 590 m²) or of the courtyard of the north wing of the "Harem" (385 m²), the 850 m² courtyard of the newly discovered building complex is larger. It is however smaller than another identified "inner" courtyard of the Edifice C in the Southern Quarter which measures about 1100 m² (Mousavi 2012: 40).

Regarding how the size of the newly discovered building complex compares to those of the other clustered buildings, it is in the upper range with those measuring between 2000 m² (building B in the South Quarter) and more than 1 ha (Treasury). Then the newly discovered building complex shares many common characteristics with the buildings of the clustered type in the Royal Area. Amidst the official buildings in this area, their functions are often considered as residential and/or administrative[9] while columned, hall-centered buildings would have been rather dedicated to the royal protocol.

For the drainage infrastructures, much informative data comes from comparisons with the Terrace and the detailed studies of E.F. Schmidt (1953). The large courtyards are places where the drainage systems are particularly visible and developed, as detailed by (Schmidt 1953: 142-Fig. 69, 161-162). For the Treasury, the largest south courtyard is bordered on the west and east by drainage canals, connected by a third one crossing the courtyard, and made with monolithic stone blocks fitted without mortar.

9 On the specific function of the building without a hall-centered plan, see the remarks of Boucharlat 2010: 434-437 as well as the synthetic view given by Mousavi 2012: 9-56. On the Terrace, for Boucharlat 2010: 435 and Mousavi 2012: 20, the Treasury is for instance an administrative building and according to Mousavi 2012: 24 the Harem had residential purposes. For the building complexes located south of the Terrace, the functional interpretation, while being a main issue, is unfortunately not often discussed. For Boucharlat 2010: 435, the edifices B, G, and H would have been residences and the edifice A a storehouse; for Mousavi 2012: 32-40, edifice H was a royal residences and edifice A was a storehouse and/or administrative building.

In the north courtyard of the Treasury, the drainage system is of different structure as only one canal was found. It is covered with baked bricks, starts in the center of the courtyard and from there runs towards southeast and then east. Canals built entirely of baked bricks are mentioned in other places of the Treasury by E.F. Schmidt (1953: 162). Drainage systems made with interlocking clay pipes are also documented in several places of the Royal Area: in the "Harem" (Schmidt 1953: 262, 249-Fig. 107E); in the "Garrison Quarter" (Schmidt 1953: 208); and near the Edifice H of the Southern Quarter (Mousavi 2012: 33, 34-Fig. 1.16). The layout of the drainage system in the northwest courtyard of the newly discovered building is comparable to the north courtyard of the Treasury. This comparison with the Treasury strengthens the hypothesis suggesting the use of baked material. Since the magnetic anomalies recorded are quite smooth, we prefer to suggest the use of pipes because generally baked bricks produced more dotted anomalies.

## Discussion on the torus base type

As discussed above and based on taphonomic considerations, the torus found north of the building complex might well come from the newly found building complex, which was probably at least partly columned. By comparing with buildings elsewhere in the region, the torus deserves to be discussed in detail as it provides us a possible dating element for the newly found building. As far as we know, only a few overview studies have been published on torus column bases and they slightly differ from one another. Since B. Wesenberg's study (1971: 104-111), the proportion between diameter and height, defining the profile of the torus, is used to define the types of torus base. This scholar defines a category of *Wulstbasis* for tori whose proportion is between 1:3.2 and 1:7, then ruling out the flat tori placed on top of the bell-shaped bases. Comparing the torus bases from the Treasury with those of the Pasargadae palace P, Wesenberg (1970: 107) suggests two sub-types (not named) depending on the nature of their footings: the first rounder, in the Treasury, with proportions between 1:3.2 and 1:4.8, corresponding to tori sunk in the floor or placed on simple plinths; and the second flatter, at Pasargadae, between 1:5.4 and 1:7, for tori placed on double stepped plinths. Later, and based on new examples published by A.B. and G. Tilia (1978), J. Boardman (2000: 62-68) divides the torus bases within two categories different from those suggested by Wesenberg: the plump ones with proportions of nearly 1:2 and the flatter ones with proportions between 1:4.1 and 1:5.6. Boardman did not build his classification on the nature of the base's footings but after having considered that plump tori are found only in Early Achaemenid buildings (Boardman 2000: 63).

After this short review, we face three different types that we suggest to name as follows: the plump tori with proportions between 1:2 and 1:3; the swelling[10] tori for proportions between 1:3 and 1:5.5; the slim[11] tori for proportions between 1:5.5 and 1:7. The torus found next to the newly discovered building complex has a 1:3.8 proportion and then is of swelling type.

As Wesenberg pointed out, most of the examples of swelling tori come from the Treasury on the Persepolis Terrace. Therefore the column bases from the Treasury will be the main comparison element for the torus found next to the newly discovered building. Wesenberg (1971: 107) suggests a sub-sorting of the Treasury tori regarding, again, the nature of their footing. He stresses that bases on plinth are flatter with a proportion value not up to 1:4.4, while on the other hand rounder basis are all sunk in the floor. The swelling tori sunk in the floor are distributed in five rooms of the southern part of the Treasury (rooms or hall 5, 8, 62, 64, 83). Their mean proportion value is 1:3.5 and their mean longest diameter is 62 cm as measured on the drawings published by E.F. Schmidt (1953: 145-Fig. 72B-D, F, H). Thus, the torus found in the field to the north has values of 1:3.8 for proportion and 66 cm for the longest diameter and is very similar to the tori sunk in the floor from the Treasury. Considering its single molding on the top without an astragal, the closest example is the base B as illustrated by E.F. Schmidt (1953: 145-Fig. 72B). As the above comparisons demonstrate, the torus found next to the newly discovered building complex might have been sunk in the soil and not standing on a plinth. Finding this base floating in the subsoil would mean that its original construction, maybe connected to the building complex, was leveled as deep as its foundations like it was suggested above.

This comparison with the swelling type torus column bases sunk in the floor from the Treasury also enables us to make suggestions for dating their use. The foundation of the Treasury dates back to the Darius reign and was one of the first buildings standing on the Terrace (Roaf 1983: 151-Fig. 152, 157). Its construction was done in three distinct phases and ended during the reign of Xerxes when the foundation of the so-called "Harem" began (Schmidt 1953: 200). Then, the south part of the Treasury, where the swelling tori sunk in the soil are concentrated, belongs to the first and oldest phase of the Treasury construction dating back to the first half of the Darius reign. Considering the nature of the footing of the bases as meaningful, we can extend

10 "swelling" refers to the term introduced by Tilia 1978: 89.

11 "slim" refers to the term introduced by Dusting 2014: 83-97.

extend this chronological discussion to the plump torus category, all of which are not on plinth.[12] It is generally admitted that they are used rather in the earlier phases of the Achaemenid period and only in the Persepolis area (Tilia 1978: 80; Boardman 2000: 63; Dusting 2014: 83; Kleiss 2015: 105). To conclude, the use of tori as a single element of column bases, then corresponding either to the plump or to the swelling tori, are more often concentrated in the Early Achaemenid times. No similar example has been recorded until now for later periods in the region. The proportion and size of the newly found torus led us to sort it into this category and then to date its carving to the Achaemenid period, most probably to its early phases.

## Conclusive remarks on the newly found building complex

The above-mentioned material allows us to propose hypotheses concerning the nature and the dating of the newly discovered building complex.

Considering its dating, several data lead us to suggest that the newly discovered building complex is Achaemenid in date: its orientation parallel to all known constructions in the Royal Area and in Persepolis Northwest; its connection to the well-dated large-scale Persepolis Northwest drainage orthogonal network; its plan comparable in many aspects to Achaemenid buildings of the Royal Area; and finally, the presence of the complete swelling torus base found nearby on the surface.

As for the nature of the building, all evidence so far demonstrates it was a monumental edifice: its large size next to 1 ha; the visible parts of its plan with a large courtyard and/or halls; the possible use of columns in its architecture; a hypothesis linked to the size of several rooms that need columns to be roofed and strengthened by the discovery of the torus. The comparison with the buildings of the Royal Area of a similar clustered type plan would demonstrate we are dealing with an official building not directly linked to the royal protocol but sheltering other types of activities (residence, administrative...) and more likely related to the everyday life of the regional capital. Unfortunately the scant archaeological finds on the surface, as well as the lack of information on the exact use of the buildings in the Royal Area, do not enable us to further deal with the topic of its function.

12 Plump tori are recorded by Boardman 2000: 63 in the Dasht-e Gohar columned building (Tilia 1974, 1978: 73-80; see also the recent discussion of Bessac, Boucharlat 2010: 30-36 on the dating of the Dasht-e Gohar platform and building complex) and later by Dusting 2014: 95-96 in the Bagh-e Firuzi area and the Firuzi 11 site (Tilia 1978: 80-82, 74-Fig. 1, named Firuzi B in this publication).

a connected outbuilding towards the north. It seems indeed quite unlikely that the limits of modern field match those of the building that would have extended farther north. As a consequence, while keeping in mind the above discussion, we have decided to integrate this torus base within the general and following discussion on the dating and functioning of the newly discovered building complex.

## Some considerations on the Royal Area space through the discovery of the building complex

Revealing the building complex some 450 m north of the Persepolis Terrace and 100 m north of the "Frataraka" Complex leads to several reconsiderations of the spatial organization of Parsa around the Royal Area. As mentioned in the introduction and since the works of E. Herzfeld and later of A. Tadjvidi (1976) discussing the east, north and south of the Terrace, it has been firmly demonstrated that the Persepolis Terrace was part of a larger 50 ha monumental complex (Schmidt 1953: 47-57; Kleiss 1980, 1992; Mousavi 1992, 1999, 2012: 10-49; Boucharlat 2010: 428-435), leading us to suggest the name Royal Area. The discovery of the building complex, which seems to be a large official building Achaemenid in date, makes us approach the topic of possibly extending the boundaries of the Royal Area farther beyond. Together with earlier data, rarely discussed so far, it provides evidence for discussing this issue. This hypothesis needs also to be approached by taking into account the archaeological topography of the area and the proximity of the "Frataraka" Complex. The spatial definition of a broader Royal Area is of importance as it would be part of the answer to the intricate and regularly addressed question of the location of the official and administrative places linked to Parsa. Before focusing on this topic, it seems to us important to suggest an archaeological definition of the Royal Area.

### Archaeological definition of the Royal Area

The name of Royal Area, frequently used in this article, is briefly defined in the above introduction and needs here to be detailed because it is not very common in the literature concerning Persepolis. The definition of the Royal Area needs first to be considered in the framework of our broader proposed reconstruction of the Persepolis/Parsa cityscape. Within the several square kilometers of the Persepolis Settled Zone, we suggested to reconstruct a diffuse pattern of occupation with settled places gathered into sectors of distinct function and nature.

Following this idea, the Persepolis Northwest area would have welcomed parts of the inhabitants of the city and their everyday activities. This assertion is based on several archaeological observations. During the 1960s, when W. Sumner (1986: 9) surveyed the Persepolis West area, the remains there still corresponded to clusters of low earth mounds. Earlier, a comparable archaeological landscape west of the Terrace was briefly described by E. Herzfeld (1929: 31-33). The tepes have now disappeared due to modern farming, but settled places are still recognizable through scarce but preserved remains, like ditches or kilns, as well as large areas of potsherd concentrations which overlay more magnetic soils mapped through combined field-walking and geophysical surveys. The successive research on Persepolis Northwest (Boucharlat, De Schacht, Gondet 2012; Askari Chaverdi, Callieri [eds.] 2017) did not reveal remains of any monumental building but rather those of residential and/or craft sectors made up of constructions mainly built in mud bricks as demonstrated by the former presence of tepes.

In contrast, the Terrace and its surroundings reveal very different and varied archaeological remains. From an archaeological point of view, the main and common criterion of all the constructions in this area is monumentality: monumental scale and monumental architecture by the extensive use of stone with the columned spaces all act as a shared signature. Of course this criterion is only morphological and deliberately sets apart the question of the precise function of the buildings that is still frequently debated.[13] However, on this topic, it is certain that many of these buildings were dedicated for the royal protocol, used by kings and their courts. The Terrace and its surroundings was certainly also the space where the permanent administration of Parsa lived and worked. Then, considering Persepolis on a broader scale, the Terrace and its surrounding area, namely what we suggest calling the Royal Area, was obviously the symbolic seat of the power and would have been one of the places, and probably the most important one, of the permanent administration of Parsa. The Royal Area should be considered as the main official sector of Parsa, the term “official” chosen to determine that the common nature of all its buildings is to be linked to the royal and/or provincial authority.

13 Among dozens of other articles on this topic, see the recent contributions of Mousavi 2012: 9-56 for a synthetic view on the function of the monuments as well as the more recent attempt for a global reinterpretation of the Terrace as a cultic place by Razmjou, Roaf 2013.

Taking these criteria into account, we suggested to gather the Terrace, the Southern Quarter and the slope east of the Terrace within the Royal Area.[14] This suggestion is strengthened, for the Southern Quarter, by the obvious royal/aristocratic character of some edifices, proof reinforced by the presence of column bases inscribed with the name of King Xerxes in the edifices F and H (Tadjvidi 1976: 107-fig. 102, 103, 108; Mousavi 2012: 33, 38) and the unfinished rock-cut tomb farther south generally accepted as royal in character because of it similarity with tombs located at Naqsh-e Rustam and east of the Terrace (Kleiss, Calmeyer 1975; Mousavi 2012: 26). Moreover, previous data, now including the new building complex, seem to demonstrate that the Royal Area extended beyond previously defined boundaries.

## Previous evidences for broadening the Royal Area

Evidence for the presence of other official buildings in the Royal Area surroundings is recorded in scientific documentation and/or is still visible on the field. Several hundred meters farther south of the above-mentioned unfinished tomb,[15] A. Tadjvidi (1976: 14, 15-fig.8) excavated a columned building when the new village of Vali Asr was founded at the beginning of the 1970s (**Fig. 8**).[16] For him, this discovery demonstrates that the Southern Quarter stretched farther south during the Achaemenid period (Tadjvidi 1976: 14). Farther to the south, the Tilias (1978: 80) published that tori column bases came from a tepe near the Tol-e Bakun A and B sites, a place named Persepolis South by W. Sumner (1986: 9). Although isolated finds, their presence might show that the plain south of the Royal Sector was dotted with other official buildings and that its southernmost limit may need to be redefined.

To the west, data are scarcer because of the planting of the large pine forest during the 1960s and afterwards building the infrastructures for the 1971 Jubilee. While the plan of Weld-Blundell (1893: 549) shows mounds west of the Terrace as noted in the general descriptions of E. Herzfeld (1929: 32) or E.F. Schmidt (1953: 55), the modern landscaping had probably destroyed or at least severely reduced these remains.

14 Our suggestion slightly differs from the reconstruction of Persepolis as suggested by Mousavi 2012: 10 dividing Persepolis into two distinct parts: on the one hand the Terrace and the fortified slope being the citadel; on the other hand the clusters of edifices to the south being the lower city.

15 Mapping and more extensive description of the finds farther south to the Southern Quarter is available in Gondet 2011: 185-186, Pl. 20.

16 Probably the site of Tol-e Merabakhi located south of the modern village; it is now under the protection of the Miras-e Farangi.

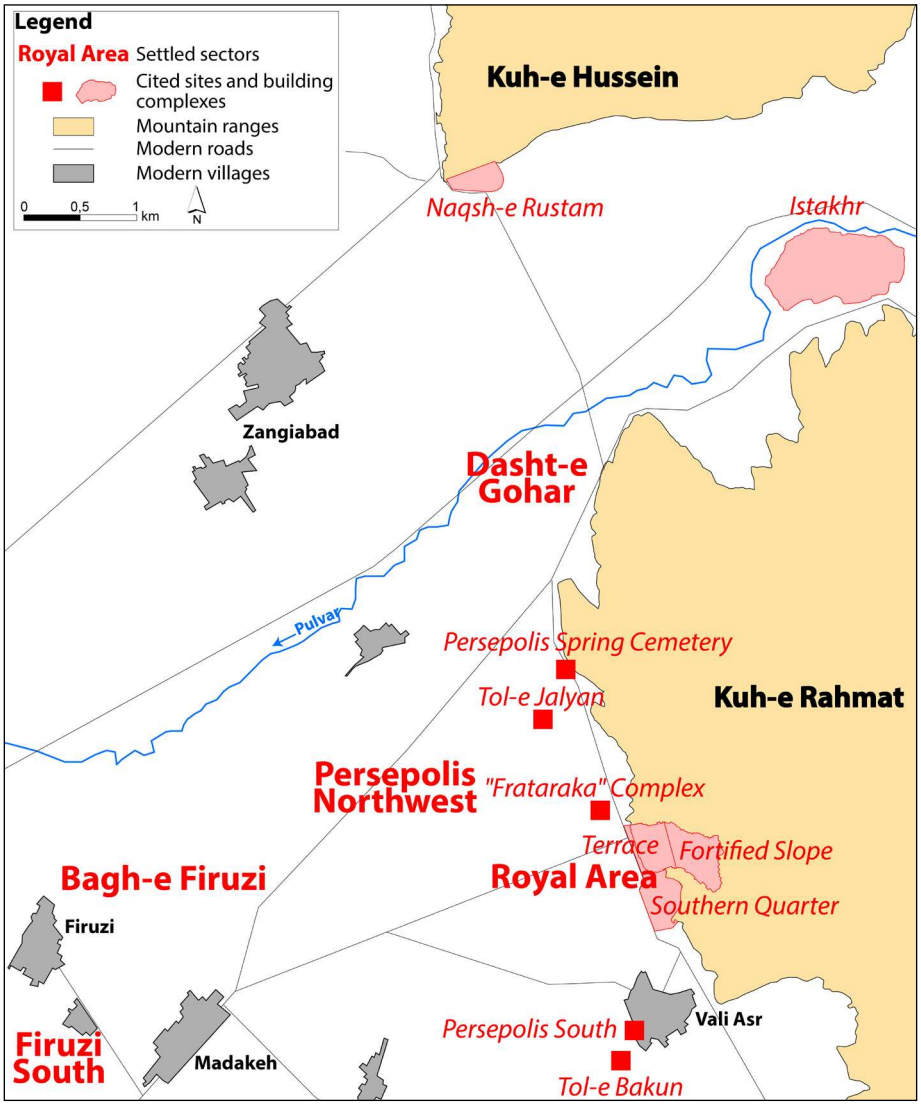


*Fig. 8. Location map of cited sites and sectors in the Persepolis Settled Zone.*

Limestone slabs located southwest of the large parking lot built near the Persepolis site ticket office are not in-situ (Shobeiri 2017). About 500 m west of the Terrace, presently within the pine forest, A. Mousavi (1992: 217) mentions that A. Sami reported the presence of a thick mud-brick wall. These data are unfortunately not enough to discuss a possible extension of the Royal Area towards the west.

Towards the north of the Terrace, the evidences for the presence of official buildings are more obvious. The "Frataraka" Complex is obviously one indication and other features also need to be reported. Evidence for monumental architectural is recorded as far as the Tol-e Jalyan site located 1 km northwest of the Terrace. Some 200 m south of this mound, two stone slabs and a large piece of a monumental stone stairway 2.65 m in width with at least four conserved steps were recorded some 30 years ago.

Although not in-situ, the heavy weight of this architectural element speaks in favor of a displacement over a short distance from a monumental building nearby (Ibnoerrida 2017). To the southeast, a stone doorway stood in the valley north of the Terrace at the time of E. Herzfeld. Herzfeld's limited excavations at the time demonstrated it was an element of Achaemenid architecture from the Terrace reused in a Post-Achaemenid construction (Schmidt 1953: 55-56). In this small valley, a recent survey including geophysics (Aminpour 2006) as well as mapping of the surface potsherds carried out in the framework of the Iranian-Italian operations, their data still being processed, might suggest that the building excavated by E. Herzfeld was part of a larger settled area. Together with the results coming from the excavation of the Late/Post-Achaemenid Persepolis Spring Cemetery near Tol-e Jalyan (Schmidt 1957: 115-123), these data draw the outline of an area north of the Terrace, as far as 1 km, quite rich in archaeological features. Given the few dated elements (Spring Cemetery, an edifice in the north valley), it would appear that this northern area was more likely the place for the Post-Achaemenid occupation of Parsa, a chronological consideration strengthened by the presence of the "Frataraka" Complex discussed below. Nevertheless considering the newly found building complex, this area might also have been settled as early as the Achaemenid period and may also be linked to the Royal Area.

## The "Frataraka" Complex and scenarios suggested for an extension of the Royal Area

Following the above discussions on the nature and the dating of the newly discovered building complex, do we have enough information to consider this an extension of the Royal Area towards north during the Achaemenid period ? To approach this question, we need to consider the newly discovered building complex together with the "Frataraka" Complex, given their proximity, their shared orientation,[17] and their similar characteristics. While about 100 m separates one from the other, the magnetic map does not show evidences for links between them. These 100 m do not show features revealing buried archaeology and we may face two distinct complexes; but this observation needs to be balanced by the fact that any features might have been leveled by regular ploughing.[18]

17 For the northwest building of the "Frataraka" Complex, the orientation is identical to the new building complex.

18 Callieri 2007: 63 mentions the discovery during the 1970s of square columned bases north of the "Frataraka" Complex. They are made of reused stone from the Artaxerxes I Palace standing on the Terrace.

Considering our above-mentioned criteria, the "Frataraka" Complex has to be interpreted as an official building. The "Frataraka" Complex extends over at least 4000 m² and its excavated part follows a clustered plan. It integrates columned spaces, and presents stone architectural elements like bases and thresholds.[19] This complex consists of two distinct wings, the northwest and southeast ones, that for all scholars would have been of different function and dating. The southeast building is generally seen as a later addition dating back to after 200 BCE, given its construction techniques, the quality of the relief carved in the window jambs, as well as its slightly different orientation (Callieri 2007: 52-53, 144-145; Mousavi 2012: 77). For the northwest building, despite the poorly published 1920s excavation results of E. Herzfeld, we can now rely upon more modern studies made by P. Callieri (2003, 2007: 51-68, 2017: 391-392). They are based on in-situ observations as well as on unpublished excavation data kindly provided by N. Chegini after having opened a sounding in the "Frataraka" Complex in the early 2000s. Callieri (2007: 56-62) carefully examines the Room 5, hosting a pedestal for a statue as well as four three-stepped plinth column bases of a type unknown on the Terrace, and its surroundings. He firmly demonstrates that all the visible remains of the northwest building pertain to one architectural phase and dated to the Post-Achaemenid period, i.e. Hellenistic and between 330 and the first quarter of the 3rd cent. BC. This dating was later accepted by A. Mousavi (2012: 74-77) and R. Boucharlat (2014: 128). On the other hand, an earlier Achaemenid foundation reused after the fall of Persepolis for the northwest building of the "Frataraka" Complex is still being debated since an article of D. Stronach (1985: 612-616), among other publications. However, no firm argument has been published yet that would give weight to this hypothesis[20] and, as observed by Stronach (1985: 614) himself: "the evidences would merit re-examination on the ground". As far as we know today, the only certain architectural and occupation phase for the "Frataraka" Complex is Post-Achaemenid.

This review on the chronology of the "Frataraka" Complex bears consequences for the topic of the extension of the Royal Area. Different scenarios may be exposed. First, the two complexes are connected and then might be considered as a cluster of official Post-Achaemenid buildings north of the Terrace, demonstrating a deliberate displacement of the official sector of Parsa to the north after the Achaemenid period.

19 For the general description and other following considerations, we extensively refer to Callieri 2007: 51-63 who published the most detailed study dealing with the "Frataraka" Complex.

20 Recently Roaf, Razmjou 2013: 413-415 repeat the hypothesis of a possible Achaemenid date without new convincing evidences as discussed by Callieri 2017: 391-392.

They were inserted in the still existing Achaemenid occupation layout known in Persepolis Northwest. This scenario would lead us to date the newly discovered complex as strictly Post-Achaemenid. A second scenario considers the newly found building complex as an Achaemenid foundation, some evidence already mentioned supports this hypothesis. This complex would be considered as a new reason for extending to the north the Achaemenid Royal Area. Between its location and the Terrace, we do not rely on reliable data concerning the Achaemenid presence, a topic that the discovery of the new building complex should lead us to reconsider with a fresh look, including the "Frataraka" Complex. The "Frataraka" Complex would have been built later and integrated into the pre-existing Achaemenid layout. Whatever the chronological order, the discovery of the new building complex leads us to rethink the occupation history of the area north of the Terrace within the Achaemenid and Post-Achaemenid organization of Parsa.

## Perspectives

By taking into consideration all the distributed Achaemenid, and/or Post-Achaemenid, evidences of monumentality (isolated stone architectural elements and large buildings), we might define a sector with a radius of approximately 1 km, from Tol-e Jalyan to the north as far as the Vali Asr modern village to the south, where archaeological remains for the presence of official buildings are or were observed. Obviously we do not suggest that the whole area was carpeted with lavish buildings as the distribution of these elements tends to show a loose distribution. As it was observed for Persepolis Northwest (Boucharlat, De Schacht, Gondet 2012: 259-264; Gondet, Mohammadkhani 2017: 20), we would reconstruct the Terrace surroundings as a more open and mosaic-type landscape where unconstructed spaces, maybe green areas, were common, similar to the case in the Royal Area between the Southern Quarter and the Terrace. Broadening the limit of the official precinct of Parsa also leaves spaces for many of the missing elements (storehouses, administrative buildings, aristocratic and functionary residences...) of the official Parsa, i.e. the capital of the Persian province for the Achaemenid and Post-Achaemenid periods, as well as for sheltering the royal encampment, i.e. the Achaemenid mobile imperial court.

Such a reconstruction of the Persepolitan official space also serves as a framework for suggesting directions for future research in line with that already implemented during the last dozen of years in the several above-mentioned projects.

For Persepolis, and in the same light for other Achaemenid sites, we are convinced that it is by considerably broadening the spatial scope of the research that we will be able to reconstruct cityscapes piece by piece. Defining such a large Royal Area raises many issues. The revealing of other new buildings, the function and the dating of the known ones, the identification of the green areas and their layout, and the question of the limits of the Royal Area with the settled Persepolis Northwest sector[21] are critical topics to focus on. Given the recent human impact on the landscape, it is worthwhile to note that probably much of the archaeological data enabling us to answer these questions have probably disappeared. Nevertheless the results and considerations published in the present article enable us to bear optimistic perspectives. A thorough study of the new building complex, necessarily planned together with new stratigraphic excavations of the "Frataraka" Complex and their surroundings, would be a first and promising step for broadening our knowledge on Parsa.

21 For this particular topic, for example, we need more consideration for and discussion about the hypothesis in Mousavi 1992 for reconstructing a sort of outer wall or fence as well as the publication by Asadi, Gallupi 2017 of a thick wall, 1 m in width, in the Trench 3 opened by the Iranian-Italian mission 600 m west of the Terrace.

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