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THE FIRUZI AREA
WITHIN THE ARCHAEOLOGICAL CONTEXT
OF PERSEPOLIS: A REAPPRAISAL, BASED ON MAPPING
AND CHRONOLOGICAL REMARKS

SÉBASTIEN GONDET, RÉMY BOUCHARLAT

FOREWORD

Persepolis and its surrounding territory are at the centre of our present tribute to our colleague and friend Prof. Pierfrancesco Callieri. For Sébastien Gondet, this area was from 2012 to 2016 the field of close and friendly joint work, as a member of the Iranian-Italian team and, from 2012 to 2014, of the Dipartimento di Beni Culturali of the University of Bologna located at Ravenna. It was a great chance to continue work on this Achaemenid center of paramount importance and, above all, gather invaluable knowledge and experience with Pierfrancesco Callieri. As for Rémy Boucharlat, friendship and collaboration date back to earlier times and are linked to common interests in studies of pre-Islamic Iran. They were considerably intensified in the year 2004. This was the starting date of fruitful collaboration in the frame of the international rescue excavation project undertaken in the Tang-e Bulaghi Valley, next to Pasargadae. Of course, this collaboration continued when Persepolis became a shared topic of research. Suffice to say, Pierfrancesco Callieri has played a prominent role in the renewal of approaches in Achaemenid scholarship during the last two decades, as well as in the development of international cooperation in Iranian archaeology. A recent article he published in 2020 with Alireza Askari Chaverdi detailed the critical results collected at Persepolis during the last decade (Askari Chaverdi, Callieri 2020). As it was received during the last moments of writing the present article, it is scarcely cited. We here wish to provide a slightly different and mainly converging and complementary reading, which may be considered as a basis for future discussion.

CONCISE OVERVIEW OF RECENT ARCHAEOLOGICAL WORK AT PERSEPOLIS BEYOND THE TERRACE

Since the (re)discovery of Persepolis by European travelers, the Terrace is Persepolis and Persepolis is the Terrace. This lavish complex supporting numerous monumental buildings with stone architecture appeared to be unique in the frame of a Near Eastern archaeology dominated by mud brick constructions. Centuries after their abandonment, however, the most impressive and famous sites became mud mounds with almost nothing visible on the surface. In contrast, it seems that at Persepolis everything is still visible. Ironically, the Persepolis Terrace monuments were also mainly built with mud brick. The stone remains at Persepolis continues to astonish the visitor and the royal display still dominates the landscape. The 12 ha Terrace complex and its surroundings, namely the Southern Quarter and the Kuh-e Rahmat fortified slope, have captured the attention of archaeologists from the beginning of scientific research at the site in the 1930s, right until the beginning of the 21st century. These remains all cover an area of at least 50 ha that we named the Royal Area. We wish to stress that the Royal Area can be correctly understood and interpreted only by considering its environment and the archaeology of the plain around the Terrace.

This remark leads to the simple question: What was Persepolis from a spatial point of view? In the field, this means defining its limits and, within them, the nature and morphology of features shaping the landscape. As regards the issue of limits, it was suggested elsewhere that the development of Persepolis needs to be considered over a space defined at least, to the South, by the Royal Area and, to the North, by the royal necropolis of Naqsh-e Rostam (Boucharlat 2003; Talebian 2008; Boucharlat, De Schacht, Gondet 2012; Askari Chaverdi, Callieri 2017). As the crow flies, Naqsh-e Rostam is located 6 km North of the Terrace and has to be considered part of Persepolis (Fig. 1). Considering the extent towards the West and the South of the Royal Area, one only needs to refer to the seminal contribution of William Sumner (1986), based on former work published by the Italian architect Giuseppe Tilia and his wife Ann Britt Petterson (Tilia 1978). Their comprehensive reconstruction suggests that Persepolis extended as far as the modern village of Firuzi, located 5 km West of the Terrace. This area of at least 30 km² thus encompassed settlements and landscape features that may have shaped Persepolis.

From an archaeological point of view, independently of any reference to epigraphic documents, it has been suggested elsewhere to call this area the 'Persepolis Settled Zone' based on the survey work of the Iranian-French project in the region, carried out from 2005 to 2008 (Boucharlat, De Schacht, Gondet 2012). The issue of Achaemenid landscape morphology around the Terrace was recently summarized by integrating most of the available archaeological data (Askari Chaverdi, Callieri 2020; Boucharlat 2020; see also the synthetic view on archaeological work at Persepolis of Mousavi 2012). Above all, the landscape

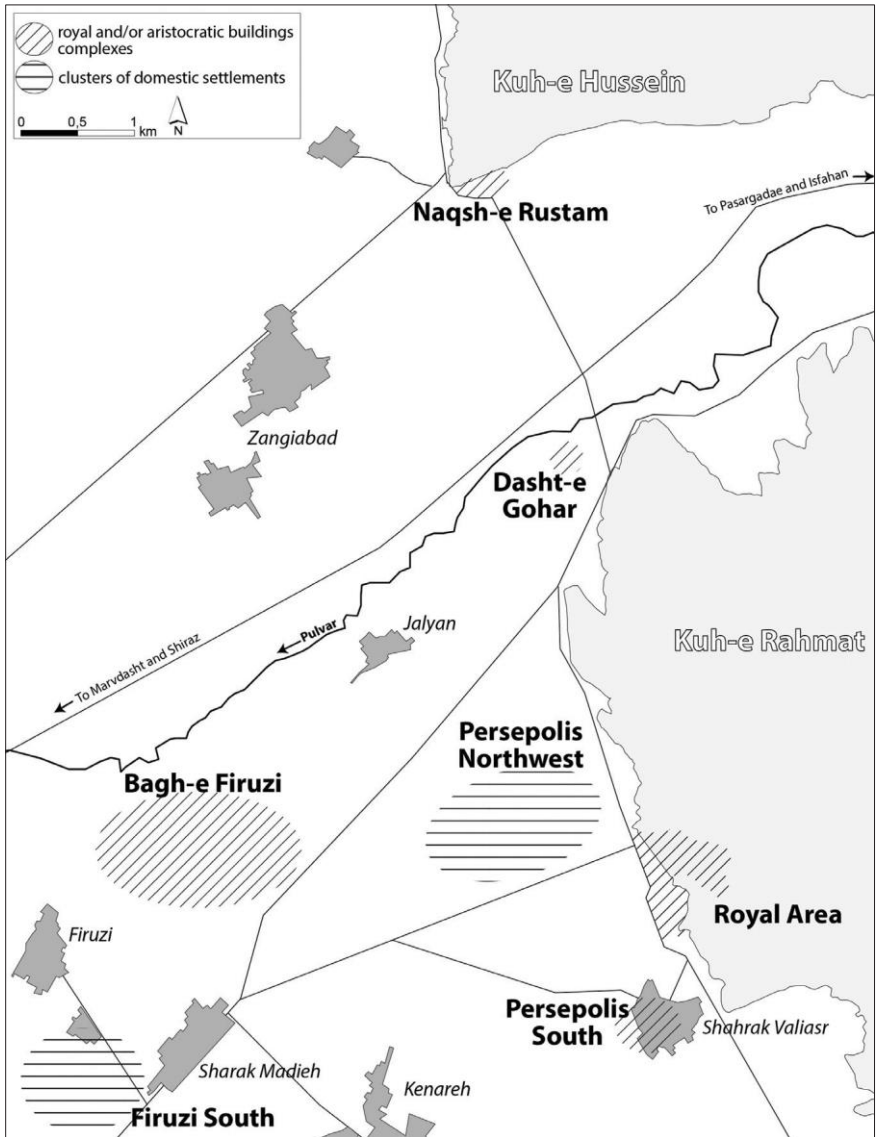


Fig. 1 - General map of the Persepolis Settled Zone and of its constitutive settlement clusters and royal/elite complexes.

around the Royal Area may be characterized as open. Clusters of settlements distributed over a large surface were surrounded by cultivated and green spaces, a pattern rather like that of Pasargadae (Gondet 2018; Gondet et al. 2019). We

can now assume that Persepolis should no longer be defined as a stronghold, since this term ought to be restricted to the Terrace. For that specific place, however, the term is also somewhat contentious, and should be discussed.

The work of the Iranian-Italian joint team managed by Alireza Askari-Chaverdi and Pierfrancesco Callieri, which began in 2008, is a seminal contribution for reconstructing Persepolis. The still-ongoing project was the first long-term and multidisciplinary one to focus on the archaeology of the Persepolis Settled Zone. It followed a series of miscellaneous studies dealing with the Post-Achaemenid or Hellenistic period in Fars (Callieri 1995; 2003; 2007), and the archaeological definition of the Achaemenid/post-Achaemenid transitional period (Askari Chaverdi, Callieri 2010; Callieri, Askari Chaverdi 2013). The implementation of the program followed a spatial progression from the Royal Area towards the Firuzi Area. The first phase of the project (2008-2011) concentrated on the Persepolis West area, a cluster of mounds defined by W. Sumner as the ‘popular’ Persepolis. Complementary to a previous Iranian-French geophysical survey (Boucharlat, De Schacht, Gondet 2012), their field-work allowed confirming the presence, West of Terrace, of a large network of ditches, several hectares in surface. It is mostly Achaemenid/Post-Achaemenid in date and encompasses several settled sectors, one of them being certainly a craft production area (Askari Chaverdi, Callieri 2012; 2017; Askari Chaverdi et al. 2016). As the extent of the layout outlined by the drainage network allegedly exceeds the limit of the Persepolis West cluster, we suggested calling it the “Persepolis North-West Area,” instead of Persepolis West (Boucharlat, De Schacht, Gondet 2012). The second phase of the project focused on the Firuzi Area and led to a breakthrough in Achaemenid archaeological studies with the discovery of the monumental gate of Babylonian style at the site of Tol-e Ajori.

Our present tribute to Pierfrancesco Callieri focusses on the consequences of these recent excavation results, in order to rethink Persepolis. Taking into consideration the need to place archaeological data on Persepolis in a broader context, we shall base our observations on complementary mapping using available documents, old maps and aerial photographs. They predate the modern use of intensive farming practices, which have deeply reshaped the landscape around the Persepolis Royal Area.

OVERVIEW OF CURRENTLY AVAILABLE DATA ON TOL-E AJORI AND THE FIRUZI AREA

Data from before the 2000s

Clusters of tepes or mounds in the vicinity of the modern village of Firuzi were known following the early large-scale mapping of archaeological remains in the Persepolis/Marvdasht Plain, published by Erich F. Schmidt (Schmidt

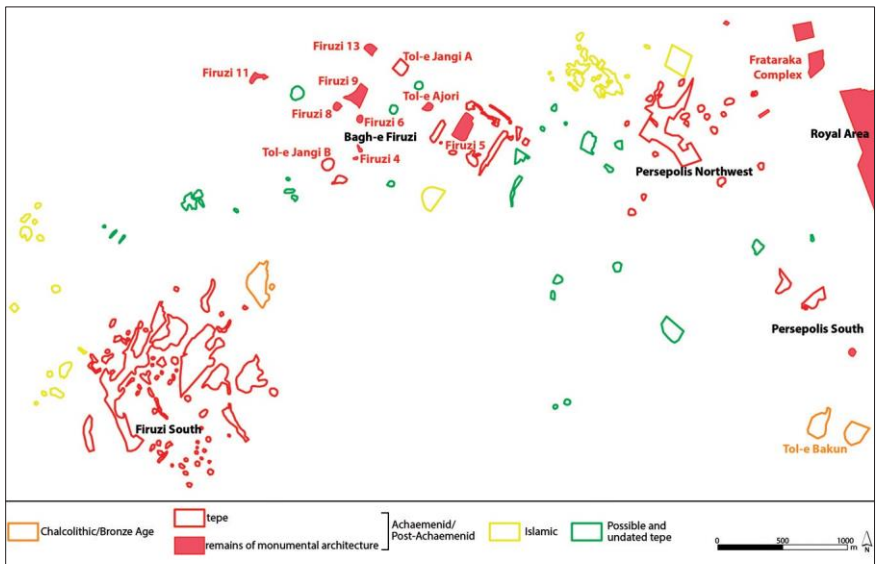


Fig. 2 - Suggested reconstruction of the archaeological map west of the Persepolis Terrace in 1966. Archaeological areas are designated according to the 1966 historical aerial photographs and 1:5000 maps; chronology derives from W. Sumner's survey data (1972; 1986).

1939: fig. 94). Louis Vanden Berghe (1954: 405, Map 5) and Paul Gotch (1968; 1969) subsequently surveyed the area. At this stage, the Firuzi sites were only dots plotted on regional maps and attributed to prehistoric periods. In the 1950s, at Gowd-e Gavmishé near Tol-e Ajori, Ali Sami (1970: 34) excavated an isolated construction made of large well-cut limestone slabs. This feature was re-published by Ali-Akbar Tadjvidi (1976: 9-14), supplemented by miscellaneous discoveries around Firuzi of stone architectural elements attributed to the Achaemenid period.

More detailed field observations on the archaeology of the Firuzi Area were published in 1978 by the Tiliás (1978: 80-85). Published data were restricted to the sector called Bagh-e Firuzi East of the Firuzi village, where eight Achaemenid sites were recorded. The team managed by the Italian architect first excavated the much-disturbed remains of what they called an "Achaemenian palatial building" (Tiliás 1978: 82), i.e. the columned building named Firuzi 11 in the Sumner's nomenclature (Figs 2 and 4). The other described construction is located about 600 m South-East and corresponds to Sumner's Firuzi 6. The soundings revealed two stone platforms and, nearby, fragments of monumental sculptures, in the shape of carved pieces of wing. In the opinion of the Tiliás, the platforms may have been the thresholds of a monumental gate house protected by winged creatures. The archaeological description of Bagh-e Firuzi

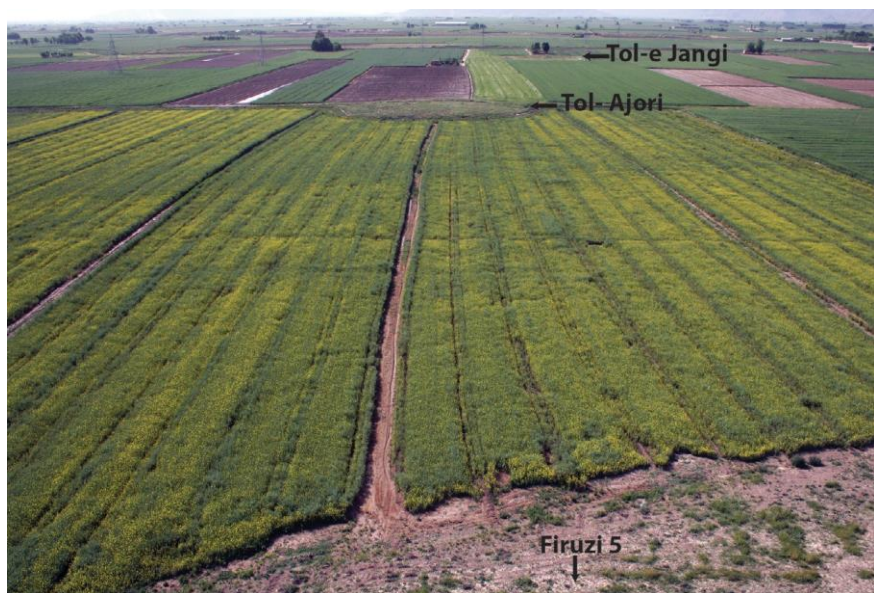


Fig. 3 - Oblique aerial view of the present-day landscape surrounding Tol-e Ajori, taken from a kite, looking North-East. Photo B.N. Chagny.

ends 550 m to the East with Tol-e Ajori, a site covered by pieces of glazed baked bricks, and with Gowd-e Gavmishe.

The main interest of the Tiliās was stone architecture, yet they also regularly referred to other mounds covered by fragments of potsherds or baked bricks located around the sites studied (*ibid.*: 82, 84). Some years later, W. Sumner (1986) published a more complete archaeological map of the Firuzi Area, adding his own data, recorded during his 1960s survey, to that of the Tiliās. According to him, the Firuzi Area encompassed 12 settlements: 9 Achaemenid, 1 Bronze Age, and 2 Sassanid/Islamic. As regards the Bagh-e Firuzi area, he added little information to the map edited by the Tiliās. His 1960s survey predated the discovery of stone remains in the area, and his main focus was the survey of mounds. His main contribution relates to the archaeology South of the village of Firuzi and the description of Firuzi 2 (Sumner 1986: 8). This settlement encompasses a cluster of at least 14 low mounds spread over an estimated rectangular area of 75 ha, where what he defined as ‘Achaemenid pottery’ seems to predominate. Firuzi 2 appeared as a large settlement zone of different nature and density when compared to Bagh-e Firuzi, and we suggested renaming it as “Firuzi South,” defining it as one of the constitutive settled sectors within the Persepolis Settled Zone (Boucharlat, De Schacht, Gondet 2012: 264-265).

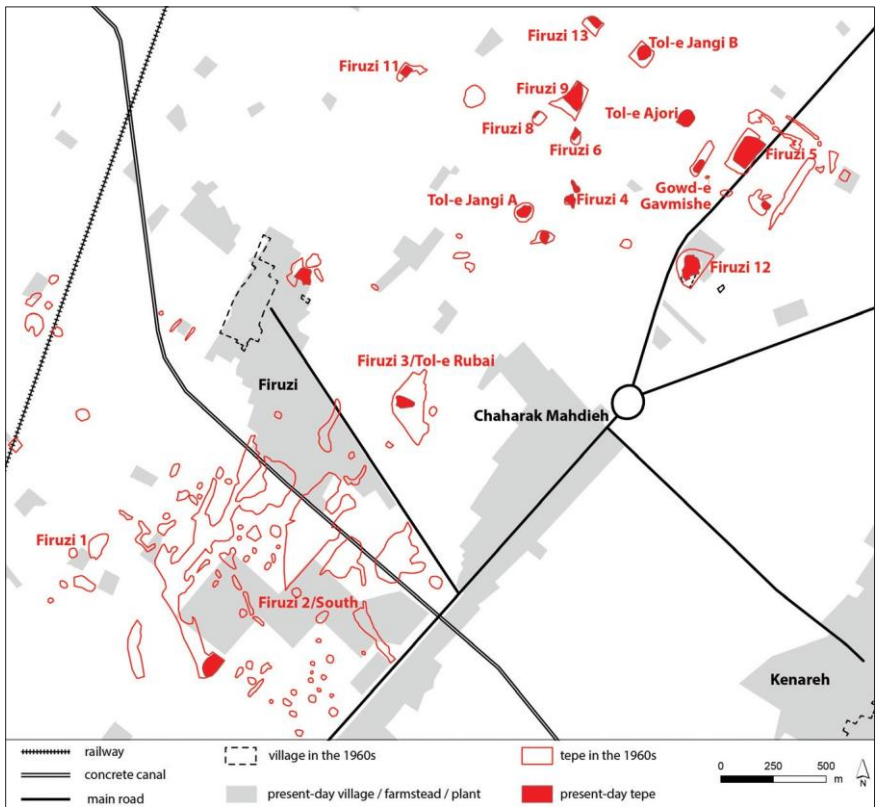


Fig. 4 - Present-day map of the Firuzi Area, on which the suggested location of archaeological areas taken from 1966 historical aerial photographs and 1:5000 maps have been superimposed.

Data Collected During the Iranian-French Survey (2005-2008)

After the Tiliás' survey, the sites of Firuzi were neglected for a long time. The Iranian Heritage authorities protected the Bagh-e Firuzi sites and, in the early 2000s, included them in the buffer protected zone of Persepolis (Talebian 2008).

The Iranian-French survey project in the Persepolis area undertook fieldwork in the Firuzi Area from 2005 to 2008 (Gondet 2011; 2015; 2018; Boucharlat, De Schacht, Gondet 2012). The project was based on reappraisals of archaeological data from Achaemenid settlements in the Persepolis vicinity published by Rémy Boucharlat (2003). The objective was first to reassess the archaeological landscape long after the surveys of W. Sumner and the Tiliás and secondly, to survey and map the space on and between known sites. This reassessment faced dramatic changes in the landscape occurring since the

1970s. Almost all sites published by W. Sumner and the Tilias were destroyed or badly threatened by subsequent farming activities. At Bagh-e Firuzi, some sites were still standing isolated in the middle of intensively cultivated fields (Fig. 3) while the mounds of Firuzi South had completely vanished (Boucharlat, De Schacht, Gondet 2012: 264-268).

The geophysical survey was carried out on sites where stone architectural remains were still protruding. Since uncultivated areas were being reduced in surface around the architectural remains, the maps obtained were of limited extent. The results led to the conclusion of probable destruction of the mud-brick buildings associated with the stone remains. The geophysical survey of Tol-e Ajori was the only one to contribute relevant results. It revealed the plan of what once looked like a large square building with sides of 25 m, partly made of baked bricks. The mapping to the North-West and South-East of adjacent fields also revealed traces of linear features, probably ditches, of similar orientation to that of the Tol-e Ajori building. The orientation of the identified Bagh-e Firuzi remains was different from that of features known in Persepolis North-West: it has been suggested they resulted from two different phases of development (*ibid.*: 267).

Data Collected During the Iranian-Italian Project (from 2011 Onwards)

As from 2011, the Iranian-Italian team concentrated its efforts on Bagh-e Firuzi. The excavation started with both Tol-e Ajori and the Firuzi 5 sites nearby. The subsequent campaigns exclusively focused on Tol-e Ajori until 2018, and the team regularly published reports on its results (Askari-Chaverdi, Callieri, Gondet 2013; Askari-Chaverdi, Callieri, Matin 2014; 2017). The gathered data deeply changed the provisional reconstruction that had been made after the geophysical survey. In summary, excavation work revealed ruined and damaged remains of a monumental gate of almost 39×29 m, with thick walls and a central rectangular room measuring 8×15m. The inner and outer wall faces were decorated by panels of glazed bricks. The plan of the building as well as the decorative elements are strikingly like the Ishtar Gate of Babylon. Among the glazed brick remains, at least four fragments bear a few cuneiform signs (Basello 2017). They were probably pieces of a multilingual (at least Babylonian and Elamite) monumental royal inscription in the inner room. The date of the building is estimated to be the Early Achaemenid period, usually understood as the reigns of Cyrus and Cambyses (Askari-Chaverdi, Callieri, Matin 2017: 223). The building's destruction was the result of a complex process of several looting phases, combined with at least one earthquake event (*ibid.*: 226-231). An early destruction date was suggested, perhaps before the completion of the building (Askari-Chaverdi, Callieri, Matin 2014: 238).

The question of the broader context of the gate was also dealt with (Askari-Chaverdi, Callieri, Gondet 2013: 34-35; Askari-Chaverdi, Callieri, Matin

2017: 221-226). 350 m South-West of Tol-e Ajori, there is a 2 ha low tepe described as the central mound of a larger settlement, called Firuzi 5 by W. Sumner (1986: 8). On its surface, there is a line of at least 8 square and poorly preserved stone platforms with sides of 4 m. The Iranian-Italian team demonstrated that this line of stone features lies exactly on the axis of the corridor of Tol-e Ajori's gate (Askari-Chaverdi, Callieri, Matin 2017: 247, pl. 6b). The team excavated trenches on the Southwestern part of Firuzi 5 and exposed the remains of additional stone platforms. Altogether, these stone remains could define the limits of what would have been a large quadrangular building with sides of at least 40 m. Perhaps it was a hypostyle hall with columned porticoes, since the stone foundations may have supported column bases. In addition to this mound, Firuzi 5 includes two smaller tepes apparently without remains, located about 200 m West and South of the main low mound. As suggested elsewhere (Gondet 2011: 300-305; Askari Chaverdi, Callieri, Matin 2017: 224-225), they could be the remaining traces of what was described by W. Sumner (1986: 8) as a rectangular enclosure outlining Firuzi 5. As a matter of fact, the Gowd-e Gavmishe construction stands inside the Firuzi 5 area. The Tol-e Ajori and all the Firuzi 5 components certainly form the outline of a much larger monumental complex (Askari Chaverdi, Callieri, Matin 2017: 225).

From 2012 to 2015, additional geophysical mapping in fields between Firuzi 5 and Tol-e Ajori, as well as further North-West beyond the latter, allowed us to trace more extensively the long linear features (ditches) discovered in 2005-2008. About 600 m North-West of Tol-e Ajori, the contour of a rectangular building of at least 2500 m² was mapped with geophysics on a much-destroyed low tepe mound. This feature had never been recorded by previous surveys at Bagh-e Firuzi, so it was decided to call it Firuzi 13, following the nomenclature of W. Sumner (Askari Chaverdi, Callieri, Gondet 2013: 6).

NEW RESULTS FROM OLD DOCUMENTATION

Materials and Methods

Current fieldwork in the Firuzi Area was carried out in an environment deeply altered since the 1960s-1970s. The landscape is presently comprised of open fields of dozens of hectares, the result of both mechanized farming and land consolidation. Archaeological fieldwork took place in what may be described as a landscape of destruction. Remaining mounds, increasingly reduced in size, have survived as islands in the middle of the intensively cultivated fields. This situation is a challenge for archaeological research, as the traces of the populations of the past have disappeared or have become harder to record. In this context, the study of historical aerial photographs and maps is often a

solution for analyzing the archaeological landscape prior to its destruction in modern times (Wilkinson 2003).

From the time of Sumner's survey in the region, we have at our disposal a set of topographical maps of the Persepolis Plain at a 1:5000 scale, edited in 1966. They date to before the creation of the long network of canals made of concrete, itself linked to the construction in the early 1970s of the Dorudzan Dam upstream of the plain. This new irrigation scheme induced a complete change of field boundaries over a large part of the plain. The maps were used and annotated by W. Sumner to locate the archaeological sites he surveyed (Sumner 1972: 19-27; 1986: 8, fn.12).¹ The 1m contour lines make the maps highly accurate and a large section of the mounds surveyed by W. Sumner remains visible. In the Firuzi area, their use enabled us to rediscover the location of some Firuzi South mounds that had disappeared (Gondet 2011: 268-273), and of what was assumed to be a large rectangular enclosure around Firuzi 5 (Sumner 1986: 8; Boucharlat, De Schacht, Gondet 2012: 266-267, fig. 15). Despite the precision of these 'historical maps', we cannot rely on them alone for a comprehensive reconstruction of the archaeological landscape as described by W. Sumner. For example, at Firuzi South, Sumner (1986: 8) mentions the presence of two large and high mounds, visible on 1:5000 maps, as well as seventeen lower mounds, with only a small part of them recorded and drawn. The fact that the groups of mounds are hardly charted on maps is directly linked to the nature of what W. Sumner has described as clusters. In his classification of site morphology, a cluster is a hilly landscape where the main landforms are under 2 m high (*ibid.*: 7). The accuracy of 1:5000 maps in rendering the topography of these extensive complexes of low mounds is imperfect.

We were recently able to work with a set of 1966 black and white aerial photographs at a scale of 1:20,000, which covered the entire Persepolis Settled Zone.² Some of these photographs would also have been used by W. Sumner (Sumner 1972: 20; 1986: 4, 10-11). Their spatial resolution is high and metric details are visible. They constitute an invaluable set of documents from the time of fieldwork by W. Sumner and the Tilijs. The reality of the recorded archaeological areas is rendered with more details than on the 1:5000 1966 maps. Their study also provided an opportunity to attempt to locate additional supposed archaeological areas, which had remained unrecorded.

¹ Available in the Sumner archives, they were digitalized during the 1990s. Abbas Alizadeh of the Oriental Institute of Chicago kindly shared them with us in 2005.

² The pictures were purchased in 2013 from the Iranian National Cartographic Center (INCC) of Tehran, in the framework of a Marie Curie European project and of the Iranian-Italian mission. The European Project was funded from 2012 to 2014 thanks to a European IEF Marie Curie fellowship headed by 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).

The superimposition of the annotated 1:5000 maps on the 1966 aerial pictures has allowed us to precisely relocate all the sites mentioned by W. Sumner (1986). Several cross-analyses have helped us to redefine as comprehensively as possible the archaeological areas appearing on pictures as uncultivated spaces. As regards the detection of yet uncharted mounds, we attempted to record new sites based on a body of consistent evidence. Where an area combines an absence of ploughing traces and unexpected curving of modern irrigation canals (both being hints for the presence of a low rise), we have drawn its outline and recorded it as a possible archaeological mound. Finally, we also pinpointed locations West of the Terrace where isolated remains of stone architecture are present in the field (Askari Chaverdi, Callieri 2017; Gondet, Mohammadkhani, Askari Chaverdi 2018). The resulting map (Fig. 2) is a proposed large-scale reconstruction of the archaeological landscape of the 1960s, which permits a reappraisal of large-scale planning in Persepolis.

A Landscape of Destruction

The history of the changing landscape is critical for contextualizing the data obtained at Bagh-e Firuzi. As assessed by the Iranian-Italian team (Askari Chaverdi, Callieri, Matin 2017: 224), the Firuzi Area was cultivated as early as the 10th century CE. From a broader viewpoint based on soil studies, it was possible to demonstrate that the Persepolis Settled Zone included the plain's most fertile land (Gondet 2011: 84-88). Within it were important Chalcolithic sites (for instance Tol-e Bakun), as well as significant ones from the Sasanid to the Early Islamic period (for example Istakhr). One must thus consider the fertile landscape around the Persepolis Terrace as having been constantly reshaped by human activity. In such a context, vestigial features inherited from past periods may have survived as long as there was a certain continuity in the settlement and land-use pattern. In the Persepolis Plain, nevertheless, the continuity in land-use was interrupted for at least the last sixty years because of the deep changes entailed by mechanized and intensive farming.

As for the lands West of the Persepolis Terrace, previous descriptions by field archaeologists are testimonies to the destruction of archaeological features already in progress. When looking at early descriptions by Ernst Herzfeld (1929: 32), one can see that he noticed, to the West of the Terrace, large areas of land with a soil different in colour from the natural earth, a soil that was littered with potsherds. In Herzfeld's mind, these areas defined the extent of the 'city'. At the time of the W. Sumner survey, about forty years later, the landscape West of Persepolis had already changed. He described Persepolis West as "much disturbed" and assessed that "[...] it appears originally to have been a single mound or dense cluster of contiguous mounds, topographically comparable to ordinary Near Eastern town sites [...]" (Sumner 1986: 9). At that time, the planting of a large conifer forest South-West of the Terrace, already visible on 1966 aerial

photographs, had certainly obliterated many archaeological remains. For the Bagh-e Firuzi archaeological sites, the report written by the Tilijs also gave us a depressing view of their state of conservation in the 1970s. The farmers and their tractors brought about the gradual exposure of archaeological remains in the area. They exposed the column bases on the site of Firuzi 11 (Tilia 1978: 80). Several wells were dug on the mounds around Firuzi 6 (*ibid.*: 82). The Tilijs concluded their report by mentioning that, during the 1970s, many archaeological sites were destroyed; they requested excavation before “it is too late” (*ibid.*: 90). Concerning the Firuzi South cluster, Gerhard Kortum (1976: 70) noticed an archaeological mound destroyed by the building of a huge concrete canal.

The 1966 aerial photographs clearly reflect this process of destruction. At the exact location of the Persepolis West cluster, the pictures show agricultural fields eating up little by little previously uncultivated lands that probably correspond to the single large low mound described by W. Sumner (Fig. 2). The remaining parts of Persepolis on the aerial photographs cover 11.5 ha in total, i.e. less than the 25 ha estimated by W. Sumner for the area of Persepolis West. During the late 1960s, a large part of the cluster had already been levelled for cultivation.

The study of the Firuzi Area also illustrates the destruction process during the past 55 years (Fig. 4). The superimposition of the drawings of putative archaeological areas from the 1966 pictures on present-day maps reveals a landscape of destruction. The Firuzi South area is particularly affected, as all the archaeological surfaces have now been levelled. This results from a combination of factors, including the growth of the villages and the building of infrastructures like canals or railroads. Above all, farming has been the main factor of destruction. The development of stabling for cattle around the village led to an intensification of corn cultivation, as well as the digging of many large pits for storing manure. Today, Firuzi South’s land surface is entirely flattened. The situation of the Bagh-e Firuzi Area is less disheartening. All the mounds containing stone architectural remains were rather well preserved, and the highest tells were also visible. However, during our 2005-2008 survey, we were able to document destructions and a shrinking of the areas of these sites. For instance, the Northeastern half of Firuzi 5 has been dug up and the resulting hole is used as illegal dump.

Consequently, it is very difficult to implement a landscape archaeological approach in the present environment. Modern human development has erased most of the landscape features inherited from the past. The suggested reconstruction of the archaeological landscape, based on historical aerial photographs, is critical for re-contextualizing Bagh-e Firuzi and Firuzi South.

General Overview of the Archaeological Landscape West of the Terrace

By merging the results of work on historical aerial photographs West of the Persepolis Terrace with the archaeological data obtained both some time

ago and recently, we have drawn a new map. On it, one can find the supposed locations and extent of archaeological areas from the Terrace as far as the Firuzi Area, for the year 1966 (Fig. 2). This map reflects new hypotheses on the layout of Persepolis and its development. The archaeological landscape appears richer in features on aerial photographs than on contemporary maps at a 1:5000 scale. Chronological information based on the W. Sumner survey records was added to our map. Certainly, the chronological characterization of some areas is debatable, especially in sectors where clusters of different date are adjacent to one another. For example, concerning the Islamic settlement of Firuzi 1 West of Firuzi South (Sumner 1986: 8), W. Sumner gave the precise number of mounds where Islamic potsherds are exclusively present. We attributed the same number of mounds to the Islamic period. For the remaining part of Firuzi South, W. Sumner (*ibid.*: 8) assessed that “Achaemenid pottery predominates but some earlier sherds are present.” We decided in fact to ascribe the remaining archaeological areas at Firuzi South to the Achaemenid period. After examining the photographs, we observed that only a handful of potential archaeological areas has ever been mentioned before. It should be stressed that the survey of W. Sumner was mound-oriented and that the Tilias gave only a brief and general overview of the archaeological landscape beside the Bagh-e Firuzi architectural site. The land West of the Terrace was never subject to a systematic survey that would have included a record of low or/and small isolated sites. We decided to integrate them into the landscape reconstruction proposal as areas with no chronological data.

Regarding the edited map (Fig. 2), the first striking observation is the wealth of the archaeological landscape West of the Terrace when compared to the present. What is clear is that the plain would have been dotted with numerous mounds, and their density appears higher than indicated in previous publications. Their distribution is rather continuous over a large Northern and Western part of the mapped area. The low density in a large Southeastern quadrant may have two causes related to taphonomy. The conifer forest to the South-West has obliterated part of the archaeological remains, and lands seem to have been more intensively cultivated than to the North.

The second main observation concerns the variety of chronological attributions and morphologies of the archaeological areas. Before the Achaemenid period, the Persepolis Settled Zone had been settled during the Chalcolithic (Tol-e Bakun) at the earliest and in the Bronze Age (Tol-e Rubai East of Firuzi village). The remains of these settlements have formed high and probably multi-period mounds. Leaving aside the Frataraka Complex North-West of the Terrace, most probably dating back to the Hellenistic period (Callieri 2007: 51-66; 2017), all the recorded settlements for the post-1st millennium BCE are Islamic. In the Firuzi Area, they are clusters dated to the Late Islamic period by W. Sumner (1986: 8), the one North-West of Persepolis West being Early Islamic (*ibid.*: 9). The ruins of a Late Islamic fortified village are located North

of Persepolis West. Consequently, the Achaemenid settlement layout must be considered in a longer landscape history. It may have integrated inherited features and been disturbed during later periods.

Layout of Persepolis Settled Zone, Based on the Analysis of Aerial Photographs from 1966

The supposed settlements of the Achaemenid period cover the main part of the designated archaeological areas. From a general viewpoint, the map drawn confirms the distribution of the Achaemenid settlement areas into five separate clusters, like those defined by W. Sumner (1986) and later by our team (Boucharlat, De Schacht, Gondet 2012): Persepolis North-West and Firuzi South were described as settlement clusters; the Royal Area, Bagh-e Firuzi, and Persepolis South were defined as royal and/or aristocratic areas (Fig. 1).

Concerning the settlement mound clusters, analysis of the aerial photographs has led to new observations. These have allowed suggesting a location for the 8.2 ha oval mound described at Persepolis South by W. Sumner (1986: 9). Two areas were detected, covering altogether 2.5 ha, which may be remains of this mound. Further South, the small area placed on the map as remains of monumental architecture comprises a columned building excavated at the turn of the 1960s-1970s by A. Tadjvidi (1976: 14), predating the construction of the village of Shahrak Valiasr. As for the Persepolis North-West area, the map strengthens our hypothesis, based on previous survey results, that posits the extension towards the East and North of the Persepolis West cluster defined by W. Sumner. Towards the East, scattered small mounds as close as 400 m from the Kuh-e Rahmat foothill were observed. Towards the North, it seems rather likely that Islamic settlement has eroded the Persepolis West cluster. As regards the Firuzi South cluster, the total mapped archaeological areas extend over almost 38 ha, much more than the 11.5 ha estimated from aerial photographs of the Persepolis West cluster. Based on this observation, one can emphasize that Firuzi South was probably the most extensive archaeological area of Persepolis after the 50 ha Royal Quarter. To sum up, the estimated total areas of the settlement mound clusters at Persepolis are 52 ha. This value is a minimum, considering the state of advanced destruction of the sites in 1966.

Concerning the complexes of royal/aristocratic buildings, new observations were made on Bagh-e Firuzi and its integration within the context of the larger Persepolis Settled Zone. First of all, the isolated character of Bagh-e Firuzi must be mitigated. On the map, the complex of Bagh-e Firuzi is located 850 m from the Western limit of Persepolis North-West. Regarding the space in between, several potential archaeological areas on the aerial photographs were detected, and, moreover, a large Islamic settlement cluster may also have obliterated some earlier remains. Except for the presence of the large Bronze Age site of Tol-e Rubai (Fig. 4), the space between Bagh-e Firuzi and Firuzi South

seems rather empty. We suggest a clear separation between the two settlement sectors of the Firuzi Area.

Comments on the Layout of Bagh-e Firuzi

A focus on the Western part of the Bagh-e Firuzi Area provided us with a more complete vision of the archaeological landscape in 1966 (Fig. 5). This sector includes the main set of monumental buildings, i.e. integrating stone architectural elements. To the interpreted aerial photographs were added data from the Iranian-Italian excavation and from the several campaigns of geophysical survey. Seen in a more complete archaeological perspective, the Tol-e Ajori site cannot be considered an isolated building, as it appears today (Fig. 3).

Additional information is mainly relevant to Firuzi 5. On the 1966 aerial pictures, we can see in great detail the field boundaries following a rectangular shape of about 2.5 ha inherited from the past that includes the mounds of Firuzi 5. To the South-East and probably to the North-East, the area is bordered by elongated mounds (Figs. 4-5). While clearly visible in the 1966 field boundaries, the rectangular area's Southwestern limit does not show any relief. The North-western limit, towards Tol-e Ajori, appears just as indistinct. Beyond the elongated mound located near the South-West of the rectangular area, which has partly survived until the present, there is a strip of land with sparse vegetation. Plough lines are visible, and when compared with the surrounding fields, it appears that this intermediate sector was being reshaped. Farm work along this cultivated strip may have obliterated archaeological features North-West of the Firuzi 5 rectangular area. Inside the rectangular area, the plausible presence of at least four still unrecorded low mounds was noticed. Firuzi 5 may have been a large low mound gradually destroyed by cultivation, where only some sherds remained in 1966. The preserved parts could reflect huge ancient building—the central tepe with the platforms—and an enclosure with thick walls—the Southeastern and Northeastern elongated mounds. The connection between Tol-e Ajori and Firuzi 5 was strongly suggested, since the former had its main axis perfectly aligned with the platforms visible on the latter. In addition, the idea that Tol-e Ajori was integrated into a larger hilly landscape is not to be dismissed. The scattered mounds visible on the pictures could be the remains of a single archaeological complex, already extensively levelled in 1966.

Another point of interest concerns the possible existence of additional low mounds: two North-West of Tol-e Ajori and three South-East of Firuzi 5. The Bagh-e Firuzi Area may have been filled with more buildings or settlements. These data point to a denser Bagh-e Firuzi archaeological landscape. When one also considers the larger surface of the sites, the idea that buildings at Bagh-e Firuzi were isolated and dispersed should be nuanced. The sites may have been loosely but quite regularly distributed following a layout partly outlined by the remains of ditches, whose existence was revealed by recent geophysical surveying.

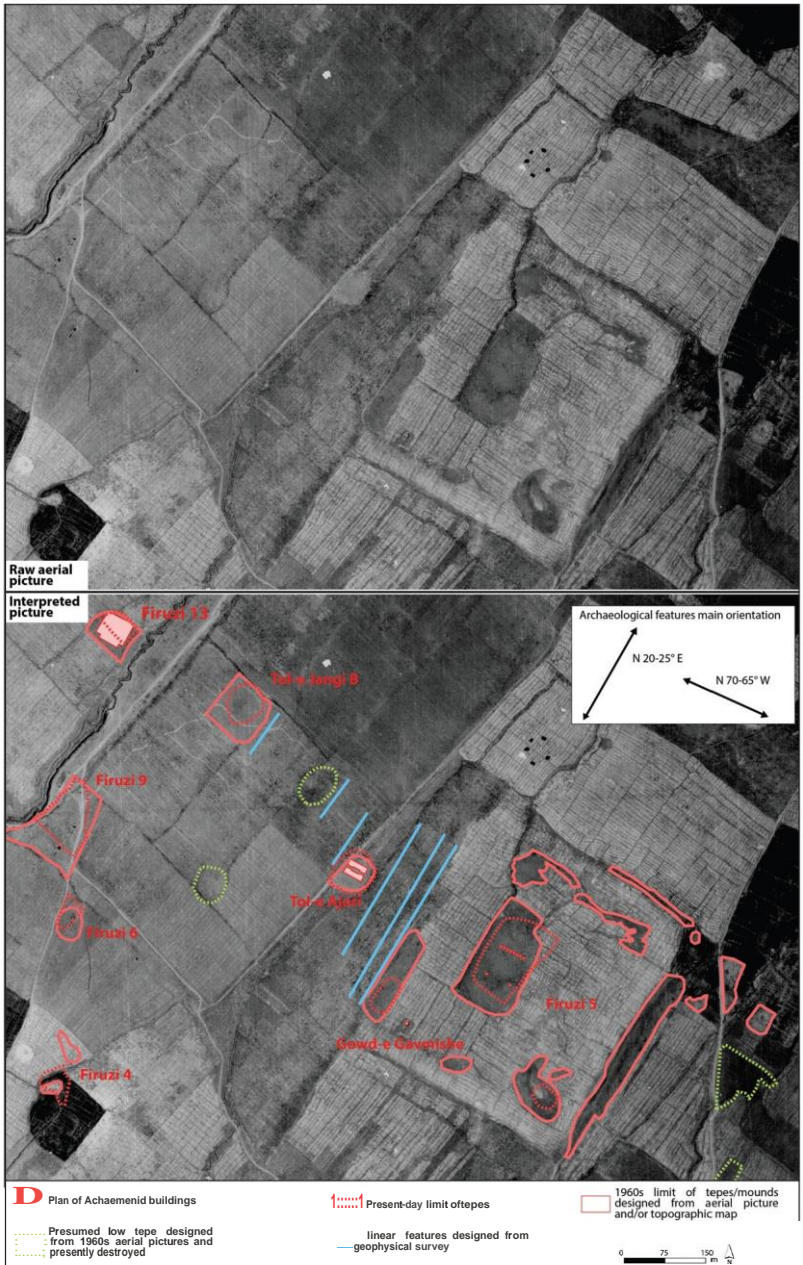


Fig. 5 - Part of the group of 1966 aerial photographs of the Western part of the Bagh-e Firuzi Area. Above: raw photographic data; below: interpreted picture, using data from the geophysical survey and analysis of aerial photographs.

Possible links between sites are nowadays much harder to define, because of intensive cultivation. One must highlight, however, the orientations shared by all archaeological features when they can be identified and measured. These include that of Firuzi 11, which is located outside our reconstructed map of the Eastern part of the Bagh-e Firuzi Area (Fig. 5). As computed by GIS, their average main directions are N 33° E and N 62° W, therefore roughly perpendicular. Such a spatial configuration confirms the hypothesis of a layout for Bagh-e Firuzi with an orientation quite different from the main one of buildings and features of the Persepolis North-West and Royal areas, which is N 17° W. Paths would have connected the Bagh-e Firuzi building complexes. For example, one should see the gateways as points directing movement. In addition to the Tol-e Ajori monumental gate, a second entrance was suggested by the Tiliās at Firuzi 6, a hypothesis which, in our opinion, is supported by several considerations. The orientation of the proposed Firuzi 6 gate is about N 30° E, while that of Tol-e Ajori's is approximately N 60° W; both orientations were computed on the published maps. They are, in addition, placed almost at opposite corners of a square with sides 300m long. The proposed Firuzi 6 gate may have been the first stage on a path going through Tol-e Ajori and leading to the large Firuzi 5 complex. Other Achaemenid monumental complexes show a complex entrance system that passes through several successive stages. A similar configuration of gates reflecting right-angle movements was observed on the Terrace between the Gate of All Nations and the Unfinished Gate, or at Susa between the Propylaea and the Darius Gate.

DISCUSSION

It is commonly admitted that Persepolis is associated with the patron figure of King Darius I, who decided to create the Terrace. This spatially and chronologically reductionist conclusion must now be considered as archaeologically untenable. The discovery of Tol-e Ajori by the Iranian-Italian team should be seen as the latest and the soundest evidence that monumental earlier constructions (from the viewpoint of architecture, size and symbols) stood in the plain around the Terrace. The Terrace would have been a masterpiece established inside an area that was already important for the people of Persia and its rulers. The Tiliās concluded their chapter on the archaeological description of the Terrace surroundings with the following suggestion: “[...] the plain around Persepolis was populated, and royal palaces or palaces belonging to princes or noblemen had already been built when King Darius I chose the site at the foot of Mount Rahmat for the construction of his ‘fortress’, the Terrace of Persepolis.” (Tilia 1978: 90). W. Sumner (1986: 28) went further by summarizing his view on the development of Persepolis as follows: “At that time [during Cambyse's reign] the town of Matezziš (Persepolis West) was inhabited and the

elite dwellings at Firuzi and Dasht-e Gohar were already standing. When Darius ordered the construction of Persepolis, Matezziš suddenly became a boom town [...]” In the light of recent discoveries and the above-mentioned observations, these assertions on the development scenario of Persepolis may now be discussed in further detail. Maps derived from the study of aerial photographs provide a more complex image of the Persepolis landscape that slightly modifies the reconstruction of settlement dynamics. Combined with a discussion of chronological data, three possible hypothetical scenarios can be surmised for the development of Persepolis; field research should seek to choose the “right” one.

Reconsidering Space in Persepolis

The main challenge for archaeological research in Persepolis is the profoundly transformed environment. All recent publications of fieldwork around the Terrace have mentioned that the results and analyses are based on the study of badly destroyed archaeological remains. Undoubtedly, the process of destruction by ploughing and levelling has sped up during the last fifty years. Nevertheless, the analysis of the aerial photographs from 1966 firmly demonstrates that W. Sumner and the Tiliās also worked in an already damaged archaeological landscape. Even more so, they focused their survey on only two types of site morphology, namely tepes or mounds on the one hand, and stone architectural remains on the other. Their reconstructions were consequently based on an incomplete set of settlement remains in the Terrace’s vicinity. The very nature of the layout in Persepolis, characterized by low settlement density, multi-centered clusters, and the prevalence of green areas, made the comprehensive reconstruction of the landscape quite difficult. They suggested Persepolis developed according to a specific morphology, distinct from the already well-known ancient cities of the Ancient East. At this time, however, they lacked present-day technology, such as remote sensing and GIS, to map the Persepolis Settled Zone on a large scale. While based on a much better-preserved archaeological landscape, their reconstruction remained speculative, as implied by the title “Yeki bud, yeki nabud” of the concluding part of W. Sumner’s article (1986: 28). The authors’ current work on the 1966 photographs resulted in a more extensive view of the surface and location of potential archaeological areas at the time of the survey and the works of the Tiliās. The necessary field checks of remotely sensed observations are still wanting, because of the obliteration of most of the mapped archaeological areas after 1966. On this matter, one still needs to rely upon the descriptions of the Tiliās and of W. Sumner.

The general archaeological map based on the analysis of the 1966 aerial photographs (Fig. 2) shows on a drawing what should be the ‘real’ extent and a more precise location of what the Tiliās and W. Sumner saw in the field.

It provides a more complex picture of the archaeological landscape of Persepolis. The number and the large surface of sites dating back to periods earlier or later than the Achaemenids demonstrate first of all that Persepolis has a longer landscape history, and secondly that the consequences of taphonomical processes were momentous. In addition, the notion that the Achaemenid settled areas were isolated and scattered needs to be reconsidered. According to a more comprehensive drawing of the clusters, which better renders their location and extent, and the recording of additional probable archaeological mounds in the space between settled areas, one can surmise that the distribution of settlement remains is somewhat rather regular. Of course, the map once more gives a picture of the layout as one organized in several separate settled areas, but evidence of constructions in between could nonetheless demonstrate more continuity in land management and occupation.

The results of mapping provide critical evidence for a reappraisal of the Firuzi Area. It clearly appears that Bagh-e Firuzi (at least its Southern and Eastern parts) was a large monumental complex. The map particularly emphasizes the existence of a large cluster integrating both Ajori and Firuzi 5, with certainly additional surrounding archaeological areas. The size of the Firuzi South cluster is estimated at 38 ha and, in 1966, appeared to be the largest settlement of the Persepolis Settled Zone after the Royal Area. While poorly studied so far, it is shown on maps as an important domestic settlement of Persepolis. Being more extensive than the Persepolis West cluster, even when the latter is extended to include a larger area in Persepolis North-West, it is sufficiently substantial in size to be the location of the central place close to the Persepolis Terrace that existed before its construction. This central place was called Humadešū in a series of Babylonian tablets (Zadok 1976) and Matezziš in the Persepolis texts in Elamite (Hallock 1969: 728 s.v. Matezziš). This reconstruction of an important centre very close to the Persepolis Terrace, which was certainly functional as early as the reign of Cambyses, is now generally admitted (Briant 1996: 99-100; Henkelman 2017: 113, 146-148). In W. Sumner's opinion (1986: 28), this town matches the Persepolis West cluster, but he also suggested locating it at Bagh-e Firuzi, given the monumental character of the remains that could reflect a central place (Stolper 1984: 306-307). From the viewpoint of space and planning, the map (Fig. 2) suggests a structure of occupation divided into two symmetrical and twin groups of settled areas within the Persepolis Settled Zone. From East to West, one of them is made up of the Royal Area's monumental complex and its associated Persepolis North-West dwellings area; the second one consists of the Bagh-e Firuzi monumental complex and its associated domestic area of Firuzi South. Of course, chronological considerations matter when one considers the link between Bagh-e Firuzi and Firuzi South and the correspondence of Bagh-e Firuzi/Firuzi South to Matezziš/Humadešū. Finally, the main issue concerns its existence prior, during and after the development of the Royal Area/Persepolis North-West.

Remarks on the Chronological Framework

Besides bringing to light clear evidence allowing to define Bagh-e Firuzi as an important and probably royal monumental complex, the excavation results at Tol-e Ajori provided a body of well-contextualized data relevant for a chronological discussion.

The Iranian-Italian team published the results of radiocarbon analyses of five samples (Askari-Chaverdi, Callieri, Matin 2014: 238-239). One was collected in a layer predating the construction of the gate, and the others in secondary occupation deposits. All dates fall within the 1st millennium BCE plateau of the calibration curve and lack sufficient accuracy. The chronological range of the C¹⁴ dates is wide and spread over a large part of the first half of the 1st millennium, until Early Achaemenid times. Strikingly, the date obtained under the building, and another from the latest reoccupation features, were quite similar. Combined with the architecture's strong Babylonian character, the scarce epigraphical evidence (Basello 2017: 237), and the suggested identification of Bagh-e Firuzi/Firuzi South to Matezziš/Humadešū, the excavators suggest dating the gate's foundation to the reign of Cyrus, after the conquest of Babylon, or to that of Cambyses, and certainly prior to the construction of the Terrace and the buildings on it (Askari et al. 2014: 237-238). This body of converging data makes sense, and the hypothesis is quite plausible. However, in our opinion, the discussion must remain open. Regarding the absolute C¹⁴ and relative epigraphic data, as emphasized by the authors themselves, they do not permit definitive chronological conclusions.

Recently, Kai Kaniuth (2018), fully acknowledging the very strong analogies between Tol-e Ajori and the Ishtar Gate, noted, however, some minute differences in the decorated panels of both monuments. He suggested that the Ajori panels are not exact copies of the Ištār Gate. More importantly, he questioned the entire chronology of Babylon's Ištār Gate. The first two building phases are undoubtedly from the time of Nebuchadnezzar II (605-580), but the last one, attributed also to the Neo-Babylonian period, is not grounded in any stratigraphic or epigraphic criteria. It could thus be of later date (*ibid.*: 350-351). Moreover, the very similar glazed brick panels of the Ezida temple of Borsippa with bull and mušhuššū as in Babylon and Tol-e Ajori—also excavated by Robert Koldewey and Walter Andrae—belong to the architectural context of the Achaemenid period (*ibid.*: 346-347), and are not Neo-Babylonian as thought until recently (Kaniuth 2013). For these reasons, K. Kaniuth (2018: 351-352) has not contradicted the chronological span given by the excavators of the Ajori Gate (from Cyrus to Cambyses), but has extended it to as late as the early 5th century BCE.

Another challenge relates to the dating of the other architectural remains inside the Bagh-e Firuzi Area. The Tilius (1978) suggested dating the whole set of Bagh-e Firuzi buildings to the Early Achaemenid period, based on con-

verging observations made on the sites surveyed: presence of both dark and light limestone architectural fragments like at Pasargadae; the plump shapes of the column bases at Firuzi 11; finally, the absence of tooth-chisel marks. All chronological observations are only relative. In another region, in Borazjan near Bushehr, three columned buildings were also dated to the early Achaemenid period, due to the use of bichromatism. Recent syntheses suggest in fact that at least one of them could be attributed, rather, to the reign of Darius (Zehbari 2020: 48; Matin 2020: 340). The plump tori found at Firuzi 11, like those at Dasht-e Gohar, show a different proportion of 1:2 when compared to those known at Pasargadae (which have a proportion of 1:3-1:5; at Borazjan, the proportion is of 1:4; on the Persepolis Terrace, of about 1:5). The Firuzi 11 and Dasht-e Gohar torus type appears to be closer to the Neo-Assyrian type at Khorsabad (Loud 1938: pl. 38) than to the tori of the Early Achaemenid buildings. Finally, the presence or absence of tooth-chisel marks or various shapes of clamps can hardly be seen as definitive relative dating elements, because they have been observed on very few stone remains. The stone architectural remains of the Firuzi Area permit few comparisons with Pasargadae's monuments built after 547 and Borazjan's comparable buildings, more than with the Persepolis Terrace, whose construction was decided by Darius not earlier than 520. It is, however, now quite clear that the first two sites were also the locations of building programs during the reign of Darius. The stone architecture of Firuzi's monuments seems quite original and, in terms of quality, the shapes and execution of the work appear rather coarse compared to those of the great royal buildings. Several of their characteristics are reminiscent of pre-Achaemenid models, for instance the plump tori. Again, as regards to architecture, the time-frame for the foundation of the Bagh-e Firuzi monuments may be expanded beyond the strictly pre-Terrace times.

The duration of occupation of the Firuzi Area also remains a matter of debate. At Tol-e Ajori, a rather short period of occupation was suggested, possibly due to destruction by an earthquake (Askari Chaverdi, Callieri, Matin 2017: 227-231). For the other Bagh-e Firuzi monuments, no data is available. In the case of Firuzi South, what W. Sumner defined as "Achaemenid ceramics" in his 1986 article (Sumner 1986: 3-7) needs to be nuanced. While he dated some ceramic types as "Achaemenid," we prefer, instead, to extend their period of use also to the Post-Achaemenid era. This was the initial chronological time-span of W. Sumner, who cautiously referred to this assemblage as "Late Plain Ware" in his PhD manuscript (Sumner 1972: 50-51, 63-64; see also synthesis in Henkelman 2012 and recent comments by Boucharlat 2019: 212-214). So far, distinguishing the various ceramic assemblages throughout the second half of the 1st millennium BCE remains challenging. The Iranian-Italian team's current attempts to define a relative chronology based on the typology is still ongoing (Askari Chaverdi, Callieri 2016: 75-127; Askari Chaverdi, Callieri 2017: 107-219). Consequently, relative dating based on ceramic typology does not

suffice to dismiss the unsatisfactory Achaemenid/Post-Achaemenid chronological characterization of recorded Late Plain Ware.

As demonstrated by this short and incomplete review of the chronological data, the authors were not able to firmly attribute the Firuzi Area to a single foundation period, and could even less provide clear data for a duration of occupation. The body of data seems, however, to point towards a vague Early Achaemenid foundation phase, much broader than a restricted span of a couple of dozen years. Further work and reconstruction may be needed to choose between the different possible development scenarios.

The Firuzi Area and the Development of Persepolis: Three Possible Scenarios

All these indications, of unequal importance, make it possible to propose three scenarios for the creation of the Firuzi Area. These are presented in a chronological order, but for all of them the duration and the changes in occupation over time remain unknown, except for Tol-e Ajori, whose life was likely of rather short duration.

Scenario 1: a Site Created before or around the Middle of the 6th Century?

In view of the poorer quality of the stonework and the wide timespan of radiocarbon dates from Tol-e Ajori, it is tempting to suggest that the first installations at Bagh-e Firuzi predate the period of Pasargadae's foundation. While speculative according to data available nowadays, the hypothesis of a foundation earlier than Pasargadae's monuments cannot be excluded. Even supposing elements of worked stone were used in Bagh-e Firuzi before Cyrus, this would have occurred under the patronage of an unidentified prince of Fars (a rather powerful Persian prince preceding Cyrus?). He would have tried to build monuments imitating Assyrian or more distant models. A member of the elite from the highlands living in the 6th century would have acted like the late Neo-Elamite princes or kings who deposited a wide variety of luxury objects in their vaulted tombs at Arjan and Jubail in present-day East Khuzestan. These offerings are close to the well-known contemporary production at Susa, but also reflect Elamite-Assyrian interaction. Likewise, these elite members might have been aware of the achievements in stone architecture and sculpture of Neo-Assyrian kings, probably still visible in Khorsabad and other capitals. They may even have imported stoneworkers from Assyria.

The settlement of Firuzi South is very damaged and no remains are visible on the levelled and cultivated surface. Yet the large mounds detected on the historical photos testify to this area's substantial occupation. The surface potsherds remain poorly identified. This area may be where Matezziš was located. However, in this sector, almost nothing can be said about the earliest occupation at this 38 ha site.

Scenario 2: after the Conquests of Cyrus in Asia Minor (around 547) and of Babylon (in 539)

The foundation of Bagh-i Firuzi may have been a project contemporary with that of Pasargadae. But in view of the lesser quality of the stonework, the compound of Bagh-i Firuzi could have been a construction project of Cyrus for a centre of second rank at the time he was building Pasargadae, like the one he undertook much further South at Borazjan. A consistent layout for at least part of the site is shown by the data on the group Firuzi 6, Tol-e Ajori and Firuzi 5. If one agrees with this hypothesis, it can at least be said that these constructions belong to the same project and to the same period. The remains at Tol-e Ajori were not definitively dated by the excavators, who tended to favour Cyrus, who was celebrating his conquest of Babylon by building this gate (Askari Chaverdi, Callieri 2020: 200). The body of chronological data produced is convincing and this scenario is the most likely so far. A date at the time of Cyrus or Cambyses is equally plausible for Firuzi 11's hypostyle construction. Concerning the other buildings with evidence of stone masonry at Bagh-e Firuzi, one is bereft of chronological clues.

As for the settlement of Firuzi South, it was occupied at the time of Cambyses, if one is to identify it with the town of Matezziš. On the opposite side, in Persepolis North-West, it seems that this part of the site was not settled, despite the assumption of W. Sumner (1986: 28), who at the same time did not really take Firuzi South into consideration. At Persepolis North-West, the recent soundings of the Iranian-Italian joint team unearthed sherds of the misdated LPW, while one radiocarbon date from the deepest infills of a ditch points to a time range of 500-400 BCE (Askari Chaverdi, Callieri 2020: 183). The housing and craft areas of Persepolis North-West most likely belong to a later period, coeval with the construction of the Terrace.

As for the more distant hypostyle hall at Dasht-e Gohar, its contemporaneity with the stepped plinth of the tomb imitating that of Cyrus is far from certain, though the two buildings follow the same orientation. The tomb is dated to Cambyses, or, alternatively, was built by Darius for his father Hystaspes (ibid.: 199 prefer the early date).

These data and remarks tend to show that the development of Persepolis Settled Zone began as early as the middle of the 6th century. The Terrace would have been inserted inside or added to a still managed landscape filled with several monumental and royal complexes.

Scenario 3: Temporary Installations during Initial Work on the Persepolis Terrace beside the Town of Matezziš

After Cambyses, Matezziš remained in use during Darius' reign, as demonstrated by dozens of Persepolis Fortification Texts these mainly speak of workers' rations in the area close to the Terrace (Hallock 1969; 1978). The town

was probably still active, however, at a later period. During the building of a vast royal complex on the Terrace at the periphery of the already existing town, Darius must have kept a location not too far for his seasonal residence and for his essential administrative services. The Bagh-e Firuzi Area, apart from the existing town of Matezziš and the zone towards the river as far as Dasht-e Gohar, may have been void of large constructions, and thus perfectly suitable space for planning buildings according to the same layout as that of Cyrus at Pasargadae.

In addition, the thousands of workers and their staff must have been permanently housed and employed in workshops. Persepolis North-West, right up to the location of the future terrace, provided enough space to host these new activities. This provisional situation lasted for years, because the quarrying of the Kuh-e Rahmat mountain and the construction of the 12 ha terrace and its huge faces of ashlar took several decades. It was only after many years that the first buildings began to be erected, for instance Darius' palace, while the Gate of All Nations and the so-called Apadana were still under construction when he died. At the date of his death, the progress of building in the Southern Quarter is entirely unknown.

While work started on the terrace, Bagh-e Firuzi area hosted important buildings, among which Tol-e Ajori, certainly of royal status. This monumental gate permitted access to other constructions of same status (Firuzi 5 and probably others). The aspect of the stone masonry of most of the area's partly-excavated buildings is known in Fars from Cyrus's time on. In contrast, the mud and glazed brick architecture of Tol-e Ajori is somewhat unexpected. Glazed brick wall decoration is primarily a Mesopotamian technique, which, together with its peculiar iconography, became known to the Persians as from the conquest of Babylon. One should be reminded of the fact that Darius highly appreciated this art form. He used it in Persepolis along the Apadana's Eastern wall and, above all, he magnified this art at Susa. He decorated a few courtyards of his residence in Elam with a frieze of lions passant in the tradition of Babylon, but he also created a new iconography with the frieze of 'archers'. The art of glazed brick was undoubtedly very much alive during the Achaemenid period in the Persian residences of Southwestern Iran, but this was also the case in Mesopotamia in the Perserbau of Babylon under Artaxerxes II, or at Borsippa. Tol-e Ajori could be an expression of the king's taste for this art form.

Scenario 1 seems likely for the creation of Matezziš at Firuzi South, but improbable for the elite/royal constructions of Bagh-e Firuzi. In scenario 2, the plain of Persepolis would have been chosen by Cyrus at the very beginning of his reign before he set up a more elaborate residence in Pasargadae. Selecting a place next to Matezziš, he built a few monumental buildings at Bagh-e Firuzi early in his reign, then at Tol-e Ajori after 539 or later. Bagh-e Firuzi might also have been a palatial complex created by Cambyses. Scenario 3 would make Darius the builder of a temporary royal site at Firuzi next to the

active town of Matezziš, to establish his court and administration when he was present in that part of Fars. From there, he would have launched the Persepolis Terrace program which would not be operational as a center for years or even decades. A major issue that remains unsolved is the duration of occupation in the Firuzi Area once the Terrace was operational, while at Tol-e Ajori, the excavators supposed that the Gate was destroyed probably before being completed.

Future Perspectives

The present landscape of destruction around the Persepolis Terrace may seem discouraging. It is far from certain that the various questions and scenarios described above can find answers in the future. Many critical data have probably irretrievably disappeared. Recent work in the Persepolis Settled Zone, however, using different approaches unavailable to the Tilius and W. Sumner, have yielded promising results, despite the heavy destruction and obliteration of the main visible elements of the archaeological landscape (the mounds). The last remaining traces of large-scale development at Persepolis may be still there. Systematic and pluri-disciplinary studies are needed to record them.

New mapping work detailed in the present article, as well as all fieldwork carried out during the last two decades, can now be used to reach a new stage in archaeological studies at Persepolis. They allow targeting areas for further study that could provide part of the missing critical data for reconstructing the landscape of Persepolis and its dynamics. The study of Firuzi South has long been neglected and deserves attention in order to further describe this important archaeological area. All mounds shaping the cluster recorded by W. Sumner have now disappeared. A first stage would consist of systematic pedestrian survey in the cultivated fields, which, albeit time-consuming and fastidious, would allow recording the last remaining traces of settlements. During our survey work at Persepolis North-West, we were able to map well-defined areas with high densities of Achaemenid/Post-Achaemenid potsherds, combined with traces of previously settled locations revealed thanks to geophysical survey (Boucharlat, De Schacht, Gondet 2012; Gondet, Mohammadkhani 2017). The study of the remaining surface material may help in drawing a more precise map of the extent of Firuzi South. Collection of surface sherds could provide dates for the duration of the settlements, conditional upon relying in the future on a precise ceramic chronological typology that spans across the 1st millennium BCE.

Another area to target would be the space between the Persepolis West cluster and Bagh-e Firuzi. Large scale geophysical survey may better define the layout of what appears as an undocumented zone between two different organizational schemes. Remote sensing should clarify the continuation, superposition or merging of the network of ditches mapped in the two areas. Still

unrecorded mounds on the 1966 aerial photographs should also be surveyed, to study possible remaining potsherd concentrations and to propose their relative dating. Of course, more precise data are needed to better define the overall layout of Bagh-e Firuzi. Regarding the considerable size of Bagh-e Firuzi, more extensive geophysical mapping, combined with systematic pedestrian survey of cultivated fields, would provide a broader overview of the general layout. The survey should be combined with excavation focusing on surviving sites and features detected by geophysical surveys. The excavations of Tol-e Ajori show that an accurate chronology of the settlements is difficult to define. Only a body of varied and complementary sets of data combining artifact analysis and several absolute dating methods—for example, OSL dating of the infilling of ditches—would be able to solve the question of the foundation and occupation period of Bagh-e Firuzi's monumental complex.

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