

# **The Development and Expansion of Shahr-i Sokhta during Period IV**

**Hossein Moradi**

**Iranian Center for Archaeological Research**

## **1. Introduction**

In Eastern Iran during the late 4th and early 3<sup>rd</sup> millennia BC, indications of economic development and an increase in the quantity and quality of practical and luxury goods can be observed (Tosi 1979: 153). Shahr-i Sokhta, with an area of more than 150 hectares, is one of the largest archaeological sites on the eastern Iranian plateau. The site is located in the Sistan plain, some 57 Km from the city of Zabol, and it was first excavated by the Italian Archaeological Expedition led by IsMEO between 1967-1978 (Tosi 1968; 1969; 1983; Salvatori 1979). Since 1997 it has been investigated by the Iranian Archaeological Expedition led by RICCHT (Sajjadi 2008; 2014). The 3<sup>rd</sup> millennium BC saw spatial and topological specialization in both architectural structure and the urban fabric. Field studies show that the city was composed of three main sectors: the *Residential Area*, the Necropolis and the *Craftsmen's Area* (Mariani 1992: 183). The *Residential Area* reached its maximum expansion during the mid-3<sup>rd</sup> millennium BC, exceeding over 80 hectares, which is considered to be one of the largest urban settlements on the eastern Iranian plateau (Tosi 1977: fig. 5). Studying the reasons and nature of this expansion in 3<sup>rd</sup> millennium BC sites by means of archaeological

excavations and field studies will help to better understand the processes that led to the development of urban textures in Eastern Iran (Fig. 1).

## **2. Evaluation of archaeological evidence from Period IV (last century of 3<sup>rd</sup> and early 2<sup>nd</sup> millennia BC)**

The predominant perception before the 2013 and 2014 excavations was that by the start of Period IV, Shahr-i Sokhta had become a small village and the process of its destruction had already begun. Finally, at the end of Phase 0 of Period IV (ca. 1800 BC) the site was totally abandoned, after a millennium of occupation (Salvatori - Tosi 2005). Environmental changes (Fouache *et al.* 2009), together with a large fire at the burnt building were the final blows that ended the life of the settlement (Fig. 2: 6).

Thanks to the excavations in Building 1 of the Residential Area, the Craftsmen's Area, the Central Quarters and workshops in various parts of the site (Fig. 3), it is now possible to gain a broader perspective on daily life in the settlement and its persistence in the last quarter of the 3<sup>rd</sup> and early 2<sup>nd</sup> millennia BC (Sajjadi - Moradi 2016: 150). It seems that the large structures and buildings brought to light by the excavations in fact reflected urban spatial and topological development at that time. Aerial photos taken by drones indicate large-scale constructions in the *Eastern Residential Area* and around *Building 1*.

It seems that in the last quarter of the 3<sup>rd</sup> millennium BC, urban development in Shahr-i Sokhta extended to previously unused sections of the site, with more intensive use of the *Central Quarters*, which is topographically lower than *Building 1*, and the *Eastern Residential Area* (Sajjadi - Moradi 2016: fig. 1). Layers 2 and 3 in Workshop 28 and layer 1 in Workshop 26 are probably related to this extensive construction activity in the last quarter of the 3<sup>rd</sup> millennium BC (Sajjadi - Moradi 2018: 112). Architectural evidence, along with mobile finds from Period IV, has been found in some excavated areas of Shahr-i Sokhta. Evidence of Period IV is found in phase F of *Building 1*; in the first and second layers of *Building 20*; in the first layer of Workshop 5 in the *Craftsmen's Area*; in two layers (0 and 1) of Workshop 26; in the first layer of Workshop 28; inside the

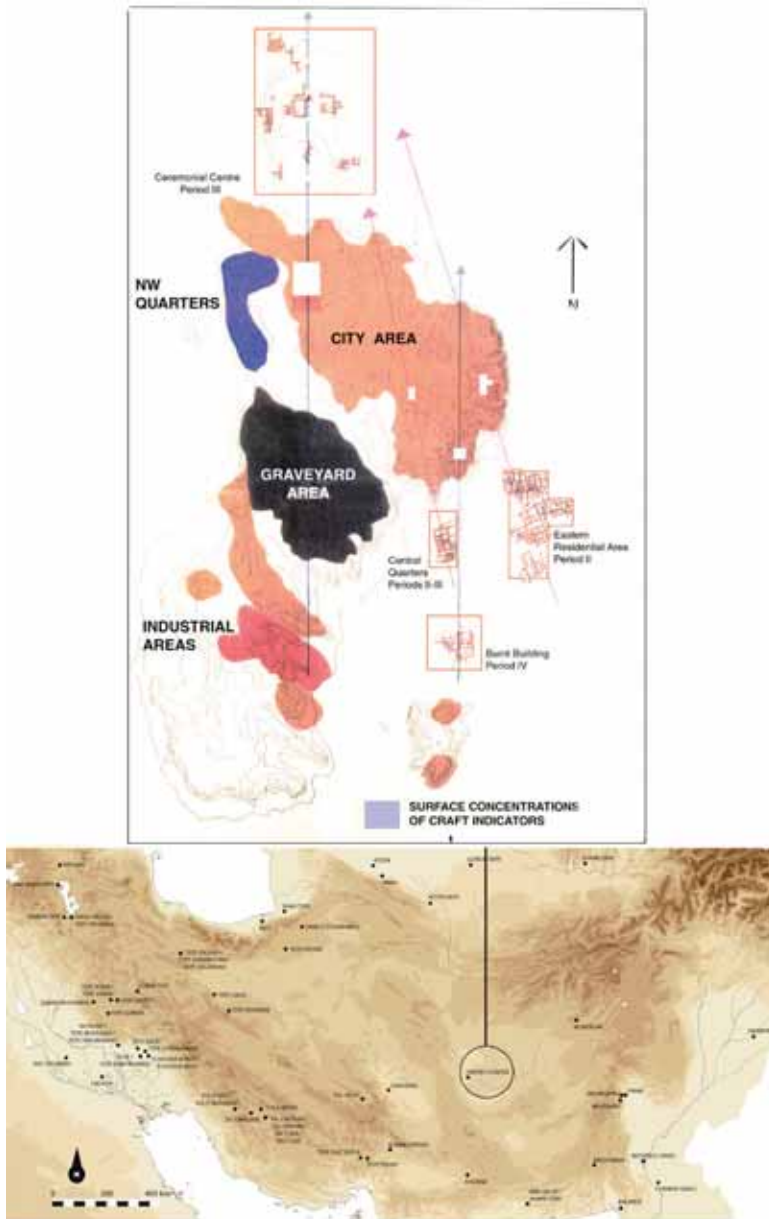


Fig. 1: the location of Shahr-i Sokhta in western Asia and the different sectors of the city according to their function (Mariani 1979; Desset 2014).

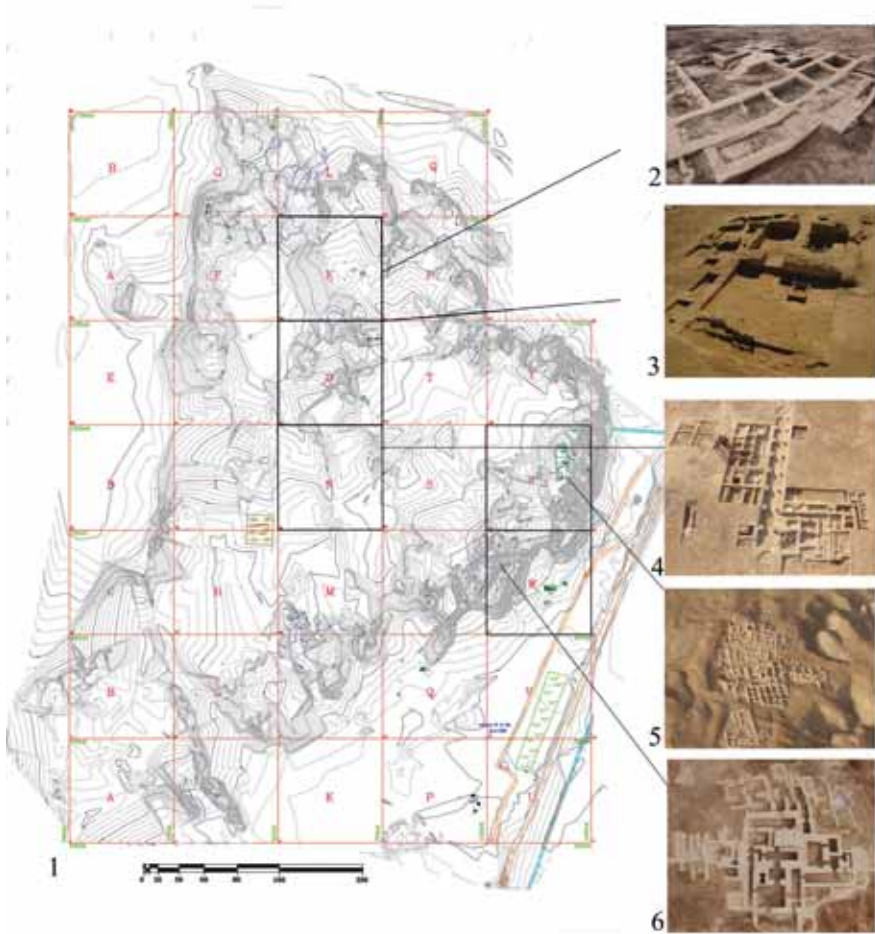


Fig. 2: topographic map of Shahr-i Sokhta and an aerial photo with remnants of period IV (Sajjadi - Moradi 2015).

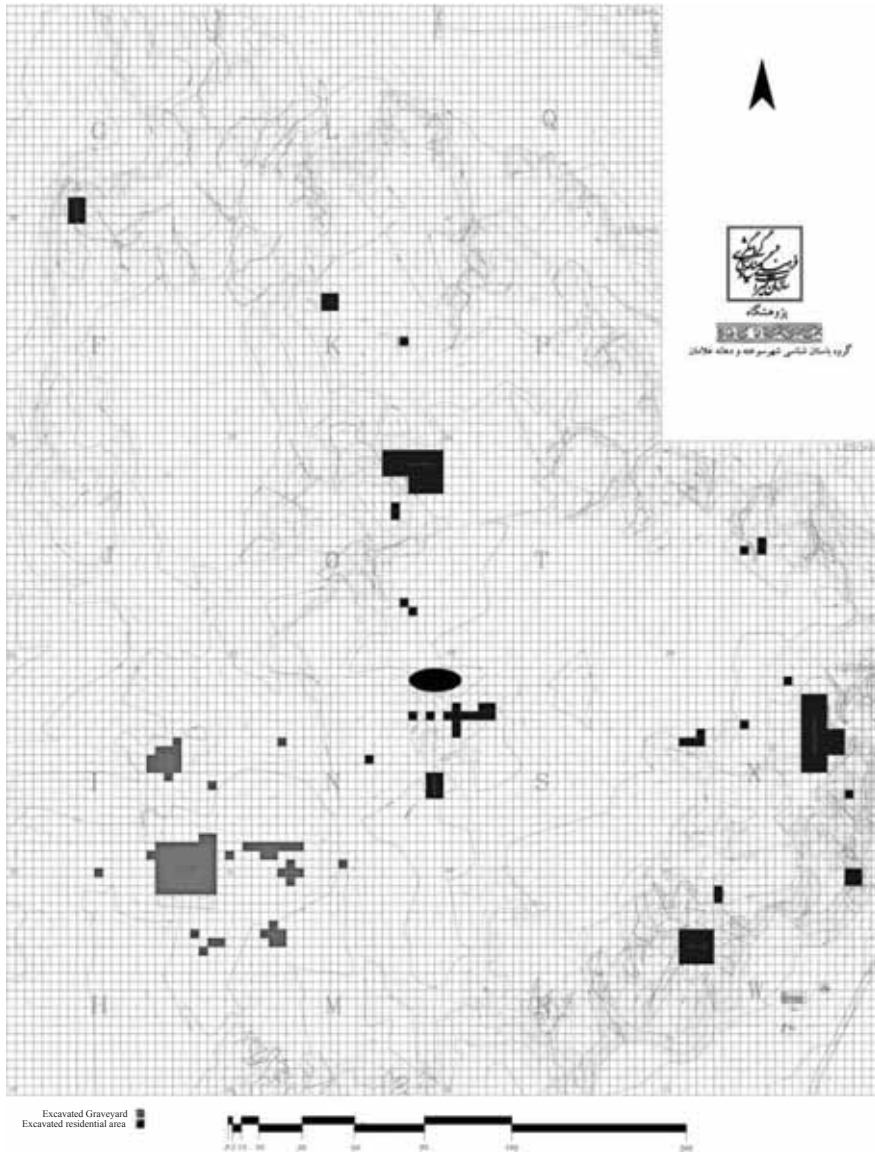


Fig. 3: Shahr-i Sokhta, general map of the site: brown color: residential areas; purple: graveyard.

excavated passageway in Workshop 29; and in the *Craftsmen's Area* in the west of the site. To all these may be added the Period IV layers of the *Burnt Building* in the very southeast of the site (Fig. 2).

### ***Burnt Building (Period IV)***

The predominant assumption was once that Shahr-i Sokhta became a small village in Period IV, which was marked by a process of decline and destruction. Finally, at the end of this period, corresponding to Phase 0 (ca. 1800 BC) the city perished and was abandoned after more than a thousand years (Fig. 4).

### ***Building 1: layer F***

*Building 1*, in the monumental section of the *Residential Area*, is one of the largest excavated structures in Shahr-i Sokhta. Excavations of this building started in 1979 and ended in 2012. An area of almost 1600 square metres of this building, located in square "O", has been excavated (Fig. 5). Of the six layers unearthed, five belong to Periods II and III of the site, while the last layer, phase "F" of the building, can be attributed to the end of Period III and Early Period IV (Sajjadi - Moradi 2014: 89) (Fig. 6).

In this phase no architectural structure related to Period IV has been found, but a considerable quantity of buff ware vessels made of red paste with everted rims and red slip, characteristic of period IV, have been recovered. Phase F is the terminal phase of *Building 1*, after which it was completely abandoned. This phase may be recognized in the large southern staircase (Fig. 7), the blocked entrances and Space 41a. It seems that in this phase or even earlier, the building was deliberately filled in and the floor plan of phase E was used for a new structure. Some indications of this phase can be observed around the building and in Workshops 18 and 19. In these two workshops, next to *Building 1*, traces of mud brick pavements, probably related to phase F of *Building 1* and Period IV of Shahr-i Sokhta, are visible (Fig. 8) (Sajjadi - Moradi 2012).



Fig. 4: aerial photo of the Burnt Building (photo M. Rahmani).

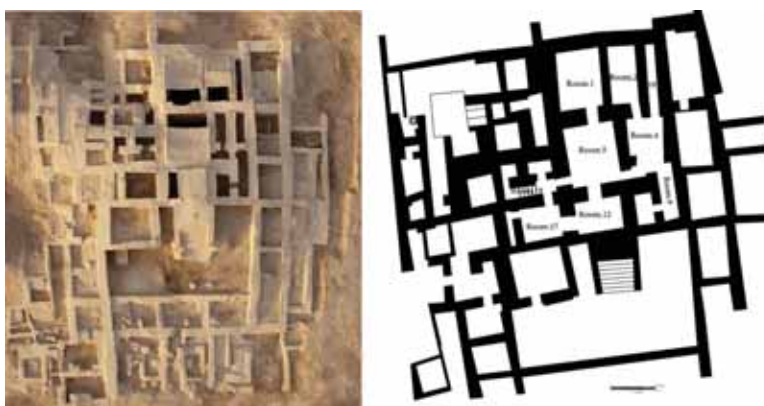


Fig. 5: aerial photo and plan of central spaces of building No. 1 (Sajjadi - Moradi 2014) (photo Rahmani).

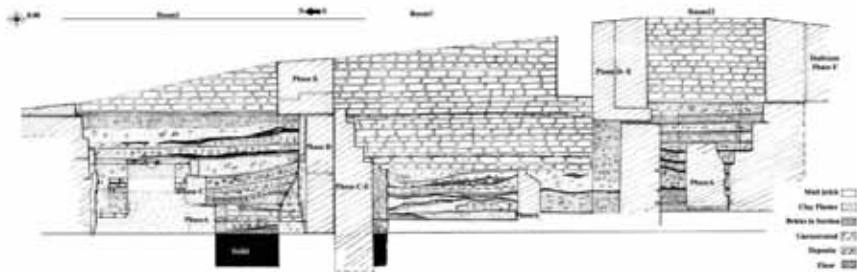


Fig. 6: Shahr-i Sokhta North-South section of central part of *Building 1* (Sajjadi - Moradi 2014).



Fig. 7: *Building 1*. Large staircase (Phase F).

### ***Workshop 5: layer 1***

Workshop 5 is located on the north-western edge of the site, north of the *Craftsmen's Area*. A vast mud brick pavement (Fig. 9) was found in the upper layer, which is characteristic of Period IV architecture in Shahr-i Sokhta and similar to the mud brick pavement that had already been found in the *Burnt Building* and *Building 1*. Associated with this layer were architectural structures including rooms and a mud brick platform, as well as a large number of standard Period IV pottery fragments, including shallow bowls made of red paste with a brownish slip and everted rims. Many of these items had angular bodies, which is a characteristic of Phases 0 and 1 of Period IV.





Fig. 8: Workshop 19, mud brick pavement.



Fig. 9: Workshop 5, mud brick pavement.

***Building 20: layer 1***

*Building 20* is a singular architectural complex. Although this building has some similarities with *Building 1* and the architecture of Shahr-i Sokhta more generally, the presence of some architectural elements extends its function beyond that of a simple house, in a way that suggests it served as a temple in late Period III and early IV (Fig 10).

Although excavations in this building have not yet finished, present evidence shows it was a single-period structure, which means that the building was used for a specific time span and then abandoned (Sajjadi - Moradi 2014: 85). Chronologically, the ceramics found here are categorized into two groups including Plain Buff Ware and Painted Buff Ware. These types are both common in various periods of Shahr-i Sokhta, but all the samples found here are from Period III. The Painted buff ware from this building is decorated with crosshatched leaves and other linear motifs that were common in Phase 3 of Period III. Another group of pottery fragments is composed of Plain Buff Ware bowls with everted rims that are morphologically similar to Sistan specimens from the historical period. These bowls were all found in the top layer of *Building 20* (Fig. 11). Analogous ceramics have been unearthed in Workshop 26 on the eastern edge of the site. These are plain, made of dark buff paste with thick brownish slip (Fig 11: 15). Generally, it seems that *Building 20* was used in a certain period, which according to ceramic evidence may be late Period III and early Period IV.

***Building 26 (Layers 0-1, Squares SDD, SDG, SDI, SDN, SDR, SDS, SDT, SDX, SEP)***

Workshop 26 is located in the *Central Residential Area*, on the western side of the large depression and north of the *Residential Area*, at a distance of 50 metres from the trenches excavated by the Italian Expedition (Salvatori 1979: 141-144; Salvatori - Vidale 1997) (Fig. 12). Three layers of architectural remains are recognized in this workshop, including layers 1, 0 and the "upper layer" (Fig. 15). The most significant excavated sections belong to layer 1. The architectural elements of layer 1 include three main parts: a corridor with buttresses, storage

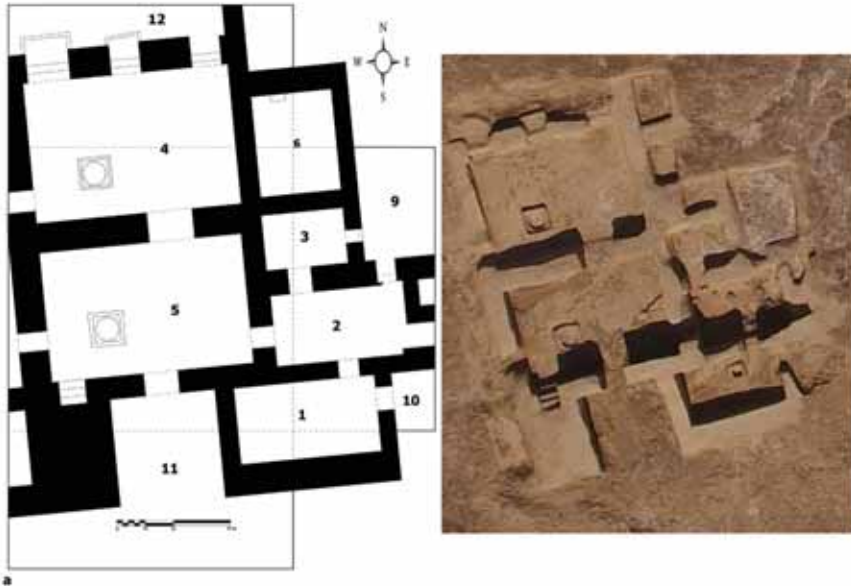


Fig. 10: *Building 20*: Aerial photo and plan (photo M. Rahmani).

rooms, and a southern residential section known as the burnt rooms, which are preserved better than elements in the other layers (Fig. 13). Found next to one of the buttresses were 18 small jars made of red and grey paste with a thick brown/ochre slip (Fig. 14), which are comparable to Shahr-i Sokhta IV and Mundigak IV ceramics in terms of slip and form (Biscione 1974: fig. 12, n. 737; 1979: fig.4).

Other pottery fragments from layer 1 are also comparable with typical bowls from Period IV (Fig. 16).

In squares SDG and SDR, layer 0 above layer 1 includes scattered architectural remnants in various sections of trench, mostly single rooms with internal installations such as a stove (Fig. 15). In some cases, the rooms are connected to the adjacent room by a doorway. No recognizable architectural complex has been completely excavated in this layer, but the ceramic finds suggest a connection with Period IV. Plain buff ware consisting mainly of carinated bowls was found on the mud brick pavement (Fig. 10). The ceramics of this layer and the upper

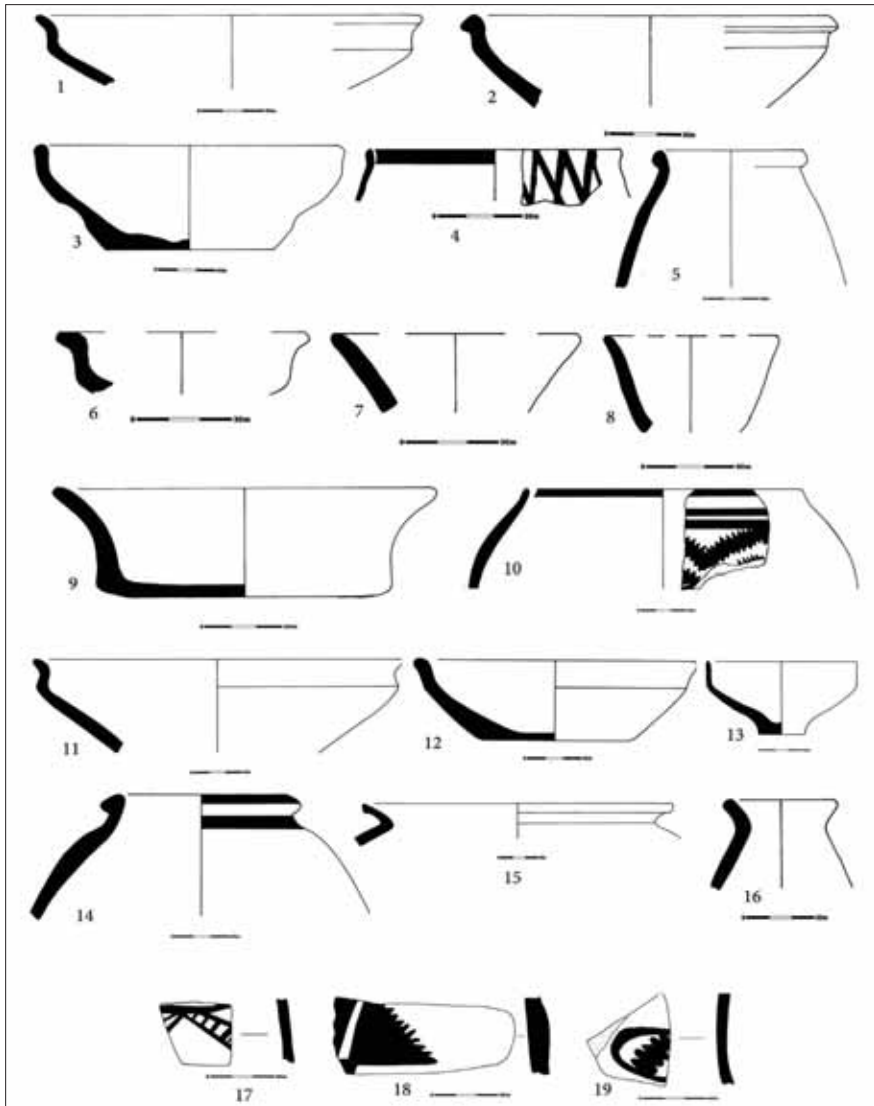


Fig. 11: *Building 20*: plain Red Ware items with brown to reddish paste and body, wheel made (Nos. 1, 2, 6, 11 bowls; 8. Flower vase; 9, Basin; 15, wide mouth jar; plain Buff Ware items with buff color slip and body. Wheel made (Nos. 3, 7, 12, 13 Bowls; 5, 16 Wide mouth, small jar); painted Buff Ware items with buff color paste and body, black paint, geometric designs, wheel made (No. 10, close mouth jar; 14, wide mouth jar; 17-19, body fragments); Painted Grey Ware item with grey paste and body. Wheel made, black paint (No. 4, wide mouth jar).

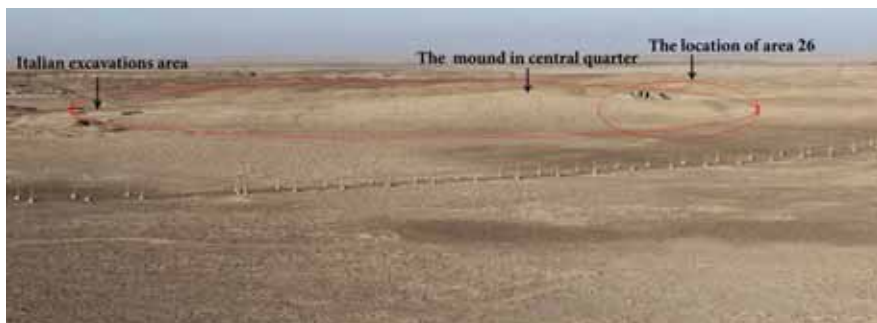


Fig. 12: Location of Workshop 26.



Fig. 13: *Building 26*. Aerial photo (photo M. Rahmani).

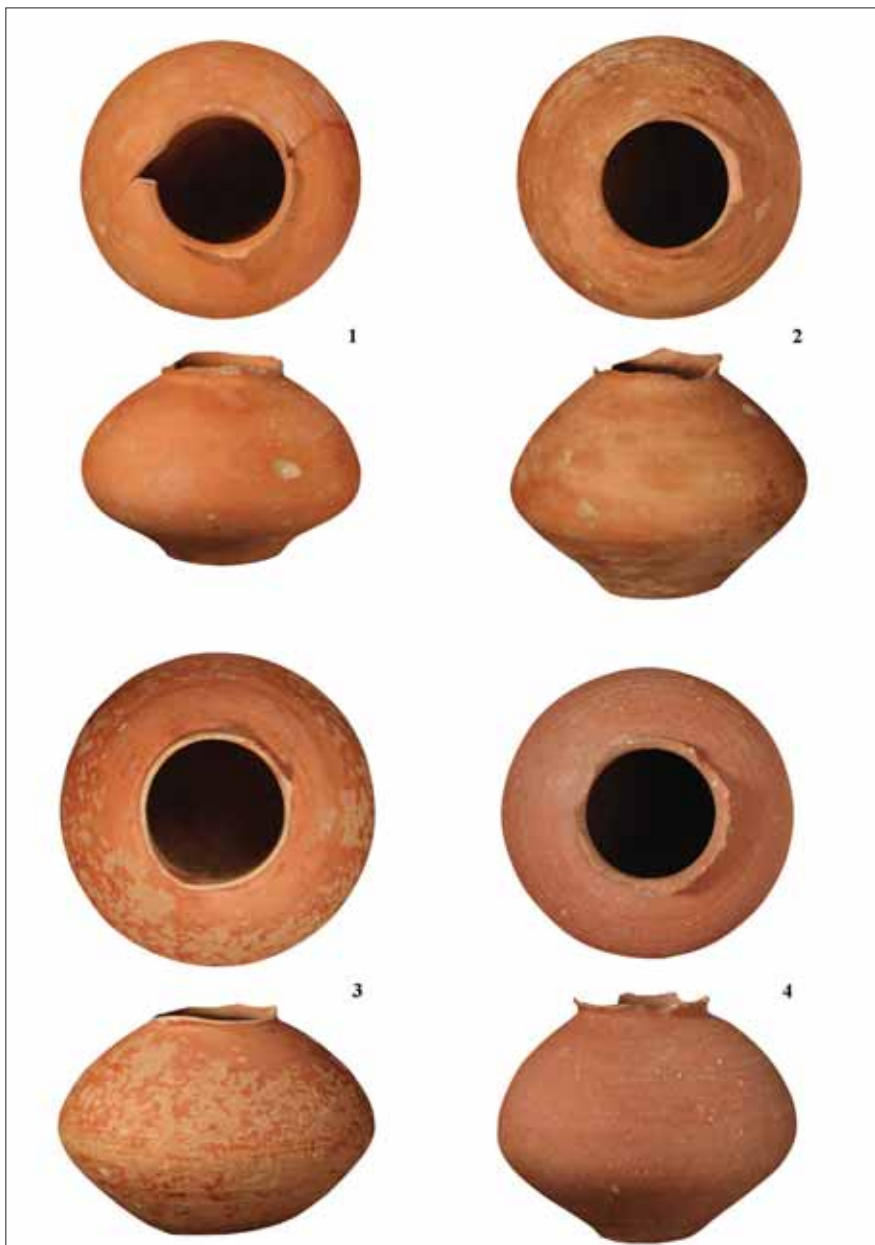


Fig. 14: Workshop 26, Trench SDI, Layer 1, Cut. 5. Red Ware small jars.

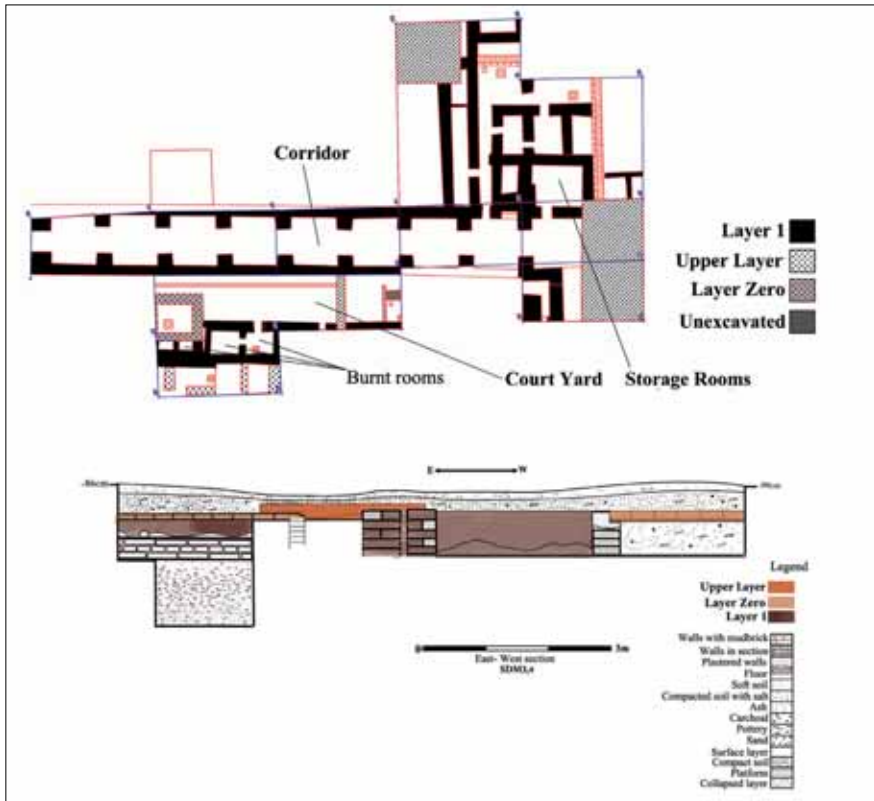


Fig. 15: *Building 26*. Plan and section (Sajjadi - Moradi 2016).

layer are chronologically more clearly related to Period IV. The paucity of painted fragments is one of the characteristics of the pottery assemblage in this layer (Fig. 17).

Traces of scattered walls have been found on the southern and eastern edges of the workshop (squares SDR and SEP, Figs. 18 and 19). This assemblage consists of walls that together form one or two rectangular spaces. Some pottery samples from this layer are related to Period III of Shahr-i Sokhta, but the predominant form is plain buff pottery, sometimes with ochre slip, which is characteristic of Period IV (Biscione 1979: 295-297) (Fig. 20).

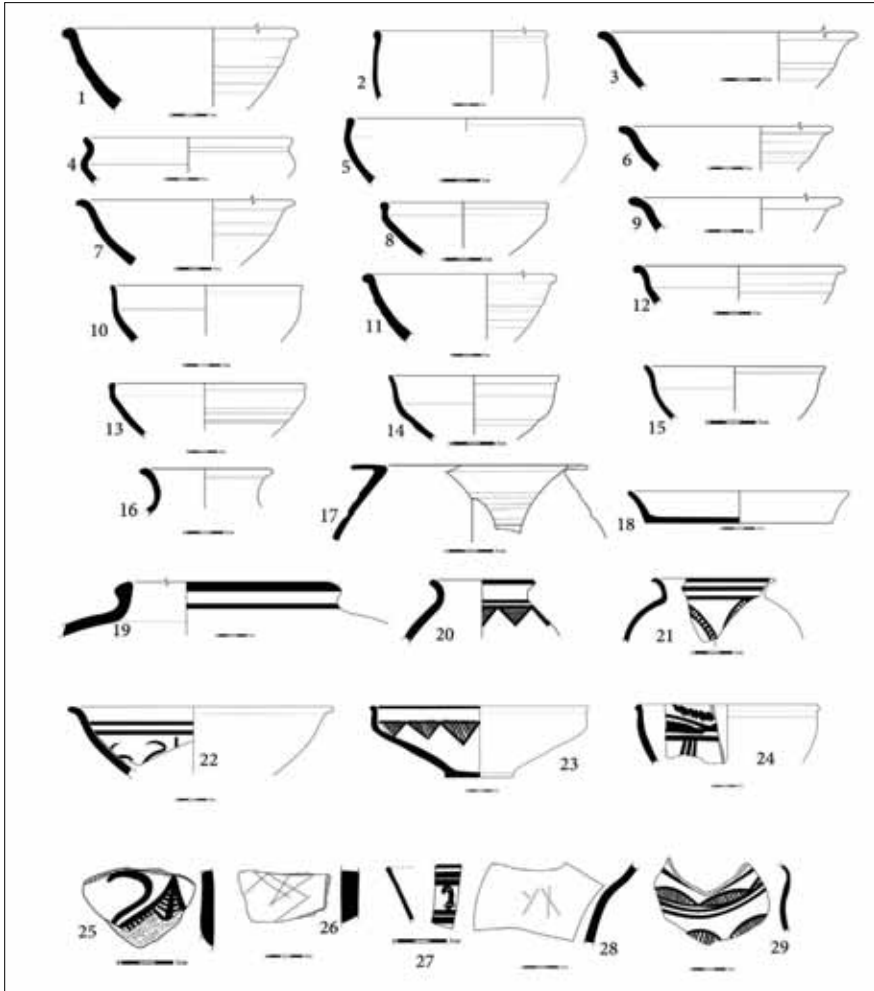


Fig. 16: *Building 26*, Layer 1. Plain Red Ware items with red paste and body, wheel made (Nos. 4, 5, 6, 8, 9 Bowls; 17 Close mouth jar; 18 Wide mouth basin), plain Reddish Ware items with light red paste and body, wheel made (Nos. 3, 7, 10-13); plain Buff Ware items with buff paste and body, wheel made (Nos. 1, 2, 14, 15 bowls; 16 Wide mouth jar); plain Buff Ware items with buff paste and body, wheel made with potter's mark (Nos. 26, 28); painted Red Ware items with red paste, dark red color slip, brown paint, wheel made (Nos. 22. Bowl: geometric design inside; No. 25. Body fragment with floral design); painted Grey Ware items with light grey and red paste. Black paint, wheel made (Nos. 23. Bowl with geometric design inside; 27. Deep beaker with zoomorphic design); painted Buff Ware items with buff paste and body, brown geometric paint, wheel made (Nos. 19, 20, 21, 29 Wide mouth jar; 24, Bowl).



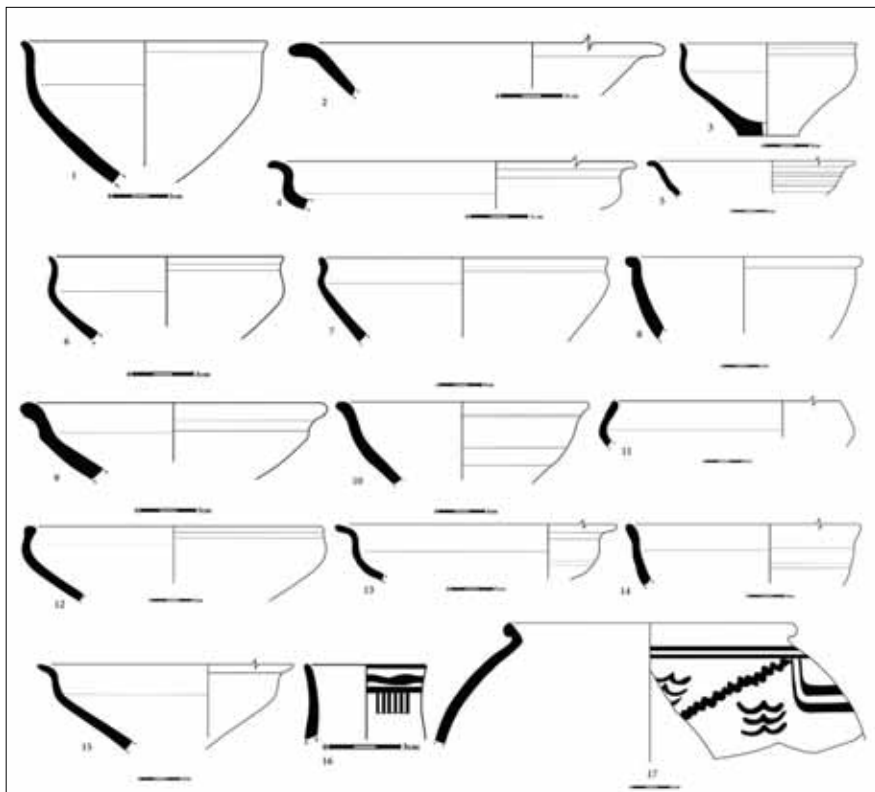


Fig. 17: Workshop 26. Square SDR, layer 0. Plain Buff Ware items with buff paste and body, wheel made (Nos. 1, 3, 6, 8, 11, 14 bowls); plain Red Ware items with red paste and body, wheel made (Nos. 2, 7, 15, deep wide mouth bowls) (4, 9, 13, shallow wide mouth bowls) (12, close mouth bowl); plain Reddish Ware items with red paste and body, wheel made (Nos. 5, 10 bowls); painted Buff Ware items with buff paste and body, geometric brown designs wheel made (Nos. 16 beaker; 17 jar).

### *Workshop 28*

#### **Layer 1**

Workshop 28 is located north of the *Central Residential Area*, 50 metres north of Workshop 26, and has three structural layers: 3; 2; and 1 (Fig. 21). The walls excavated in layer 3 generally consisted of one row of mud bricks (Fig. 22). The bricks were badly worn and difficult to recognize during the excavation. The ceramics included painted and unpainted vessels, most of which have characteristics typical of Period IV (Fig. 23). A bowl with cross-hatched leaves



Fig. 18: Workshop 26: Square SDH, Upper layer architecture remnants.



Fig. 19: Workshop 26: Square SDR, Upper layer architecture remnants.

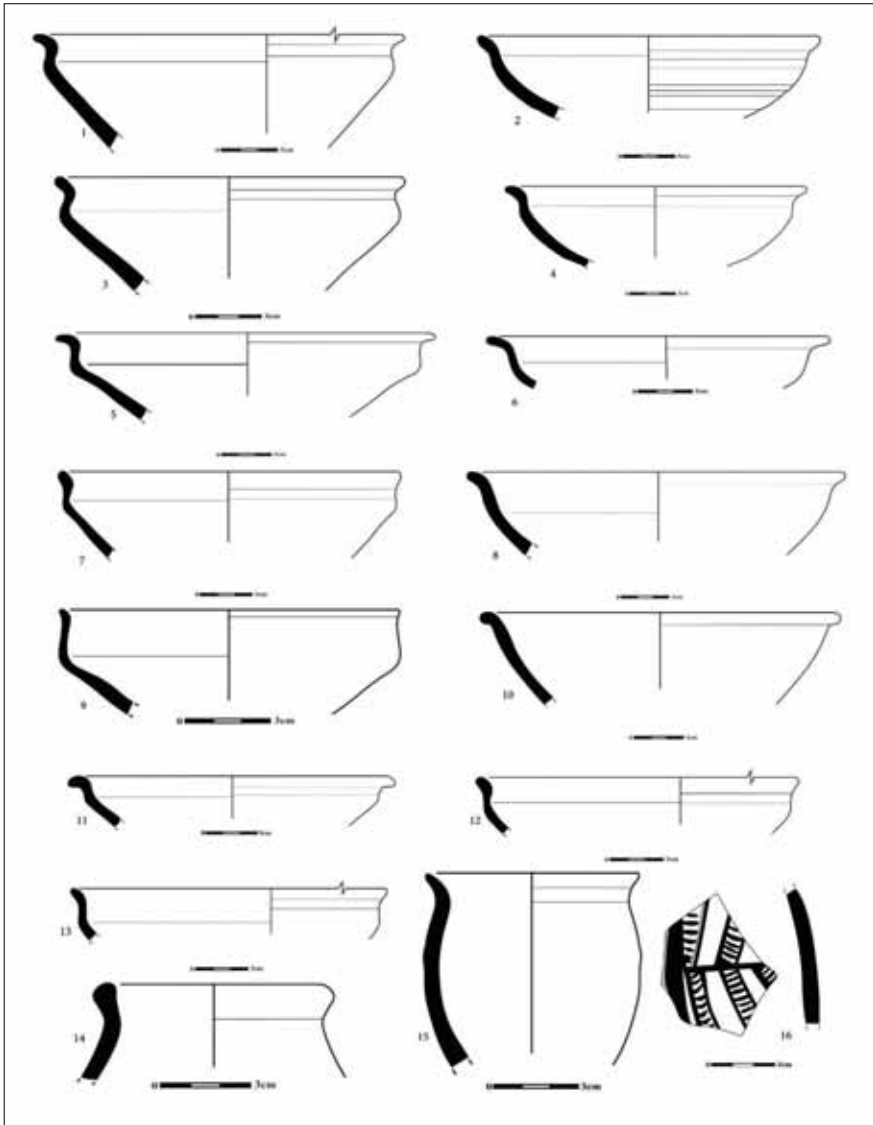


Fig. 20: Workshop 26: plain Reddish Ware items with light red paste and body, wheel made (Nos. 1, 2, 8, 9, 12, 13 bowls); plain Red Ware items with red paste and body, wheel made (Nos. 3, 5, 6, 7, 11 bowls); plain Buff Ware items with buff paste and body, wheel made (Nos. 4, 10, bowls; 14, 15, jars); painted Buff Ware items with brown color floral design, buff paste and body, wheel made (No. 16 Body fragment).

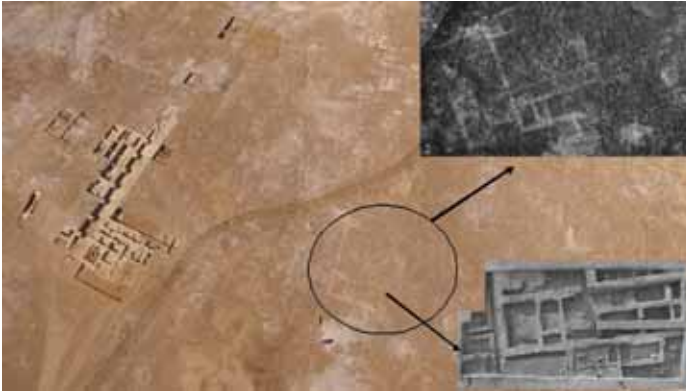


Fig. 21: Workshop 28 before and after excavation (photo M. Rahmani).

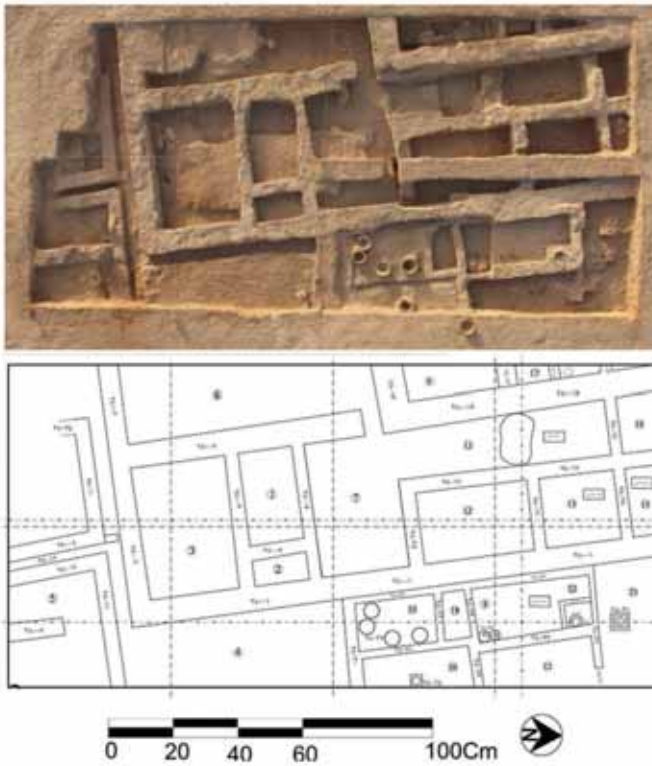


Fig. 22: Workshop 28. General map.

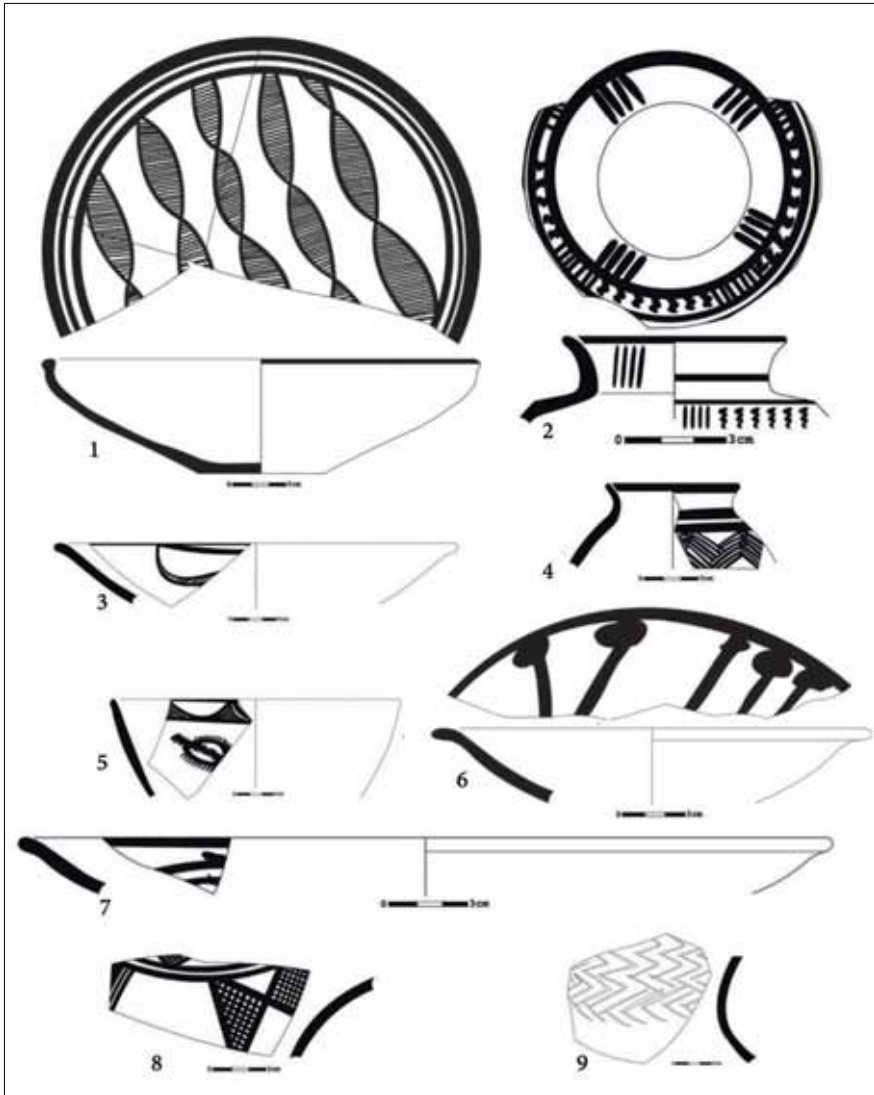


Fig. 23: Workshop 28. Painted Grey Ware items with black geometric motifs (Nos. 1 Bowl; 2. Jar); painted Buff Ware items with brown color geometric motives (Nos. 4, jar; 5, deep bowl; 6, 7, shallow bowl); 8 and 9, fragments (No. 9 is incised); painted Red Ware items, red slip, brown color geometric (No. 3 shallow bowl).



Fig. 24: Workshop 29: passageway and pottery fragments.

(Fig. 23: 1) shows the relationship between this layer and the later phases of Period IV (Biscione 1990: fig. 4). This bowl was found on the surface of Space 22 alongside other pottery specimens considered to be typical of standard pottery forms in Period IV. Hence, it can be suggested that the upper layers of Workshop 26 were contemporaneous with the Central Residential Area in Period IV and probably part of its construction.

### ***Workshop 29 (Passageway)***

#### **Layer 1**

Workshop 29 is located 50 m north of Workshop 28. Based on aerial photography, it seems to be part of a long passageway. This passageway contained a mixture of materials including pottery fragments from various periods, particularly Period IV, especially shallow bowls with leaf motifs, characteristic of Phases 0 and 1 of Period IV (Fig. 24).

### **3. Other evidence: Surface surveys and excavations in the satellite sites**

Surface surveys of Shahr-i Sokhta show Period IV pottery in most of the Residential Area. Previous archaeological surveys in the Sistan plain have also shown many satellite sites contemporaneous with Shahr-i Sokhta Period IV (Mosavi Haji - Mehrafarin 2008). To these findings may be added the data obtained from the excavations of Tepe Taleb Khan 1 and 2, some 12 Km south of Shahr-i Sokhta, and Tepe Graziani (Kavosh *et.al* 2019). Excavations in Tepe Rud Biaban 30 Km southeast of Shahr-i Sokhta also yielded finds that are consistent with Period IV (Mariani 1993-94).

### **4. Conclusion**

Evidence of Shahr-i Sokhta Period IV has been found in the excavated layers of workshops throughout the Residential Area of the site. Interpretation of this distribution in a broader perspective would undoubtedly clarify many issues and help formulate theories concerning this ambiguous period. Architectural evidence and relics from Period IV have been found in phase F of *Building 1*

and Workshop 19; the first and second layers of *Building 20*; the upper layers of Workshop 5 in the *Craftsmen's Area*; the upper layers of Workshop 26; the first layer of Workshop 28; and inside the passageway in Workshop 29. This distribution covers almost all of the *Central Residential Area*, *Building 1* in the north and the *Craftsmen's Area* in the west of the site. To these sections may be added the *Burnt Building* in the southeast of the site (Fig. 25).

The ceramics related to Period IV are mostly shallow bowls with a carinated body and everted rims which can be seen on the surface or within the context in all the above-mentioned areas. Deformed or underfired fragments were found inside some of the trash pits. The presence of these materials both on the surface and in the excavated layers attests to the extensiveness of the Period IV settlement of Shahr-i Sokhta. It seems that during Period IV, when it was previously thought that the city was on the verge of extinction, new structures were built over architectural remains from the preceding Period III.

However, it should also be noted that the architectural structures associated with this period were in the uppermost level of the site, which is more exposed to natural erosion and more severely affected by the process of destruction and disappearance of the structures of this period.

The excavations of recent years in the residential areas of the site have shown that unlike what was previously thought, in this period the city expanded greatly and the area under construction was extended to cover a large part of the site. By taking account of the excavations of *Building 1* and the northern and central residential sections, it is possible to have a broader perspective on daily life in Shahr-i Sokhta and its persistence in the last quarter of the 3<sup>rd</sup> and early 2<sup>nd</sup> millennia BC. It is possible that in the last quarter of the 3<sup>rd</sup> millennium BC, due to construction density, new areas were occupied and the city expanded horizontally. This process led the *Central Quarters* to reach its greatest extent and density during Period IV.

In the last quarter of the 3<sup>rd</sup> millennium BC, construction reached parts of the site that had not been used that much before, while the Central Quarters,



topographically lower than *Building 1* and the *Eastern Residential Area*, were frequented more intensively. Another point is that before these excavations it was assumed that evidence from Period IV could be found only in the *Burnt Building* area and that the city reached its peak in the 3<sup>rd</sup> millennium BC and perished soon afterwards. Today this assumption needs to be revised in response to the new excavations in the *Central Quarters*, which found occupational evidence of Period IV, especially the later phases. Other evidence from the northern parts of the site, such as *Buildings 1 and 20*, should also be considered.



Fig. 25: an aerial photo showing the distribution of IV period evidence.

## Bibliography

- Biscione, R., 1974. Relative Chronology and Pottery Connections between Shahr-i Sokhta and Mundigak, Eastern Iran. *Memorie dell'Istituto Italiano di Paleontologia Umana* II: 131-145.
- Biscione, R., 1979. The Burnt Building of Shahr-i Sokhta IV. An attempt of functional analysis from the distribution of pottery types. *Iranica*, 291-306.
- Biscione, R., 1990. The Elusive Phase 2 of Shahr-i Sokhta Sequence. In M. Teddei (ed.), *South Asian Archaeology 1987*, Naples, 391-409.
- Desset, F., 2014. A New Writing System, Discovered in 3rd Millennium BC: The Konar Sandal 'Geometric'. *Iranica Antiqua* 49, 83-109.
- Fouache, E., Cosandey, C., Adle, C., Casanova, M., Francfort, H.-P., Madjidzadeh, M., Tengberg, M., Sajjadi, S.M.S., Shirazi, Z., and A.A. Vahdati, 2009. A study of the climatic crisis of the end of the Third millennium BC in Southeastern Iran through the lens of geomorphology and archaeology. *Geophysical Research* 11.
- Kavosh, H.A., Vidale, M., and H. Fazeli Nashli, 2019. *Tappeh Graziani, Sistan, Iran: stratigraphy, formation processes and chronology of a suburban site of Shahr-i Sokhta*, Antilia-ISMEO.
- Mariani, L., 1992. The Eastern Residential Area at Shahr-i Sokhta. In C. Jarrige (ed.), *South Asian Archaeology 1989*, London, 181-193.
- Mariani, L., 1994. *Tepe Rud-i Biyaban 3: produzione e consumo della ceramica in un villaggio del Sistan protostorico*. Tesi di laurea, Istituto Universitario Orientale, Facoltà di Lettere e Filosofia, Napoli.
- MusaviHaji, S.R., and R. Mehrafarin, 2008. *Gozarash barresi raveshmand bastanshenakhti Sistan*. Unpublished Report delivered to Iranian Center for Archaeological Report.
- Sajjadi, S.M.S., 2008. Sistan and Baluchistan Project: Short reports on the tenth campaign at Shahr-i Sokhta, *Iran* 41, 307-334.
- Sajjadi, S.M.S., 2014. Potter's Signs of Shahr-i Sokhta: Their function and Meanings. *Modares Archaeological Research* 10-11: 11-40.
- Sajjadi, S.M.S., and H. Moradi, 2012. Evidence on specialization growth in period I, II, and III of Shahr-i Sokhta based on the results of excavation in "O" square". In H. Fahimi and K. Alizadeh (eds), *Namvarnameh*, Tehran, RICCHT, 109-125.
- Sajjadi, S.M.S., and H. Moradi, 2014. Excavation at Building nos.1 and 20 at Shahr-i Sokhta. *International Journal of Society of Iranian Archaeologists* 1/1, Winter and Spring, 77-90.

- Sajjadi, S.M.S., and H. Moradi, 2015. Shahr-i Sokhta 2014-2015 Excavations: The new Results in Areas 1, 20, 26 and 28. *Archeologia Aerea* 9, 149-167.
- Sajjadi, S.M.S., and H. Moradi, 2016. Excavations in Workshops Nos. 26 and 28 in Shahr-i Sokhta, *Athar* 74, 103-130.
- Salvatori, S., 1979. Sequential analysis and architectural remains in the central quarter of Shahr-i Sokhta. In M. Taddei (ed.), *South Asian Archaeology 1977*, Naples, 141-147.
- Salvatori, S., and M. Tosi, 2005. Shahr-i Sokhta Revised Sequence. In C. Jarrige and V. Lefèvre (eds.), *South Asian Archaeology 2001*, Paris 281-292.
- Salvatori, S., and M. Vidale, 1997. *Shahr-i Sokhta 1975-1978 Central Quarter Excavation: Preliminary Report*. ISIAO, Rome.
- Tosi, M., 1968. Excavations at Shahr-i Sokhta: A Chalcolithic Settlement in the Iranian Sistan. Preliminary Report on the First Campaign, October-December 1967. *East and West* 18, 9-66.
- Tosi, M., 1969. Excavations at Shahr-i Sokhta. Preliminary Report on the Second Campaign, September-December 1968. *East and West* 19, 283-386.
- Tosi, M., 1977. The archaeological evidence for Protostate Structures in Eastern Iran and Central Asia at the End of the 3rd millennium BC. In J. Deshayes (ed.), *Le Plateau iranien et l'Asie Centrale des origines à la conquête islamique*, Paris, 45-66.
- Tosi, M., 1979. The Proto Urban Culture of Eastern Iran and the Indus Civilization. Notes and suggestions for a Spatio-Temporal Frame to Study the Early Relations between India and Iran. In M. Taddei (ed.), *South Asian Archaeology 1977*, Naples, 149-171.
- Tosi, M., 1983. *Prehistoric Sistan I*, IsMEO, Rome.

