

Preliminary Report on the Iranian-Italian Joint Expedition into Khuzestan: Kal-e Chendar; Shami (2013-2016)

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Abstract: This report presents the preliminary results of the excavation conducted between 2013 and 2016 by the Iranian-Italian Joint Expedition in Khuzestan at Kal-e Chendar, in the Shami Valley (ancient Elymais). The site is well known for the outstanding antiquities discovered accidentally in 1936 followed by the excavation carried out briefly by the famous explorer Aurel Stein. But it remained neglected for decades despite its importance. It is presumably one of the most important sanctuaries of Iran at least in the Hellenistic and Parthian periods. Further to a survey conducted in 2012, the Iranian-Italian expedition started regular excavation and brought into light the remains of buildings of various type, size and technique, almost certainly made for religious purposes on monumental terraces, similar to those already found in the sanctuaries of Majid-e Sulayman and Bard-e Nechandeh, which are located in the same area. Family tombs of a wide cemetery were also recognized, hypothesise that at Kal-e Chendar the religious and funerary functions were, in some way, interrelated.

Keywords: Elymais, Hellenistic sanctuaries, Parthian sanctuaries, Shami, Aurel Stein

چکیده: در این مقاله گزارش مقدماتی کاوش‌هایی آمده که از ۲۰۱۳ تا ۲۰۱۶ م. به کوشش هیئت مشترک ایران و ایتالیا در خوزستان در کل چندار در دره شمی (سرزمین باستانی الیمایی) انجام شد. این محوطه باستانی از شهرت زیادی برخوردار است، زیرا از اینجاست که در سال ۱۹۳۶ م. به طور اتفاقی اشیای باستانی چشمگیری به دست آمد و پس از آن سیاح معروف اورول استاین در آن کاوش‌های مختصری به عمل آورد. به رغم اهمیتش، محوطه به فراموشی سپرده شد. از قرار معلوم اینجا از مهم‌ترین نیایشگاه‌های ایران، دست‌کم در دوره‌های پساهاخامنشی و اشکانی، بوده است. پس از بررسی سال ۲۰۱۲ م، هیئت مشترک ایران و ایتالیا در خوزستان به کاوش‌های مستمر در محوطه روی آورد و سازه‌هایی از گونه‌ها، اندازه و فناوری گوناگون هویدا کرد. می‌توان به یقین گفت که این بناها به منظورهای مذهبی بر روی مصطبه‌های یادمانی احداث شده‌اند که نمونه‌های مشابه آن‌ها پیش‌تر در مسجدسلیمان و بردنشانده در همان حوالی کاوش شده‌اند. همچنین گورستانی وسیع با آرامگاه‌های خانوادگی شناسایی شد که به این فرضیه دامن می‌زند که کل چندار کاربری مذهبی و تدفینی مرتبط به هم داشته است.

کلیدواژگان: الیمایی، نیایشگاه‌های دوره پساهاخامنشی، نیایشگاه‌های پارتی، شمی، اورول استاین

Introduction

The “Iranian Italian Joint Expedition in Khuzestan” started excavation at Kal-e Chendar, a village located in the Shami Valley, nowadays Khuzestan, in October 2013. This project focused on the research on ancient Elymais since 2008. During first four years, the expedition conducted four campaigns between 2008 and 2011, including survey, laser-scanner acquisition and excavation at Hung-e Azhdar; an open-air site,

where rock reliefs of the old-Elamite and Parthian periods were dedicated (Messina, 2015). The first season of excavation at Kal-e Chendar (6th campaign) was preceded by a survey conducted on the site in 2012 (5th campaign), based on the Sir Aurel Stein’s research in the region.

Background

On January 1936, Aurel Stein was informed of the accidental discovery of outstanding antiquities

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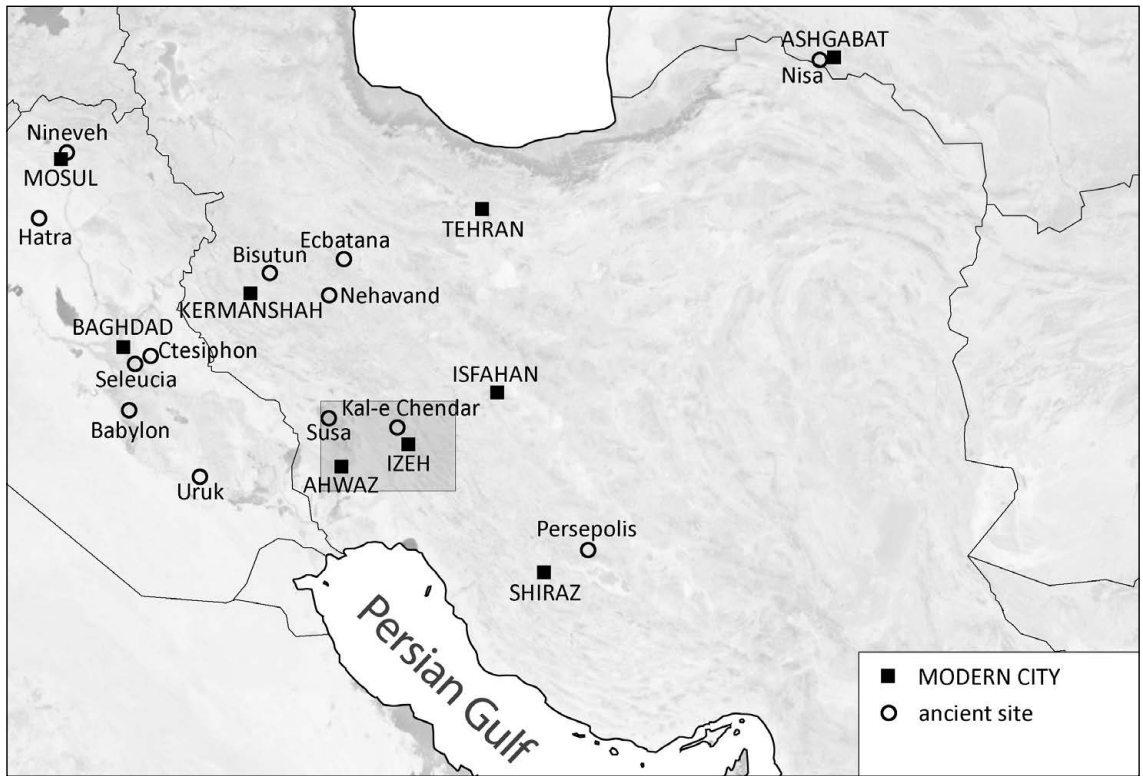


Fig. 1. Map of Iran. Location of Kal-e Chendar in the highlands of Khuzestan (the inset is detailed on Fig. 3).



Fig. 2. Excavation of Aurel Stein and Bahman Karimi at Kal-e Chendar. In the foreground, baked brick platform and floor are visible (Stein, 1940: fig. 53).

in the village of Kal-e Chendar, in the Shami Valley (Fig. 1). He conducted an excavation at the site after visiting the site and observing some notable finds from this site and nearby regions including several fragments of marble sculptures dated from the Hellenistic to the Parthian periods (Cumont, 1939; Kawami, 1987: 59-64, 169-174; Mathiesen, 1992: 165-168; Sarkhosh Curtis, 1993), and a well preserved bronze statue, portraying a nobleman in Parthian dress (Kawami, 1987; Mathiesen, 1992: 166-167) from the nearby city of Izeh (ancient Mal-e Mir). The latter is now hosted by the Iranian National Museum in Tehran.

Together with his Iranian colleague (Curtis and Pazooki, 2004: 23-25), Stein, in few days, recovered the remains of a rectangular enclosure built on stone foundations, a rectangular baked brick platform, and several stone bases, as the support of ancient statues which are now lost (Fig. 2). Aurel Stein's report on his 1936 excavation at Kal-e Chendar was published in 1940 (Stein, 1940:141-159). It was based on his notes and diaries almost daily, along with a series of pictures of the fieldwork (of which only two were published) and a contour line map of the area. Stein only briefly surveyed the site, however, several ruins and a number of ancient graves mentioned in his report, were not precisely recorded and placed on his map (Ibid: 157-158, plan 10).

Both structures and findings induced him to identify the site as an ancient sanctuary, and this has been considered, in the subsequent literature, as one of the most reputed religious places of Hellenistic and Parthian Elymais (Sherwin-White, 1984).

The presence of important sanctuaries in the region, was reported by ancient Greek and Roman authors. One of the most famous occurrences is the temple of Bel, where Antiochus III died in 187 BCE while attempting to plunder its treasure (Strabo, 16.1.18). Another temple, Artemis-Nanaia, is believed to be threatened by Antiochus IV, successors of the Antiochus III (Polybius, 31.9). Some authors (Justin, 41.6.8) mentioned the temple of Artemis, called 'Azara' by Strabo

(16.1.18), which was plundered by a Parthian sovereign (Mithradates I, after his conquest of Susa) (Nodelman, 1960: 87; Hansman, 1978: 154; Harmatta, 1981: 207; Nöldeke, 1874: 192; Potts, 1999: 394-395). Important sanctuaries characterized by monumental cult terraces were indeed located on the ground, and excavated, at Majid-e Sulayman and Bard-e Nechandeh (Ghirshman, 1976).

Because of the high quality of the sculptures found at the site, the sanctuary at Kal-e Chendar is considered as one of those mentioned in ancient sources, however, no further research was carried out after Stein's fieldwork.

Survey at Kal-e Chendar

Given the importance of the site, the Iranian-Italian Joint Expedition in Khuzestan, planned to conduct a survey in Kal-e Chendar after examining the Stein's unpublished documents kept in the British Library, London, and Bodleian Library, Oxford, and identifying the area investigated in 1936.¹ The survey started in September 2012 (5th campaign) (Messina and Mehr Kian, 2014a; 2014b).

The Shami Valley is located ca. 30 km north of the modern city of Izeh (west of the Susan Plain); the village of Kal-e Chendar is located in its northern part (Fig. 3). The area, investigated by Stein, was hard to recognize on the ground, for his map –detailed as it is– is not geo-referenced. However, since the valley landscape is characterized by hills, peaks and slopes, it could help to recognize from his pictures in 1936, and the correct identification of the site was confirmed by the comparison between the Stein's map and satellite imagery of the area, acquired as local coordinates were determined by GPS (Messina and Mehr Kian, 2014a: 67-70).

The site extends, at least ca. 50 ha, on the west slope of a narrow valley, in triangle shape, as shown in the Stein's map (Fig. 4) (Messina and Mehr Kian, 2014a: fig. 3). This is clearly a gravel fan (Fig. 43) delimited to the north and south by the beds of two streams, now dried up, and to the east by Rud-e Shami River. The fan slopes towards the river are located at the elevation 920-1040 m

1. Preliminary notes were published by Stein soon after his fieldwork (Stein, 1936; 1938). Stein's handwritten diaries can be consulted on microfilm in the Bodleian Library, where even 11 black and white pictures taken at the site are preserved; 12 black and white pictures –the same of the Bodleian plus one– are collected in an album shelved in the British Library.

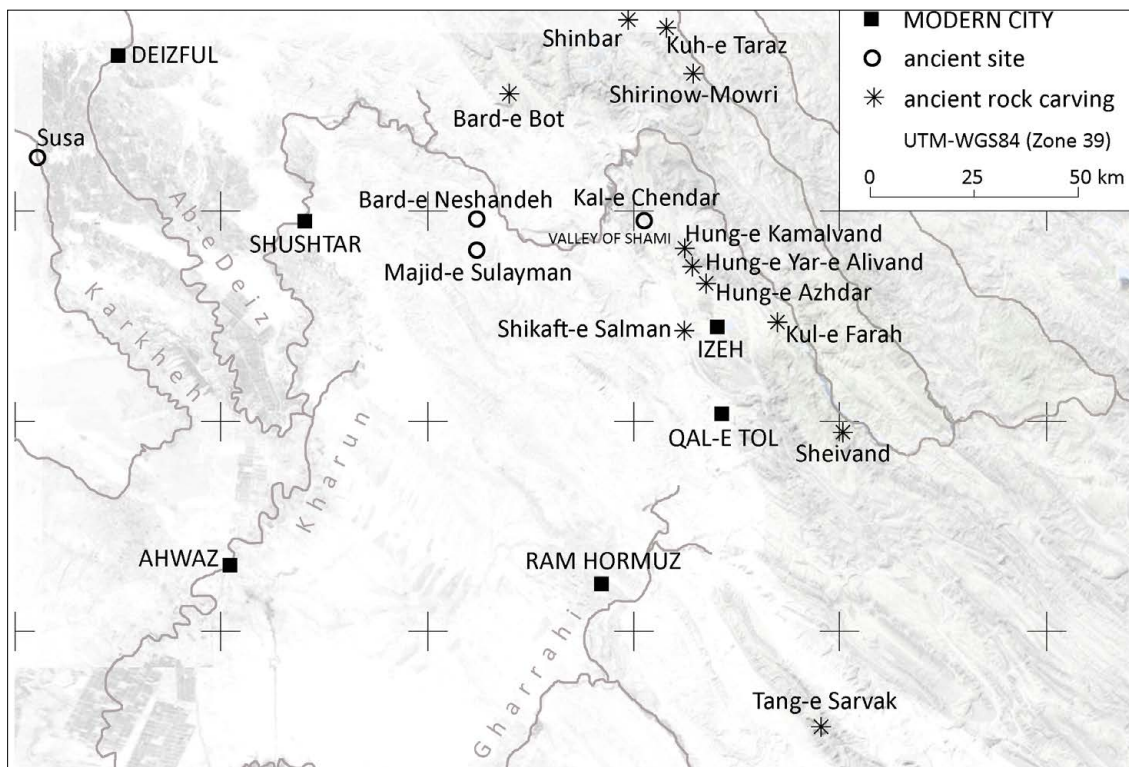


Fig. 3. Highlands of Khuzestan (ancient Elymais). Location of the archaeological sites in the area of Izeh.

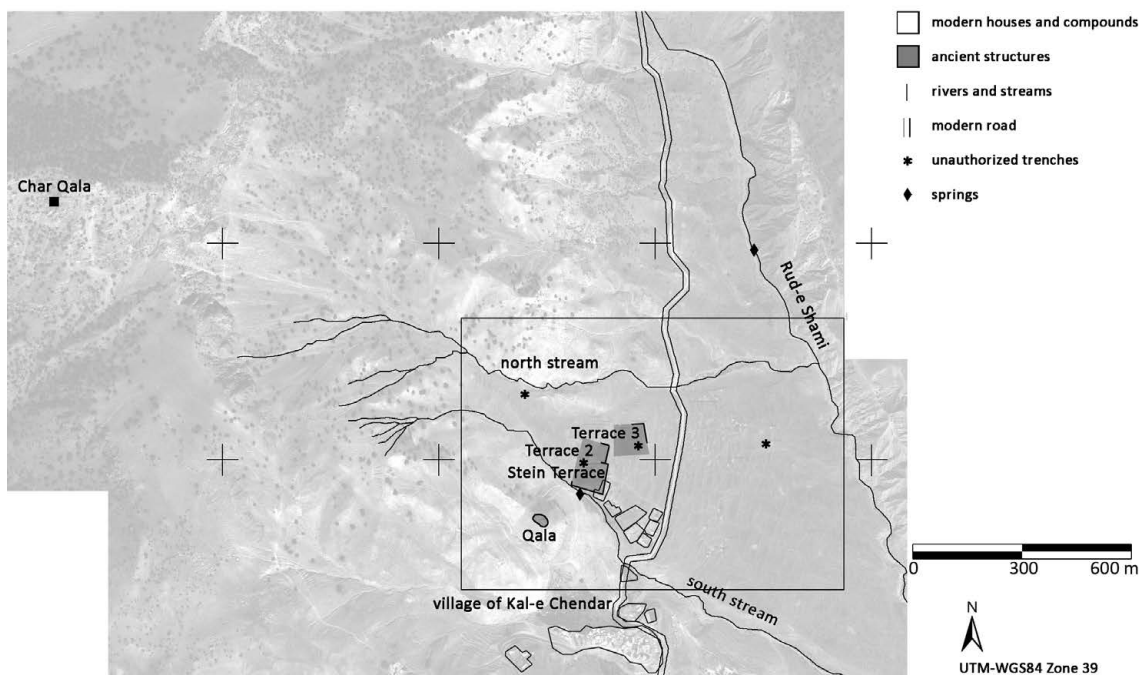


Fig. 4. Area of Kal-e Chendar. Map of the most important archaeological features, overlapped on a WW2 (© Digital Globe) satellite image (the inset is detailed on Fig. 5) (Elaborated by V. Messina).

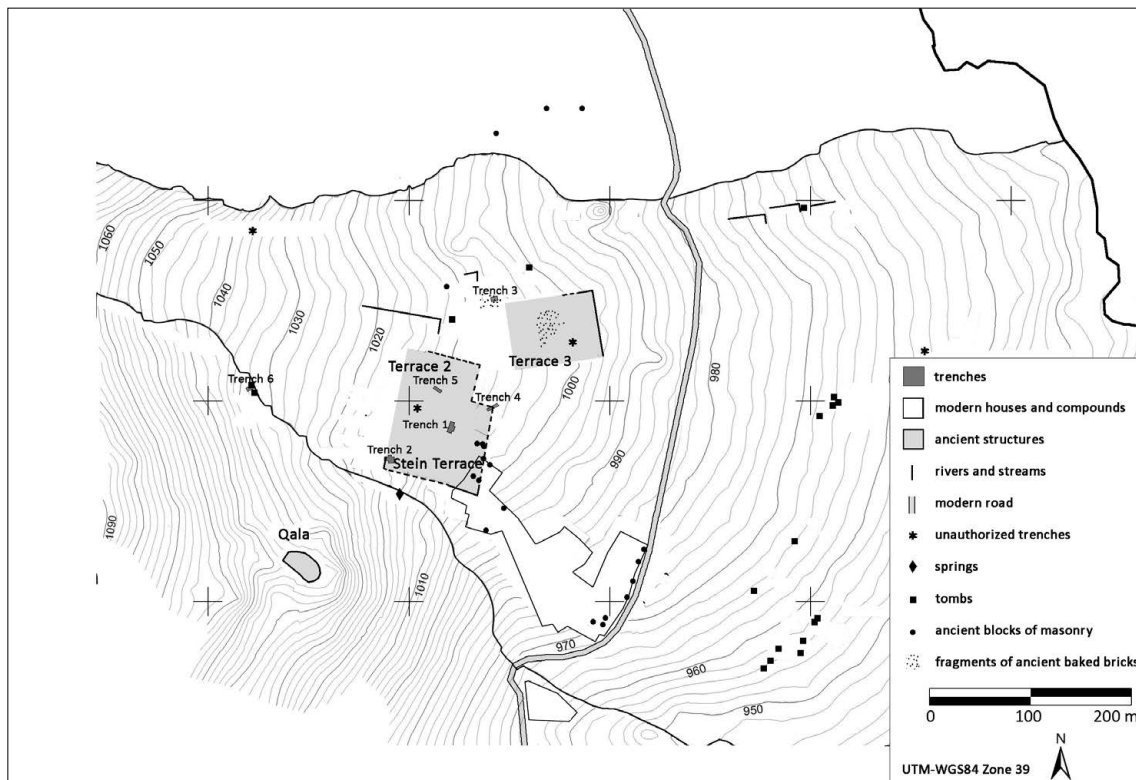


Fig. 5. Kal-e Chendar. Contour map of the surveyed area and location of the trenches (Elaborated by C. Bonfanti).

above sea level (asl.) and are crossed by a modern road parallel to the river. To the south, a small hillock ca. 1070 m asl. contains the remains of a very small fortress. The surveyed area (Fig. 5), entirely occupied by cultivated fields, revealed traces of monumental terraces built from stones and placed, at different elevations, following the natural valley slope. At least three terraces have been recognized:

The upper terrace –which we have called the “Stein Terrace”– extends for more than 6000 m², having an irregular quadrangular perimeter overlooking the south stream. Its central part, perhaps, included the structures investigated in 1936 and its south-east corner is now occupied by one of the houses of the modern village that partially destroyed the archaeological site. The south wall of the terrace is more than 90 m long and, in some parts, up to 3 m high: this was built in order to regularizing a natural step between the top of the terrace and the stream, and retaining the filling (probably of loose hearth, rubble and stones) of the terrace itself; for this reason, its façade is easy to recognize, being still exposed by the stream’s bed. The other

walls of the “Stein Terrace” are more difficult to see, with the exception of the east wall, which is located at the south-east corner of the terrace. In this area, ancient column bases and drums were found along with other ancient stone blocks of masonry, which have been re-used in the walls of the modern houses (Messina and Mehr Kian, 2014a: 71-73, fig. 7). The latter findings are particularly important for they testify the fact that a monumental building –or buildings (?)– stood on top of the “Stein Terrace” and confirm the preliminary results of Aurel Stein’s research (Stein, 1940).

Immediately to the north of the “Stein terrace”, a smaller squared terrace of ca. 56×60 m can be clearly seen on the ground as “Terrace 2”. It is unclear whether this structure is part of the “Stein Terrace” or leans against it.

Around 110 m north-east of Terrace 2, the corner of a third terrace; “Terrace 3” still emerges from the present ground level, as well as its east façade, which was presumably built using the same technique of the south wall of the “Stein Terrace”. The terrace size cannot be determined, for its south and west fronts are unknown,

but it would not be surprising that, at least westward, it extended up to Terrace 2. Terrace 3 is particularly interesting for several baked brick fragments scattered on its surface. Remains of other structures of unclear purpose have been also recognized in other points of the site, east and west of the modern road.

As also reported by Stein, the presence of a number of tombs of different types is noteworthy. They spared on whole area surrounding the terraces but have been particularly recovered from east of the modern road. The tombs are underground saddle-roofed chambers built in undressed stones and generally lean against the gentle slopes of the ground, even if they could be placed against the rock cliffs or near the steams. Chambers are easily recognizable in spite of their poor state of preservation. They are identified when filled by rubble and stones with the purpose of avoiding incidents during agricultural works or hide the looters' pits. Sometimes, the stones that fill the graves are part of a collapsed roof. Up to the fourth campaign, 32 tombs were recovered and all of them are heavily disturbed by looters, and the whole site is pillaged.

The preliminary survey conducted by the Iranian-Italian expedition at Kal-e Chendar gave clear indications on the wide extension and monumental layout of the site. This is characterized by the presence of monumental terraces built with the purpose of regularizing the ground slope and supporting buildings made out of undressed stones and/or baked bricks. The presence of terraces was reported by Stein. However, he believed that they were exclusively built to support cultivated fields (Stein, 1940: 143-144). Almost nothing remained from these buildings except the reused or loose-on-surface stone blocks of masonry, column bases and brick fragments. It is highly possible that many other ancient elements were broken on purpose and have been used in building modern houses, since there was not enough protection. These, indeed, can be recognized, with certainty, based on their size –which, as a rule, is larger than the other stones used in the courses of modern walls– and polished surface, but become almost undistinguishable when they are broken

into small pieces or re-cut. Their floors have presumably corresponded to the present ground level. This can be deemed when looking at the unpublished pictures provided by Stein. In these pictures, workmen stood close to levelling rods, indicating that Stein and Karimi excavated down to a depth of ca. 1 m below the surface. That the present ground level approximates ancient floors, is also confirmed by the fact that, as reported to Stein by the local dwellers (Stein, 1940: 144), the sculpture fragments and bronze statue were discovered just below the surface. Thus, the building unearthed by Stein is what remains of the most recent phase of occupation, and the site must have remained almost untouched until the modern times. The destroyed walls and columns stood among the ruins for a long period, having been progressively plundered over the centuries. Surprisingly, for a long time, the site was used as an open-air quarry of easy-access stone materials. Aurel Stein's excavation shows that their layout could be traced-back on the basis of their foundations. However, the wide extension of the terraces that supported them, hypothesises that they must have been large buildings or even complexes of buildings.

The discovery of dedicatory stone or bronze sculptures attests that a cult place existed on the site. If not all the recognized terraces could have been built for cult purposes, the monumental setting, that can be inferred from the data acquired, hypothesises that the sanctuary at Kal-e Chendar could have rivalled those already known and excavated at Majid-e Sulayman and Bard-e Nechandeh.

Excavation at Kal-e Chendar

The results of our survey have motivated us to excavate Kal-e Chendar for verifying the presence of ancient structures that could have survived after repeated pillaging. However, excavation at the site encountered several difficulties. First, the ground morphology has changed; the modern settlement and agricultural works there, up to present times. Second, the activities of the looters, caused many unauthorized trenches almost everywhere (Fig. 5).

According to the geological survey of Iran, the Shami Valley was evolved in different eras. The tectonic and structural setting of the Iranian Plateau evolved in the Alpine-Himalayan orogenic belt, with a subdivision in ten structural units based on certain geological features, which corresponds in south-west Iran to the Zagros Mountain Range. The highlands of Khuzestan originated, mostly, in the lower and middle Cretaceous, when more ancient formations, like Shami Valley, are also attested. In the maps provided for this survey, Oligo-Miocene, Eocene and Cretaceous formations, mainly composed of “Asmari” and “Orbitolina” limestone, can be recognized in the valley. These produced calcareous lithosols, for the most, but also shallow soils or orthents having in different colours. Thus, the ground morphology made it hard to distinguish the archaeological stratigraphy—as our excavation showed—for the soil, and archaeological strata, lay on sloping bedrocks.

Agricultural fields, owned by local villagers, extend over the whole archaeological area and hinder excavation strategies, for not all the owners agreed to open stratigraphic trenches on their fields. Despite these conditions, some areas were selected for opening trenches on the basis of the results of our survey and the other premises already mentioned: our interest was drawn, among others, by the “Stein Terrace” and the area between terraces 2 and 3. The “Stein Terrace” appears to be the most important monumental feature of the site, and is the place where the bronze statue and other sculpture fragments were found. Terraces 2 and 3 also show a monumental layout, and particularly Terrace 3 reveals interesting features, for many baked brick fragments can be seen on its surface, especially as the consequence of the soil ploughing.

All the trenches have been covered and protected after fieldwork.

Trench 1

Trench 1 was opened at the centre of the “Stein Terrace” (Figs. 5 and 7), on the area of a very low mound. It originally measured 4×4 metres, with one of its sides roughly aligned to the north,



Fig. 6. Kal-e Chendar. Trench 1. SU 9+4. Mosaic picture from the north (Elaborated by V. Messina).

but was widened up to 8×6 m, being T-shaped. On the surface, there were stones of small size, rubble, and scanty fragments of baked bricks and potsherds; lithic materials, like microblades and bullet cores, were also recognized. Under the surface, which is at about 1005.23 m asl. in the centre of the trench, a layer of big undressed stones (SU 2) and two strata of agricultural soil (SU 1 and 3) were reached at a depth of 15 cm.

These covered the remains of a wall, or foundation wall (SU 4), at about 30-40 cm from the surface. This wall, extending beyond the excavation limits and thus is more than 8 m long, is made of irregular undressed stones and roughly north-south oriented. Only its east façade, identified down to a depth of about 60 cm from its top (reached at 1004.89 m asl.), is clearly outlined; to the west, the wall's limit is not well defined, for it retains, with no clear interruption, a filling of loose earth, pebble and irregular stones more than 3 m wide (SU 9), and extending beyond the excavation west limit. Thus SU 4 and 9 appear to be a kind of flat platform, or foundation platform, of which the real extension and function remain unclear (Fig. 6).

Two strata lean against the east façade of SU 4 (SU 6 and 7): these do not seem natural deposits, for the few potsherds and fragments of baked bricks they contained rather allow us to consider them as layers of debris from a collapsed structure. At least three different brick formats were recognized (Fig. 8): squared, rectangular, and triangular with one curved side (probably, column segments). It is interesting to note that squared bricks have the same shape and roughly the same

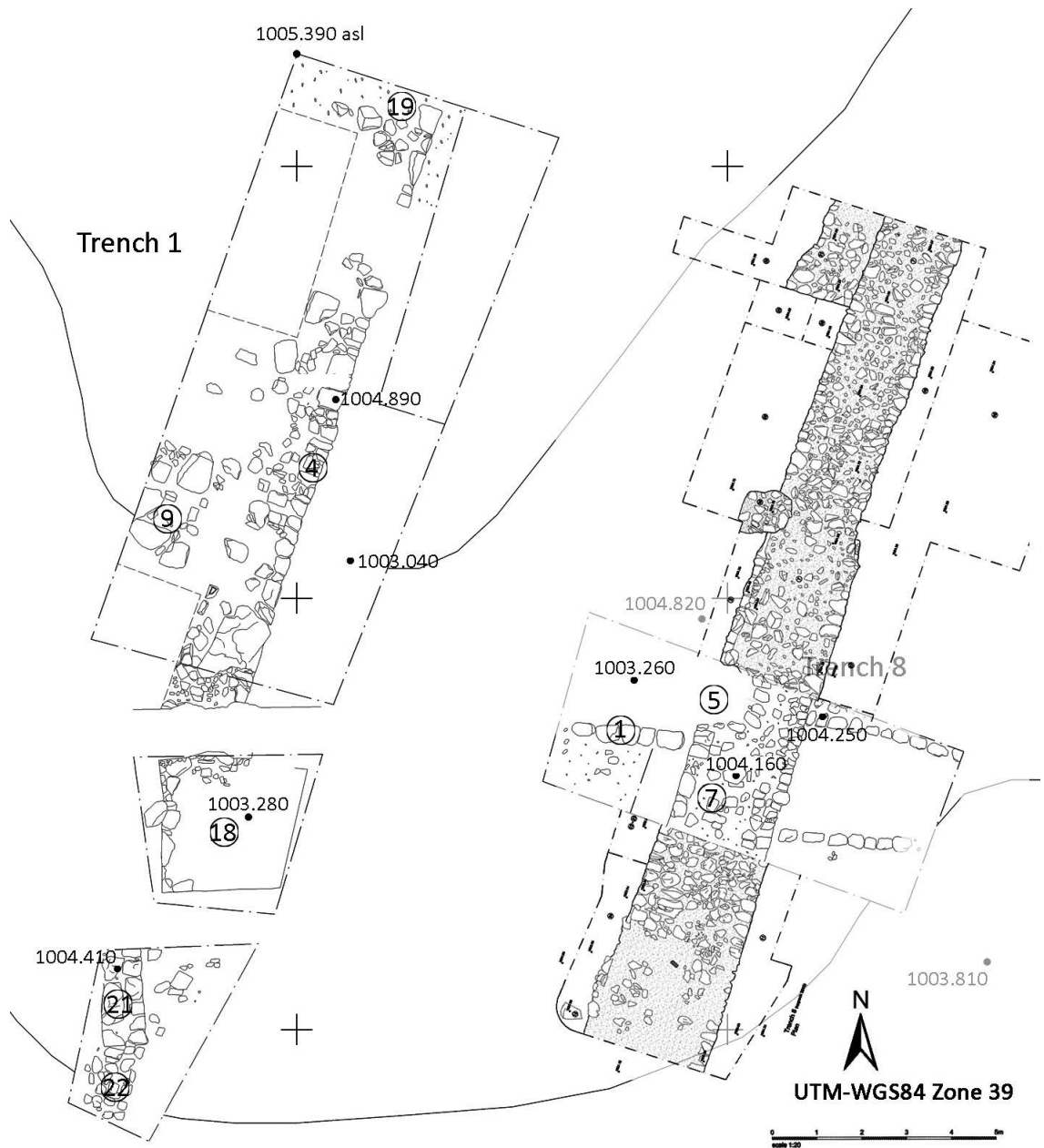


Fig. 7. Kal-e Chendar. Trenches 1 and 8. Plan (Drawing by I. Bucci, A. Cellerino and V. Messina, elaborated by C. Bonfanti).

size (36×36×7 cm) of those identified also in Trench 3 (see below), and that they seem very similar to the bricks in the texture of the platform –or altar (?)– brought to light even by Stein (Stein, 1940: 147). These layers also contained fragments of bronze and stone objects that cannot be identified. Whether the brick fragments belonged to a structure built on the foundation platform SU4+9 is unclear yet but probable. In any case, it seems that this platform did not emerge from the ancient ground level; this can

be deemed on the basis of two observations: first; the top of SU4 and 9 is not regular, and could well have supported structures but hardly being visible; second; as already noticed above, there are many indications that the present ground level, which is about 30-40 cm atop the platform, approximates the previous one.

SU 4 covers a thick stratum lacking archaeological materials (SU 8). Except a microblade from the upper part of the stratum, which is probably intrusive, this layer is almost certainly of natural

origin: this was perforated down to a depth of about 80 cm, thus reaching ca. 2 m from the surface, but not completely removed.

During the 2014 season, the trench was widened to the N and S up to 25 m, with the purpose of detecting the extension of the main discovered structure (SU 4). The excavation confirmed that this is a great retaining wall, delimiting the east side of a platform, which is not yet completely exposed, and has been reused in modern times as the foundation of a small quadrangular structure (SU 11). SU 4 develops for at least 10 m. To the N, SU 4 seems broken at about 10 m from the northern limit of SU 11, being either intentionally cut or simply deteriorated. After a gap of 1.8 m from this point on, the remains of another wall were found (SU 19) (Figs. 1 and 3). The latter, the surface of which was reached at an elevation of 1005.12 m asl., is, likewise, built of big undressed stones laying on rubble (SU 14) and aligned with SU 4: likewise, its east outline is regular, while its north, west and south borders cannot be clearly outlined. It is even unclear, at present, if SU 19 has been laid on the remains of SU 4 or if they were part of the same structure.

In the southern part of the trench, three strata leaning against the east façade of SU 4 were detected (SU 6, 7, and 16) and completely excavated down to a depth of 1003.59 m asl. (Stein, 1940: fig. 8). They contained some miscellaneous archaeological finds such as potsherds, fragments of baked bricks, fragments of metal objects, and stone micro-blades (Fig. 9). Since these materials were not in their original positions and have different dating, as the presence of lithic remains of the prehistoric period and Parthian pottery indicates, these layers could be interpreted as the result of disturbed and mingled archaeological deposits.

To the south, SU 4 is cut by the foundation of a modern structure (SU 11), which has a slightly different orientation: it is a quadrangular room or enclosure of about 3×3 m, built of irregular or roughly squared undressed stones and rubble arranged in regular rows. The north and south walls of this structure are approximately EW oriented, emerging at about 1005.31 m asl. and being founded at about 1003.85 m asl.; the east

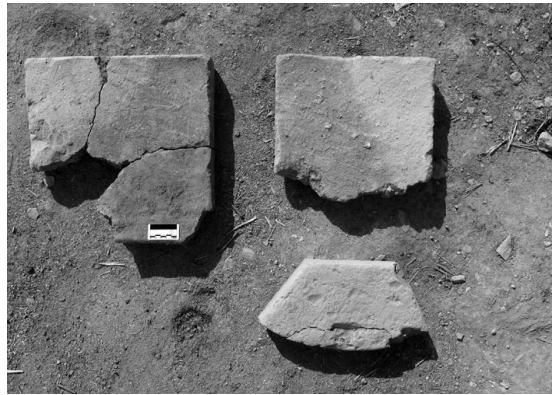


Fig. 8. Kal-e Chendar. Trench 1. SU 6 and 7. Baked brick fragments (Picture by I. Buccì).



Fig. 9. Kal-e Chendar. Trench 1. SU 16. Stone micro-blades and lithic fragments (Picture by E. Foietta).

wall was not unearthed, but it, presumably, runs parallel to the west one. The north wall of SU 11 is about 90 cm thick and clearly superimposed on SU 4. The latter extends further to the south, as it can be seen below the foundations of SU 11, where it is badly preserved.

Beyond the south limit of SU 11, the remains of an ancient wall were brought to light (SU 22) at an elevation of 1003.45 m asl., beneath a more recent wall (SU 21). Given that SU 22 has a texture similar to that of SU 4, and is aligned with it, it can be deemed that it is the continuation of SU 4 after this has been cut by the foundation of SU 11. No archaeological materials have been found in this area.

Trench 2

Trench 2 is located at the south-west corner of the “Stein Terrace”, in a point that seems to correspond to its ancient retaining wall (Fig. 5). The trench was a square of 4×4 m oriented to the north, which has been widened up to 6×5 m. Just below the surface (1002.76 asl.), a huge

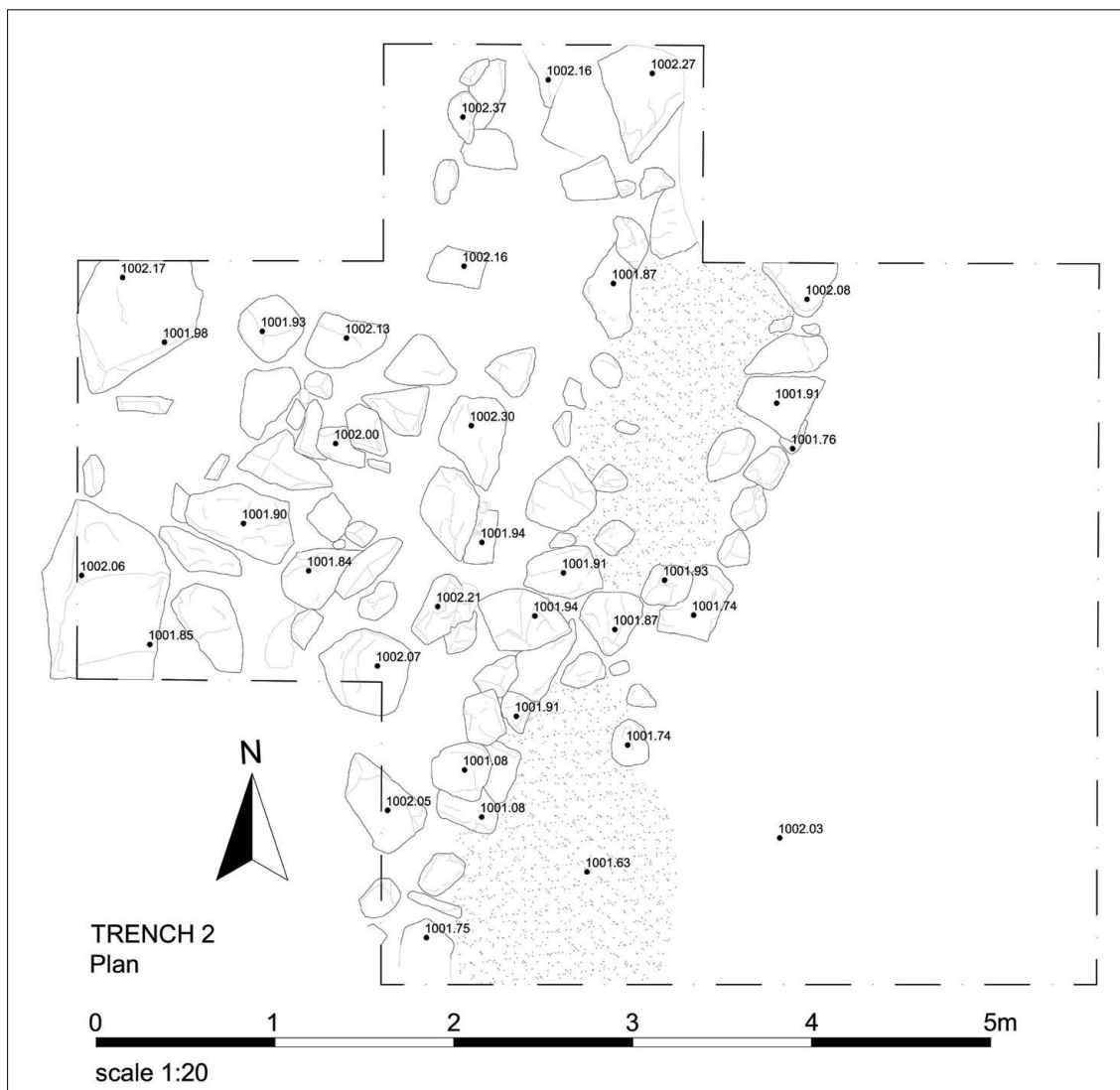


Fig. 10. Kal-e Chendar. Trench 2. Plan. Drawing by A. Cellerino and E. Foietta (Elaborated by C. Bonfanti).



Fig. 11. Kal-e Chendar. Trench 2 from the south (Picture by V. Messina).

structure has been unearthed (SU 1, at 1002.37 asl.). This is made of undressed roughly cut stones, partly loose and decayed, which appear to have been disposed at least on 6 rows (Fig. 10). These rows could be interpreted as part of the terrace retaining wall, approximately oriented to the north-east, and measuring at least 3.8 m in width and extending for more than 5 m in length (Fig. 11). Given that this wall is very close to what is supposed to be the terrace corner, these rows could be what remains of the terrace west wall, and the two huge boulders still in their position at the west limit of the trench part of the terrace west façade. The stone wall contains a filling entirely composed by rubble and pebbles (SU 2, 1002.05 asl.), probably laid for levelling

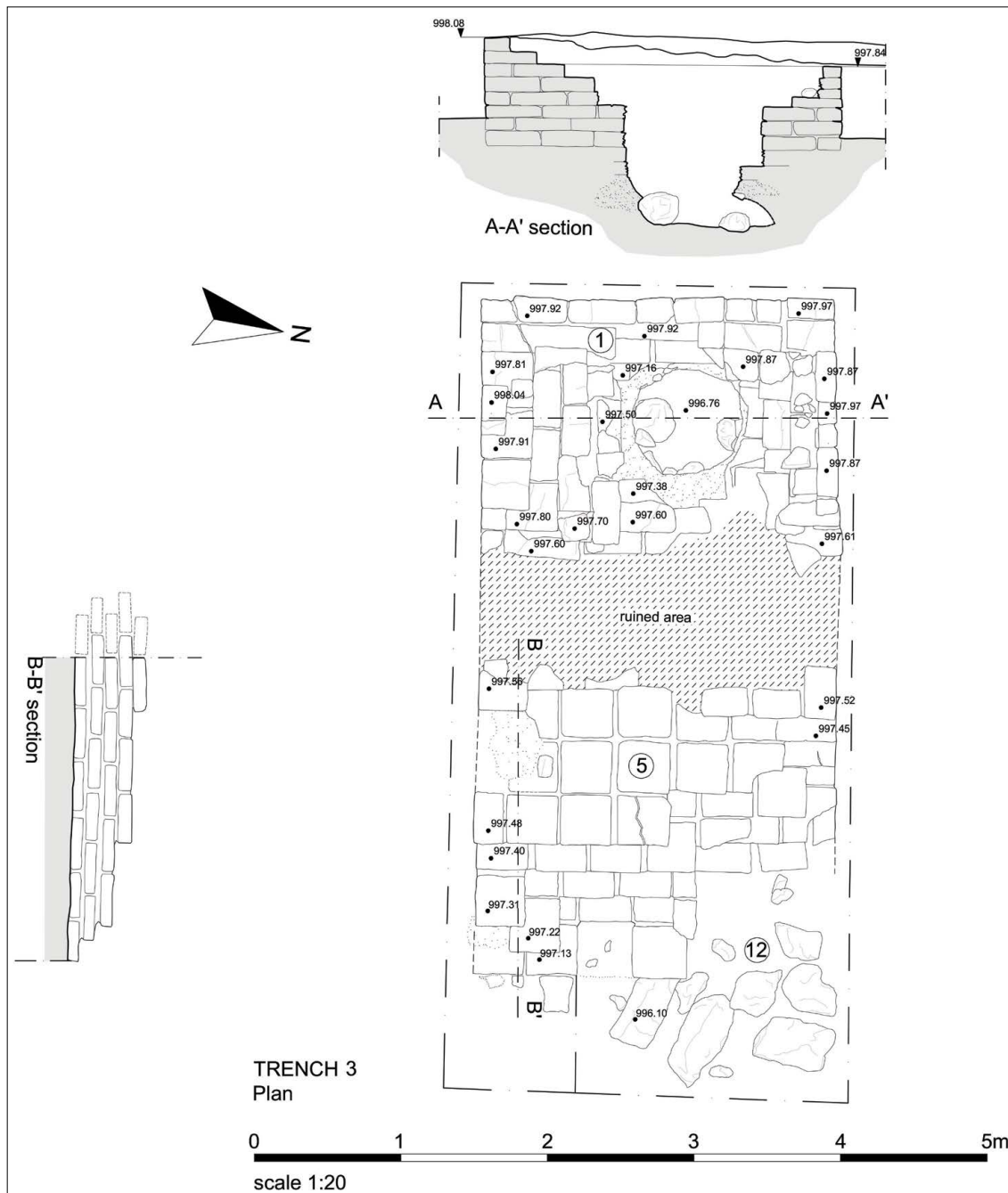


Fig. 12. Kal-e Chendar. Trench 3. Plan and section (Drawing by A. Cellerino and E. Foietta. Elaborated by C. Bonfanti).

the terrace ancient ground, which was found over entire excavated area. Excavation in depth, hindered by the presence of this filling and was stopped at about 60 cm below the surface. No potsherds were found here.

Trench 3

Trench 3 was opened in a place where several

baked brick fragments could be seen on the surface, north-east of Terrace 2, not far from its corner (Fig. 5). This is a roughly squared trench, measuring 6×6 m and oriented east-westwards (Fig. 12). Here, a complex structure made in baked bricks, partially covered by a modern retaining stone wall and a path running through cultivated fields, was reached immediately below



Fig. 13. Top : Kal-e Chendar. Trench 3. SU 1 from the east (Picture by E. Foietta).

the surface. This structure is composed of a parallelepiped –a platform indeed– having its long sides roughly oriented to the east (SU 1) and measuring 2.5×1.8 m (Fig. 13), and a low stair (SU 5), badly damaged, measuring at least 2.5×3.10 m (Fig. 14). Two brick formats have been recognized: a square module measuring 35.36×35.36×8 cm, and a rectangular module – that is, the half of the squared brick–measuring 35.36×16×8 cm. Both modules are used in the construction and arranged, in alternated rows, in what seems a fixed pattern, so as to lay half-bricks at the perimeter (Fig 11). The platform is at least ten rows high, even if it is only partially preserved at present because many bricks have been broken or missing, especially in the more superficial rows. A thin layer of clay mortar was clearly visible between the brick courses. A hole, measuring 80×90 cm and probably opened in modern times by looters, was found at the centre of the platform. This is now filled by brick and stone fragments (SU 2). It lacks any potsherd or archaeological finds.

Below SU 2, a thin layer of very compact clay (SU 3) was recognized. This is about 10 cm thick (top at 997.250 asl) and contains green clay lumps and rubble. Given that a similar layer (SU 10) was also found under the stair, we suppose that SU 3 and 10 have been laid for regularizing the surface before building the structure. SU 3 covered an assemblage of big stones (SU 6, top at 997.140 asl), which seem in their natural position rather than the result of human intervention. Because of the presence of these stones, the excavation was stopped at 996.89 asl.

On the east side of the platform, at a distance of ca. 70 cm, a stair (SU 5) leading to SU 1 was found: this consisted of at least 5 steps with risers made by a single row of bricks and irregular treads. The west side is 2.5 m wide, as the east side of SU 1. The stair is built by the same square and rectangular bricks of SU 1 and slopes toward the east (Fig. 14). SU 1 and 5 were connected, being thus parts of the same structure (Fig. 16): the fifth row of the platform and the first preserved step of the stair are at the same level



(997.57-997.56 asl.). The flat surface originally connecting the platform to the stair consisted of three squared bricks. It was severely damaged by the modern path and is now filled by many fragments of baked bricks mixed with stones of small and medium size (SU 7).

Under the lowest preserved step, a layer consisting of compact clay with green clay lumps and very small stone rubbles was found (SU 10, at 997.13 asl). This shows the same characteristics of SU 3. A very thin layer of pure and compact natural calcareous sediment (SU 11) was reached below SU10; it covers an assemblage of medium size stones (SU 12, top at 996.98 asl) already recognized, approximately at the same elevation, through the hole dug in the platform centre.

Two large strata (SU 4 and 8), characterized by the presence of ashes, charcoals and fragments of burnt bricks, were found around the structure, particularly to the west and south: these can be interpreted as the evidence of a partial destruction by fire of the structure itself, or traces of a kind of ritual performed there. In these disturbed layers several baked brick fragments were also found, and among them 5 complete triangular bricks with a curved side that are probably column segments: these are of two sizes, the bigger measuring 35×35×30×8 cm (35 being the radius), the smaller 32×32×29×6 cm (32 being the radius). It is unclear whether, and how, they were related to the structure.

No objects were found, whereas only very few potsherds were scattered on the surface layer that covered the structure: these are in common ware and could be generally dated to the Parthian period.



Fig. 14. Top left: Kal-e Chendar. Trench 3. SU 5 from the east (Picture by E. Foietta).

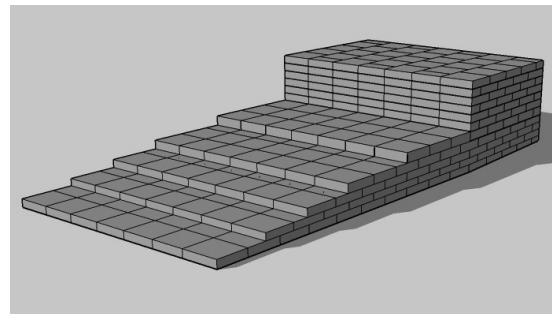


Fig. 15. Top right: Kal-e Chendar. Trench 3. SU 5+1 during excavation. Mosaic picture from the east (Elaborated by V. Messina).

Fig. 16. Down: Kal-e Chendar. Trench .3 3D reconstruction of the structure SU5+1 (Elaborated by E. Foietta).

The purpose and meaning of the structure are still uncertain, but it is supposed that it was an altar or a kind of platform that supported an altar –or a statue (?)– to which a worshipper could have been led by a low stair. It is remarkable that this structure finds close comparison with a similar platform brought to light by Stein within the enclosure that he interpreted as a shrine (Fig. 2). In the middle of his trench, Stein found two paved areas: the first (*d*), measuring about 1×0.6 m and built in rectangular baked bricks, supposedly supported the stone base of a statue found there; the second (*e*), immediately to the east, measured 2.61×1.83 m and was built in squared bricks



Fig. 17. Kal-e Chendar. Trench 6. Tomb T9 from the south (Picture by M. Rouhani Rankhoui).



Fig. 18. Kal-e Chendar. Trench 6. Tomb T9 from the south-east (Picture by A. Baqherian).

(Stein 1940: 147-148, fig. 53, pl. II). Joined with flooring *d*, there was a rectangular platform, measuring 1.70×1.15×0.91 m and similar to SU 1, built as well in two brick formats: a square module, measuring 35.56×35.56×6 cm, and rectangular module, measuring 35.56×15.24×6 cm. Stein identified the latter platform as an altar (Stein 1940: 147).

Trenches 4 and 5

Trenches 4 and 5 were opened on the “Stein Terrace” (Fig. 5). Trench 4 is a narrow rectangle measuring 1×10 m and was opened across the presumed north-east corner of the terrace aiming to find a small part of the retaining wall. Only the surface layer was removed before reaching three

rows of huge stones that appear to be in their original position and belong to what remains from the ancient wall. Trench 5 is a rectangle shape measuring 3×10 m, roughly oriented east-westwards. It follows the same orientation of a modern ruined wall, which could have been built over the remains of more ancient structures. The surface layer revealed the presence of scanty potsherds, particularly fragments of big storage jars decorated with a ribbing that appear to be late Islamic. Given that no structures were discovered below the modern wall, excavation was stopped at 50 cm below the surface and the trench was covered.

Trench 6

Trench 6 was opened on the place of a tomb which was already recognized during the 5th campaign and named T9. This is located by the south stream (Fig. 5) and is a chamber of 4.5×2.4 m, roughly oriented to the east. It has been heavily pillaged, and its archaeological context is completely destroyed, to the extent that no human remains, or goods were found, and only part of the perimeter walls and façade were preserved (Fig. 17). These walls are made of undressed irregular stones and pebble (Fig. 18). The chamber, which probably belonged to a family tomb, was filled by the debris of the collapsed roof (probably, a saddle roof). These were removed together with two stones that could be part of the roof itself, however, it caused instability for the whole structure. Below the debris, a floor made of irregular flat stones was reached, together with a low funerary bench (about 20 cm from the floor), as well made of undressed stones, laid against the chamber’s north wall and broken by plunderers. The chamber could have been at least 2 m high, and even if it was an underground structure for its larger part, it could be deemed that its façade emerged from the ancient sloping ground, being visible to those who visited the area.

Trench 7

Trench 7 was opened less than 20 m E of trench 3, close to the north limit of what we called Terrace 3 (NE of the Stein Terrace). This place

was selected for verifying whether the presence of baked brick fragments on the surface, in that point, could have been the consequence of the same context discovered in trench 3, in which a baked brick structure was discovered in the first season. The survey conducted in 2012 (5th campaign) revealed that clusters of baked brick fragments were diffused on the surface of Terrace 3, and this induced us to think that other baked brick structures could have been built on the terrace in ancient times.

Over the selected area, the surface layer, at an elevation of 994.483 m asl., was composed of rubbles and several baked brick fragments. Trench 7 is a square of 7×7 m oriented to the north and was not entirely excavated. Only the surface layer was removed completely, and the trench was investigated only in its north half. In the excavated area a structure of unclear purpose was discovered (SU2), having its foundations laid at ca. 2 m below the surface (992,843 m asl.). Structure SU2 is made of big and medium-sized stones, aligned on many rows and filled by baked brick fragments mixed with soil and rubble. The top of the structure was reached at about 994.313 m asl., but brick fragments were found also in its lower courses. It is remarkable that no potsherds were found in the layers connected with SU 2, or close to it. Given the extensive re-employment of broken bricks, it can be assumed that it was built probably later than the main Parthian phase of the site. No dating elements were discovered; therefore, precise chronological indications are lacking. The purpose of the structure is unclear as well. Given its north-south orientation, which follows the natural slope of the ground, the possibility that this stones' alignment was built in modern times as a kind of retaining wall for the cultivated fields cannot be ruled out completely. It is, likewise, unusual to have found the foundations of SU 2 down to a depth of about 2 m from the present surface.

Trench 8

Trench 8 was opened less than 10 m east of trench 1 (Fig. 7): it is a rectangle of 9×4 m east-west oriented. In this area, the terrace's surface

gently slopes to the east, that is to say towards the lower part of the site. Excavation allowed us to discover a large wall (SU 7) having almost the same orientation of the retaining wall unearthed in trench 1. The surface of SU 7 was reached at an elevation of 1004.16 m asl.: it is located in the middle of the trench, and built of undressed stones, which are irregular for the most, but even roughly squared. Both the east and west façades are clearly outlined, being composed of stones regularly aligned and usually bigger than those from the wall's core. SU 7 is 2.40 m wide and about 4 m long, but it extends further to the north and south limits of the trench. Its west side is preserved for two superimposed rows (bottom at 1004.003 m asl.), while the east is preserved for at least four superimposed rows (bottom at 1003.54 m asl.), thus compensating for the sloping terrace's ground.

Three modern walls roughly east-west oriented have been laid against the two façades of SU 7: SU 1 to the W, SU 8 and 9 to the E. SU 1 is ca. 40 cm wide and at least 2.30 m long, extending further to the west border of the trench. It is built of irregular or roughly squared undressed stones. Its top was reached at 1004.55 m asl., at a depth of about 20 cm from the present surface. It appears that SU 1 is composed of only one row of stones (as the wall SU 9), its foundations having been laid at 1004.29 m asl. Moreover, to the south, SU 1 seems to border a semi-circular cut (SU 5) made into the west side of SU 7, where at least four medium size stones have been shifted or laid down to delimit SU 5. The outline of the latter was not completely brought to light, since it extends beyond the north border of the excavated area. Two layers characterized by the presence of ashes and some burnt bone fragments have been found in this part of the trench (SU 4 and 6), suggesting that it could have been used in modern times as a dumping area.

The walls SU 8 and 9 lean against the east façade of SU 7. SU 8 is built of undressed stones and connected to the north part of SU 7. It is about 75 cm wide and about 3.60 m long, extending beyond the excavation limits. On its south side, SU 8 is preserved for at least five superimposed



Fig. 19. Kal-e Chendar. Trench 9 and Tomb T23. Plan (Drawing by E. Fojetta, V. Messina and M. Rouhani Rankhoui, elaborated by C. Bonfanti).

rows of stones, its top having been reached at an elevation of 1004.25 m asl. and its foundation at 1003.54 m asl. SU9, which runs almost parallel to SU 8, was reached at an elevation of 1004.15 m asl. It is built of only one row of the most roughly squared undressed stones (as the wall SU 1). SU 9 is about 40 cm wide and 3.20 m long, but it surpasses the east limit of the trench. The

arrangement of the walls SU 8, 7, and 9 delimits a rectangular space of at least 3.6×2.4 m. This space was filled with layers of deposits, containing very few archaeological materials, including some non-diagnostic potsherds (SU 12, 10 and 15). It appears that SU 7 is the most ancient structure unearthed in trench 8, as its size, building technique and deeper foundations indicate. SU 1, 8 and 9 seem indeed small walls built in modern times by re-using the remains of SU 7: they have been laid against SU 7 as if it was the main division wall of small rooms or enclosures, whose exact number and layout cannot be established at present. Because of its orientation, elevation, and building technique, SU 7 appears to be related to the same archaeological context of the great retaining wall discovered in trench 1 (SU 4), even if it is unclear at present whether SU 4 and 7 are interconnected by orthogonal walls or simply run parallel (Fig. 7). Both of these structures, which were probably discovered at their foundation level, could have been the support for buildings that now are lost. The stratigraphy of trenches 1 and 8 is similar in the paucity of archaeological finds from deeper strata and in the disturbed context of the layers and fillings related to the unearthed structures.

Trench 9

Trench 9 was opened in the area where a family tomb was identified and excavated in the 2014 season (T23, see below). This trench was opened for verifying the presence of structures connected with this tomb, given that the stepped corridor leading to its funerary chamber seemed to be connected with further walls. The trench, measuring about 9×3 m from north to south, revealed the presence of a wall made of undressed stones (Fig. 19), and repaired with baked bricks which were re-used on purpose. This wall, developing for more than 9 m north-southwards, runs about 1 m east of T 23 and seems to have been a kind of enclosure of the latter. This must be clarified by further excavation, for it may reveal the presence of funerary complexes in this area of the site.

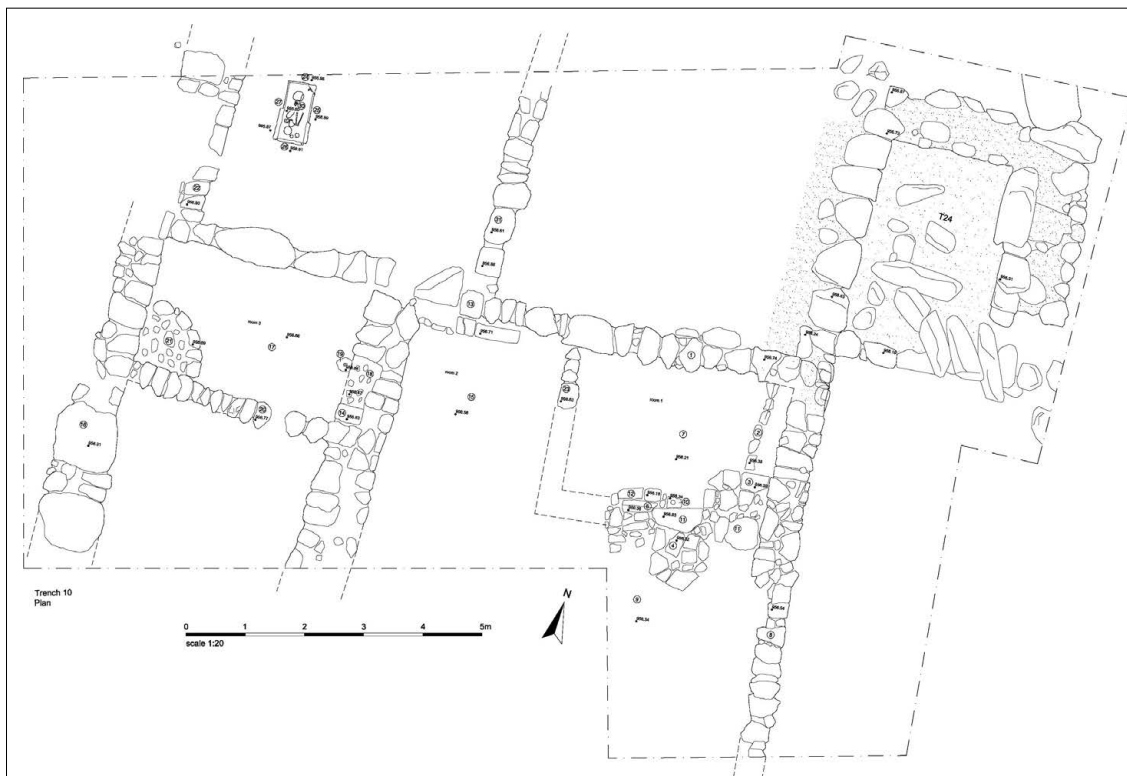


Fig. 20. Kal-e Chendar. Trench 10. Plan (Drawing by M. Faraji, elaborated by C. Bonfanti).

Trench 10

Trench 10, immediately south of a tomb discovered and excavated in the 2014 season (T24 see below), is located at 32°3'40.10"N, 49°41'57.90"E. The trench revealed the presence of a large building made in undressed stones (Figs. 20-21). These stones have been clearly re-used on purpose, for some of them are very well cut and polished and have been broken for being laid in the new walls, having been pillaged from more ancient buildings. At least five rooms belong to this later building, which partially lays against the walls of T 24. The finding of potsherds from the surface seems to refer to a domestic context of a date later than that of the tombs. However, more precise indications on the chronology of the structures were impossible at this stage.



Fig. 21. Kal-e Chendar. Trench 10. Aerial picture.

no traces of archaeological remains and the trench was covered.

Trench 11

Trench 11 was opened in the western part of the surveyed area, north of trenches 1 and 8 and west of trench 3 for investigating the ruined and emerging part of a great wall made in undressed stones. The excavation gave no clear results and

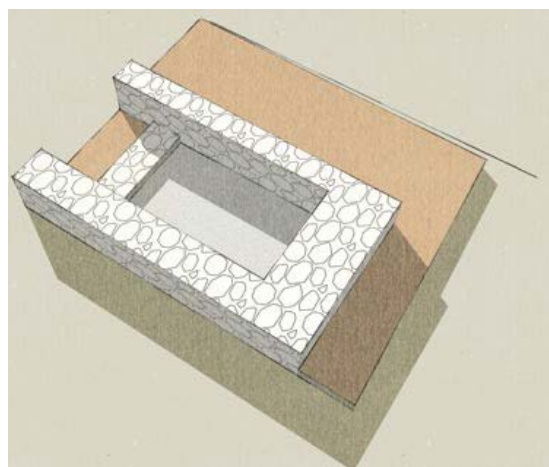
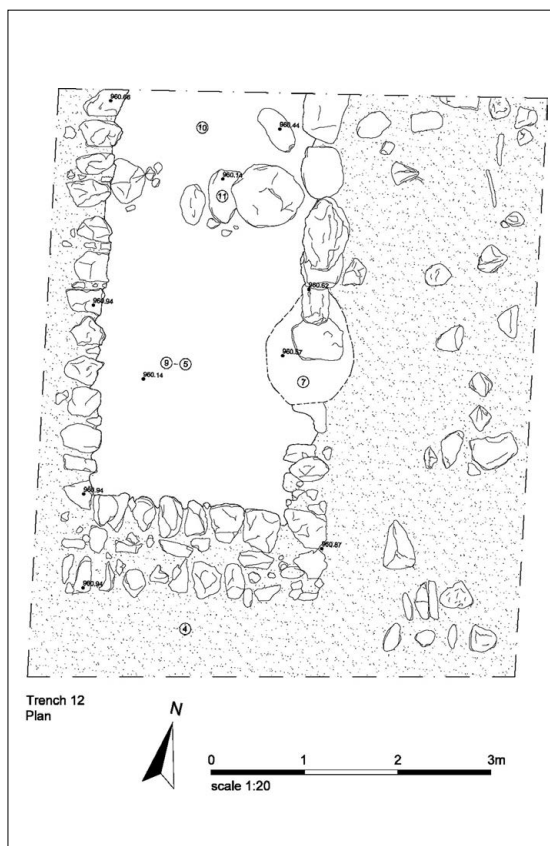
Trench 12

Trench 12, located south of trench 9, revealed the presence of walls made of undressed stones, belonging, at least, to two building phases. These are apparently aligned with the wall unearthed in trench 9 and could belong to the same context (Figs. 22-24). A Wall placed in the western

Fig. 22. Kal-e Chendar. Trench 12. Plan (Drawing by E. Foietta and M. Rouhani Rankhoui, elaborated by C. Bonfanti).

Fig. 23. Kal-e Chendar. Trench 12 from the north (Picture by M. Rouhani Rankhoui).

Fig. 24. Kal-e Chendar. Trench 3 .12D reconstruction of the structure unearthed (Elaborated by E. Foietta).



part of trench 12, is approximately north-south oriented. It is built with medium and small sized stones and connected to the wall east-westwards. The first upper row of stones is smaller than the second deeper one, which lays on a layer of arrangement. The first row shows stones ca. 25 cm width, while the second one ca. 55 cm width. A further wall, placed in the south part of trench 12, is connected to the preceding and with the eastern wall, which is deeper. Its direction is approximately east-west and is built with three superposed rows of irregular stones, being 50 cm high.

The last wall is placed in the east part of Trench 12. It is the wall SU3, in connection to the south wall SU2, which is connected with wall SU1. Its direction is approximately north-south as the wall SU1 and is built with medium and large sized stones. SU3 is cut by a trenching hole, which was visible from the surface before the excavation. This wall is deeper than the southern and western walls.

Trench 13

Trench 13, north-west of trench 9, revealed the presence of two squared platforms, of about 5x5 m, and a further structure developing south of the former (Figs. 25-26). These two high platforms are aligned east-westwards, the eastern being articulated in small niches, and are made by walls in undressed squared stones that retain a filling of loose earth and rubble.

The platform to the west is slightly larger than the other. Its walls are laid in a deep foundation, which goes down to about 70 cm below the present surface. The latter apparently, corresponds to the ancient ground almost entirely. To the platform's corners, particularly the north-west corner, very huge and regular stones were laid for supporting the whole structure. Rows of smaller stones were arranged over the latter. These stones, unlike those often found in the structures discovered at the site, are cut regularly and polished. Particularly the stones laid in the lower rows



follow this trend. The most superficial could be roughly cut. This seems to imply that the best cut stones were laid in low courses, namely the points of higher stress for the structure. The walls made by this technique, which describe the perimeter of the platform, retain a filling of loose earth and rubble, which was compressed to be better retained. The surface of the platform was likely covered by a layer of stones in order to provide a quite regular ground. This must have been at least 1-1.5 m below the surface and could be reached by a small and quite irregular stair indented into the platform's north wall. Of the latter, only the recess and the two lower steps remain, which are almost completely ruined.

The other platform, somewhat smaller, has its walls articulated in indented niches. The building technique is the same of the former platform, even if the stones laid in the latter walls are smaller than those of the preceding. This was probably the consequence of the need of placing them so, as to articulate the walls in niches; an operation that could be easily performed by the use of small stones. Unlike the former platform, the latter, which is to the east, does not reveal the presence of indented stairs, even if its ground must have been at an elevation of at least 1 m from the present surface.



Fig. 25. Kal-e Chendar. Trench 13. Plan (Drawing by V. Messina, elaborated by C. Bonfanti).

Fig. 26. Kal-e Chendar. Trench 13. Aerial picture.

On the basis of what can be seen, it appears that these platforms could be interpreted as the support of altars, or small structures for religious purposes, or as *epitymbia*. These two structures are of pivotal importance; for they testify to the fact that religious practices or ceremonies could be performed in an area very close, and thus directly connected to, the many tombs so far identified.

Tombs

Previous survey and excavation allowed us to verify the presence of monumental tombs built in undressed stones. Reference to few tombs was already made by Stein (Stein, 1940: 142, fig. 10), and we were able to recognize at least 32 occurrences up to the fourth campaign, but their number is considerably higher. These are

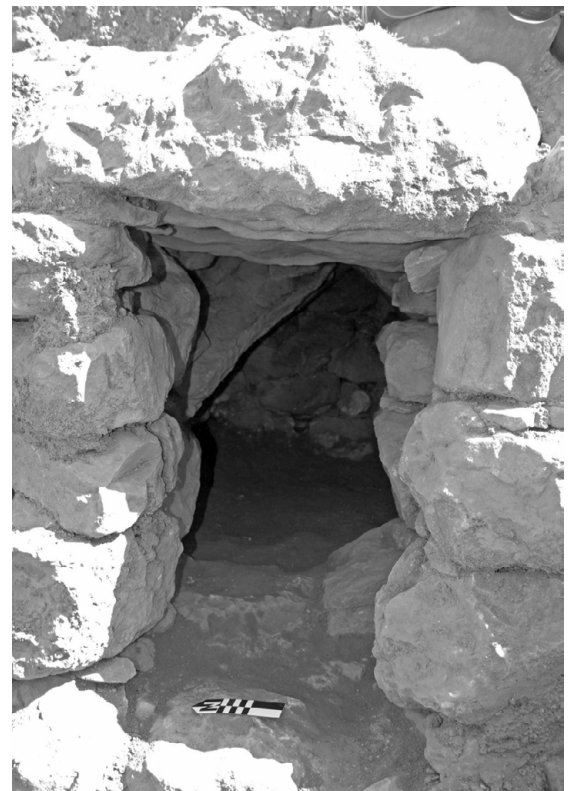


Fig. 27. Top left: Kal-e Chendar. Tomb T23. Corridor's stairway and entrance from the S (Picture by V. Messina).

Fig. 28. Down left: Kal-e Chendar. Tomb T23. Entrances to the funerary chamber and small chamber from the SW (Picture by E. Foietta).

Fig. 29. Top right: Kal-e Chendar. Tomb T23. Niche in the stepped corridor's wall from the E (Picture by E. Foietta).

Fig. 30. Down right: Kal-e Chendar. Tomb T23. Small chamber's entrance from the W (Picture by E. Foietta).

underground saddle or flat-roofed chambers built in undressed stones. All the tombs recognized have been looted repeatedly, in ancient and modern times: four of them (named T7, T20, T23 and T24) have been excavated at the decision of both co-directors in order to prevent further unauthorized activities and the loss of data and information.

Tomb T7

T7, about 50 m W of Trench 3, is a rectangular chamber excavated in the ground, roughly

oriented to the east, and measuring about 1.60×2.60 m, being 1.40 m high. Undressed roughly cut stones have been laid against the grave's sides with the purpose of building the chamber's walls. Stones have different shape and size even if, as a rule, stones of bigger size are laid in the walls' lower courses. The chamber is covered by a combined roof, which has flat stones close to the chamber's entrance (at 1007.290 m asl.) and stones laid in the shape of a saddle at the chamber's back. The tomb has been looted during the times, even if the most recent unauthorized excavation must have happened not long before this campaign; for the soil that still covered part of the roof appeared recently excavated. The chamber, which could be entered through a small rectangular pit of 90×60 cm, was empty. Very few bone fragments have been found into the chamber, while few funerary objects have been discovered among the very disturbed layers of filling. Along, beads and fragments of an iron blade, and a gold bead having the shape of a pomegranate, a bronze pin with decorated head, which shows an embracing couple still revealing Hellenistic reminiscences, were found.

Tomb T20

T 20, located about 125 m north of Trench 3, is a rectangular underground chamber covered by a saddle roof, roughly oriented to the north, measuring about 1.50×3.60 m and being 1.40 m high. It is built with the same technique already described for tomb T7 and was repeatedly looted during the times. Its archaeological context is heavily disturbed, to the extent that its entrance is completely destroyed. The interior revealed clear traces of very recent unauthorized excavations, which leaved the human remains found into the chamber completely disarticulated. Anatomic connexions were completely lost; however, the remains of at least three individuals have been recognized. The precarious state of the roof, which has been partially removed by looters, induced the co-directors to enter the tomb through its north side, for it was too dangerous to remove other roof's slabs. Only two small bronze rings were found in the chamber.

Tomb T23

T23, at the feet of a low terrace east of the modern road that crosses the site, is the most impressive tomb discovered in the present season (Figs. 19-27). It is composed of an underground funerary chamber, a stepped corridor with a rectangular niche, and a small chamber (probably employed for funerary rituals). All the walls of the tomb are built in roughly cut undressed stone blocks. The corridor, delimited by the walls SU 1, 2 and 13, measures about 4 m in length and 1.4 m in width. To the south, the corridor's stairway was probably linked to other structures still undiscovered. To the north, it leads to the entrance of the funerary chamber. This stairway (SU 7), made of roughly cut stones and slabs, occupies the whole corridor and was open to the sky, allowing an easy transit to the chamber; it consists of five steps, the higher of which is about 50 cm below the present ground (at an elevation of 959.17 m asl.).

On the corridor's west wall, a small niche of 80×30×65 cm precedes the chamber's entrance (Fig. 29). In the niche, the remains of a sheep or goat (?), sacrificed probably during the last funerary ritual there performed, were found mixed with a layer of filling (SU 6). On the east sidewall, approximately in front of the niche, a small chamber covered by a saddle roof, composed of stone slabs, was unearthed (Figs. 30-31). Irregular stones and rubbles blocked its entrance, measuring 70×40 cm; its inner space contained a layer of filling (SU 9) mixed with several fragments of animal bones, testifying to the use of this space for sacrifices or rituals, as the niche placed exactly in front of it.

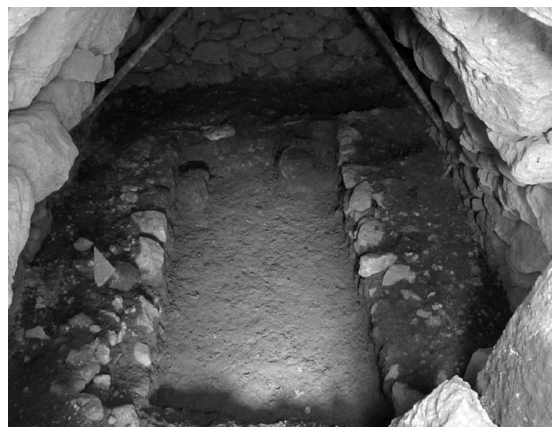
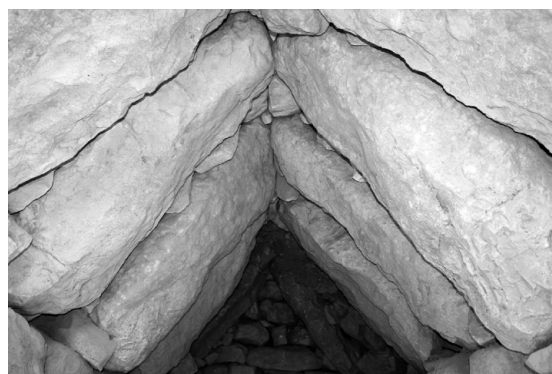
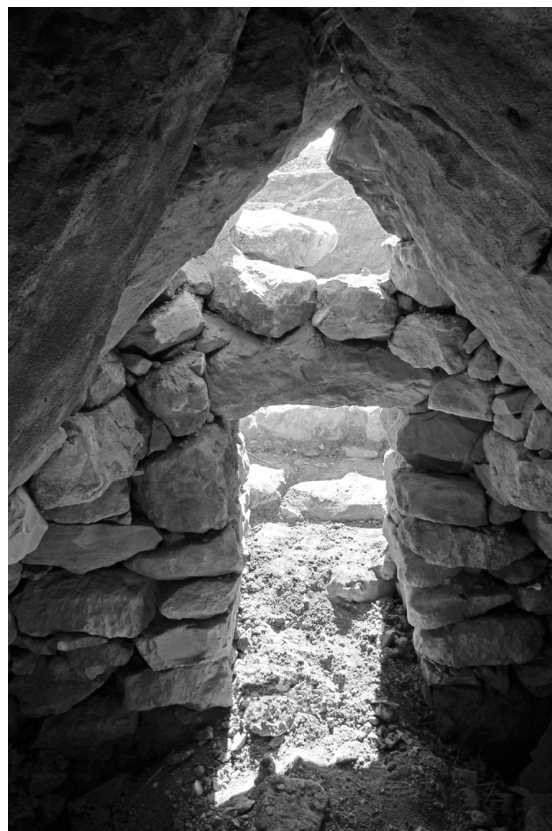
The entrance to the main funerary chamber is a small passage of 70×100 cm approximately, opened in a huge wall (SU 13) (Fig. 32). Its threshold is about 2.4 m below the present surface (at 958.06 m asl.) and creates a step to the chamber's ground. The chamber measures 4.5 m in length and 2.4 m in width. The relations existing between the chamber's and corridor's walls show that the latter were built after the former. The undressed blocks of the chamber's walls are bigger in the lower courses and progressively smaller in the upper, allowing good

Fig. 31. Top left: Kal-e Chendar. Tomb T23. Interior space of the small chamber (Picture by E. Foietta).

Fig. 32. Top right: Kal-e Chendar. Tomb T23 Entrance from the interior of the funerary chamber (Picture by V. Messina).

Fig. 33. Center right: Kal-e Chendar. Tomb T23. Roof's slabs (Picture by E. Foietta).

Fig. 34. Down right: Kal-e Chendar. Tomb T23. Funerary benches from the S (Picture by J. Mehr Kian).



stability to the structure. The courses also project inward from the bottom to the top, in order to reduce the space covered by the roof. This is a saddle roof (SU 24) built about 1.5 m from the chamber's floor and composed by 14 slabs having oblong irregular shape (Fig. 33), arranged in two rows of 7 (even if they must have been originally 16 arranged in two rows of 8). In ancient times, the top of the roof (at 960.47 m asl.) could have emerged from the ground. A hole, opened in the forefront of the roof, allowed looters to enter the chamber illegally.

Traces of ancient restorations of the roof and the chamber's south wall (close to the entrance), were found during excavation. A hinged stone door, now lost, must have closed the entrance, as the presence of two hinges inside the chamber clearly attests. These were not in their original position; the first being on the chamber's floor, the other re-employed in the texture of the entrance wall after its restoration. This indicates that the tomb was entered many times during the centuries, the last attempt to close its entrance having been made by placing a flat irregular

slab on it. It must be stressed that this slab was discovered broken in two parts, thus indicating that the tomb was re-entered even afterwards. The chamber was filled by a layer of soil and debris (coming from a collapsed part of the roof). Against the east, west and north walls, three low funerary benches, rectangular in shape, were found that follow the chamber's perimeter (SU 27-29). These are made of pebbles delimited by baked bricks, and measure about 250-270 cm in length, 50-80 in width, and 30 in height (Fig. 34). In the space between them (at about 957.79 m asl.), fragments of bones –it is uncertain whether human or animal– were very scanty, and found in layers of filling (SU 32, 33) together with precious funerary goods and glazed vessels broken into sherds. These have been recomposed and show types particularly attested in the 1st-2nd century CE. Small findings as a bronze mirror, bronze spoon-shaped pins, beads, gold mouth coverings and a diadem seem particularly connected with the presence of a buried women.

Tomb T24

T24 is located south of T23, not far from it. It is an underground chamber that has been heavily destroyed and repeatedly plundered, even in modern times. Its roof, which is of unclear type –but likely similar to that of T23, with oblong slabs– has completely collapsed into the funerary chamber (Fig. 35). The latter measures about 4×2 m, even if its south limit is unclear, for it has been destroyed by the collapsed roof. The entrance was opened in the south wall, for its threshold has been recognized still *in situ* under the roof's slabs (at 956.19 m asl.) (Figs. 36 - 37). It is very interesting that the threshold is higher than the floor of a corridor running on the exterior of the south wall, and parallel to it. This seems to imply that the corridor was open to the sky and could be walked repeatedly in ancient times. The corridor could have connected T24 with other underground structures yet undiscovered. If so, T24 could have been part of a funerary complex. The walls of T24, built in the same manner of those of T23, are very wide, and a low funerary bench was laid against the north wall.

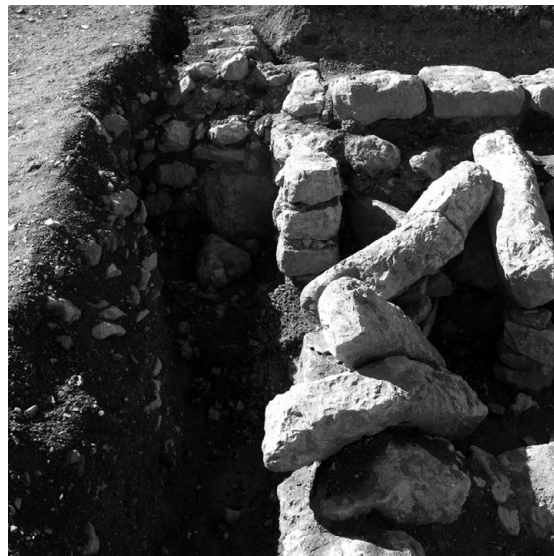


Fig. 35. Kal-e Chendar. Tomb T24 (Aerial picture by V. Messina).

Fig. 36. Kal-e Chendar. Tomb T24. Collapsed roof, entrance and threshold from the SE (Picture by J. Mehr Kian).

Fig. 37. Kal-e Chendar. Tomb T24. Collapsed roof, entrance and threshold from the E (Picture by J. Mehr Kian).



Fig. 38. Kal-e Chendar. Tomb T24. Stone hinged door discovered over the ruined tomb's E wall (Picture by J. Mehr Kian).

Fig. 39. Kal-e Chendar. Tomb T24. Stone hinged door (Picture by M. Farajji).



It is remarkable that no funerary objects or bone fragments were found during excavation. However, a hinged stone door, still well preserved, was found in the superficial layer that covered the remains of the tomb's east wall (Figs. 38 - 39). The door, sculpted from a single stone block of about 76×100×20 cm, must have been displaced in the place where it was found from its original position, namely the entrance of T24, and its outer surface is

carved with a geometric pattern of four rectangles arranged on two rows, thus implying that it was visible when it blocked the tomb's entrance. The door of which the hinges were found in T23, must have been of the same type.

Concluding remarks

The results of our first season of excavation confirm what was preliminarily noticed by Stein; that buildings of different type, size and technique stood on the terraces recognized at the site. It seems that along with monumental buildings laid on foundation platforms made of undressed stones, like that found in trench 1, also small structures existed that were made for religious purposes: the baked bricks altar, or altar platform, found in trench 3, and the very similar platform found by Stein, are probably only two of the many structures of this type are to be found at the site. In any case, the religious complex at Kal-e Chendar appears to have been of particular type: at the present state of data, a cemetery, of which only few tombs have been recognized up to now, occupied the areas surrounding the terraces, thus implying that the religious and



Fig. 40. Kal-e Chendar. Pottery assemblage from T23 (Picture by E. Foietta).

funerary functions were here strictly interrelated.

No clear traces of destruction were found during our excavation, but the fact that the buildings at Kal-e Chendar were demolished, and not only decayed, can be considered certain. However, it is impossible to say, at present, if they were demolished at one time, in a kind of *damnatio memoriae*, or progressively, maybe over long timespan, for allowing building material of easy-access to be recovered and reused. The site pillaging is clearly revealed by certain features, like the presence of architectural elements loose on surface or re-used in the walls of modern houses, but can be also deemed on the basis of the archaeological context described by Stein, which appears heavily disturbed by quarrying operations and makes his assumption doubtful regarding the original placement of the discovered sculptures inside the rectangular enclosure he found. According to what he wrote on his report and diaries, it seems more probable that the sculpture fragments and bronze statue were not discovered *in situ*, but in a disturbed and superficial layer, having been probably displaced from their original position in antiquity, when the sanctuary was abandoned and/or destroyed.

Excavation at the site is not an easy task and need to be carefully planned year by year. The site stratigraphy is hardly comprehensible, because of the characteristics of the soil, deposits and ground morphology, as the opening of our trenches shows well. The soil, a lithosol consisting

mainly of partially weathered rock fragments that appears to have very low saline inclusions, is everywhere mixed with rubble of different sizes, pebble and other debris, which are the result of the progressive decay of the stones and boulders that can be found everywhere in the valley and are wedged in the ground since very ancient times. The abundance of these decayed materials in the soil makes the detection and understanding of strata uneasy. The main problem for the definition of an archaeological sequence is created by the low stratigraphic accumulation, however, is characteristic of mountainous sites, and caused by the soil flotation –here more accentuated by the sloping bedrock onto which the soil itself lays– and repeated human interventions. Indeed, unlike what can be seen in sites located in alluvial plains, human interventions did not seem to have originated the progressive deposit of layers and architectural remains, characteristic of structures built in mud-brick, for building materials, namely stones, are here continuously re-used, and the most recent intervention always obliterates the preceding, almost completely.

The result of this process is that, in the excavated areas, no more than 2 m separate the surface by layers of natural deposits lacking archaeological records, and stratigraphy is extremely compressed in favour of the more recent phases of occupation, with materials of different dates incoherently mixed in the same disturbed layers. This is also shown by the very low occurrence of findings:



Fig. 41. Bilevah.
Collapsed wall in stone
blocks of masonry
(Picture by J. Mehr
Kian).

in 6 trenches, which cover together a surface of about 150 m², less than 40 potsherds of various types and only 3 fragmentary objects or tools were found, whereas lithic objects, like microblades or bullet cores can be widely found at the site, especially on the surface, but even among the archaeological layers, mixed with the much more recent and scanty materials.

Despite the scanty findings, the structures unearthed in our trenches appear to be dated to the Hellenistic and Parthian periods quite confidently, on the basis of their stratigraphy. They lay just below the surface indeed, and there are clear indications that the latter approximates the floor of the ancient buildings fairly. This is particularly clear when looking at the stratigraphy of the “Stein Terrace”. Here it is possible to see that the terrace retaining wall, probably collapsed in ancient times, show a clear relation with the building unearthed by Stein in 1936 and the platform found in trench 1: the wall retains the same filling layer into which the foundations of these buildings were laid and must be thus more ancient; in this layer, the sculpture fragments

and bronze statue dated to the Hellenistic and Parthian periods were also found.

No evidence was discovered of occupations that pre-date the structures unearthed, for in the excavated trenches, the latter insists on natural deposits lacking archaeological records almost directly. However, the possibility that the site was known, and in some way frequented, even before the most recent periods, cannot be ruled out completely at the present state of knowledge. The excavation conducted close to a small natural sanctuary of Hung-e Azhdar revealed that in sites of this mountainous area the most recent structures overlap and almost completely erase the traces of previous occupations as a rule (Messina et al. 2015: 81-88). In addition, the fact that in Elymais the frequency of the sites having attained particular significance –in this case religious– is usually attested far before their use in the Hellenistic and Parthian periods, must be also taken into account. Indeed, sites maintain their religious value for long lasting periods. That the area was known since prehistoric times is, at last, revealed by the wide occurrence of lithic objects even on surface.

The religious complex of Kal-e Chendar was probably one of the most reputed in the region. The peaks overlooking the site from the west –known as peaks of Bilevah– have been also preliminarily surveyed during the 6th campaign: here, at an elevation of about 1709 m asl., ruined massive walls were recognized and marked by non-differential GPS receivers (Fig. 41). These walls, made in undressed blocks of stone linked by iron (?) clamps (Fig. 42), still emerge from the present ground level and appear to be what remains of one great fortress or, maybe, a complex of small fortresses guarding the Shami Valley from the mountain. It is remarkable that the area is known as “Char Qala” (in Persian: four fortresses). Surface potsherds, which have not been collected, are very scanty, and appear to be dated from the Parthian to the Islamic periods. The presence of this military building(s), especially in connection with the small “Qala” recognized at the top of the hillock that rises south of the “Stein Terrace”, induces one to think that the religious complex at Kal-e Chendar was considered very important, and thus protected effectively, in ancient times.

Only four of the 32 recognized tombs were excavated, and we expect that a few hundreds more will be discovered at the site in the future. These tombs provide interesting information on the social milieu of the people buried there. If some of them appear as normal burials revealed in many depositions (T7 and T20), there are also monumental family chambers (T23 and T24) that seem to have been part of more articulated funerary complexes, in which corridors, sometimes stepped, were used as walkways to other –buried or semi-buried (?)– structures. The most interesting feature of these monumental family tombs is that their façades had a monumental setting, with hinged stone doors, decorated by carved geometric patterns, and could be viewed from the outside and only part of the tomb have been underground. The hinged doors blocking their entrances could be opened and re-opened for entering into the funerary chambers many times, while rituals were performed in external niches or secondary chambers.



Fig. 42. Bilevah. Stone block of masonry with carved recesses for iron clamps (Picture by J. Mehr Kian).

The monumental impression of some tombs leads to an aristocratic milieu. This is confirmed by what remains of the funerary goods. The golden objects and pottery assemblage of T23 (Fig. 40) testify the customs of a wealthy plutocracy, reminiscent the trends of the Hellenistic and Parthian upper classes, probably influenced by the productions of the lowlands of Susiana and Mesopotamia. Even the type of family tombs, with large chambers accessed by stairways and containing funerary benches, find comparisons with samples known at Susa, Babylon, Kish and Seleucia on the Tigris².

The sanctuary and cemetery at Kal-e Chendar were located in a very suggestive mountainous landscape (Fig. 43), which seems to give meaning to the religious value of the area, at least in part. This is especially true when considering even other natural religious places of Elymais, like for instance the neo-Elamite sanctuaries at Kul-e Farah and Shikaft-e Salman, or the Parthian rock carvings assemblage at Tang-e Sarvak, in which architectures or other features actually seem meaningless regardless of their natural landscape.

2. The family tombs of the Parthian period found at Susa have been recently published by Bouchalat and Haerinck, 2011: pl. 6, 13, 17. For the family vaulted tombs with niches at Babylon, see U'mran Musah, 1979: 67-68; at Kish, Watelin and Langdon, 1934: 54-55, at Seleucia (N agora), Messina, 2006: 143, (block G6), Yeivin, 1933: n.2, 131, 159, 216, figs. 8, 9, 10, 11. pl. 18:1, Hopkins, 1972, 54, 68.



Fig. 43. Kal-e Chendar. Aerial view of the site and alluvial fan from the east.

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