INTRODUCTION

The thirteenth archaeological expedition at Vardanzeh was realized between July, 29, and August, 31, plus 10 days devoted to the backfilling activities. This year the excavation focused in two distinct areas of the site (**Fig. 1**), that were extensively excavated: the first one, under the supervision of S. Pozzi and D. Mirzaachmedov, was the south-western corner of the citadel (**Fig. 2**); the second, under the responsibility of I. Vincenzi, was localized in the Shahristan 1-East and more specifically near the trenches already excavated last year (**Fig. 12**). Following the topographic grid system, in the citadel we opened nine new squares 5x5 m wide; some of them were not entirely excavated since part corresponded to the border of the palace and sloped down. As far as the shahristan is concerned, we opened four new squares and we continued the excavation of two previously excavated trenches. Considering all this, the total surface investigated this year corresponds to ca. 300 m^2.

The research staff was composed of three archaeologists: Silvia Pozzi, Ilaria Vincenzi and Dzamal K. Mirzaachmedov in quality of senior archaeologists. Silvia Pozzi and Ilaria Vincenzi alternated their presence on the site. Siroj Mirzaachmedov, architect from the *Samarkand Archaeological Institute* was in charge of the topographic documentation, using also photogrammetry techniques for a better representation of the excavated structures. Also this year we used 3D Lidar technology offered Polycam application available for free in Ipad Pro. Ogiloy Hakimova, conservator working at the *Samarkand Archaeological Institute* (Bukhara branch), drew a selection of ware. The digitalization of the drawings was realized by a group of specialists supervised by S. Mirzaachmedov, while Munira Sultanova, architect and conservator working at the *Samarkand Archaeological Institute*, drew the small finds. The conservator, Dilmurod Kholov, was in charge of the cleaning and the conservation of the artefacts unearthed this year. Finally, we have to mention the collaboration with Dr. R. Spengler (Max Planck Institute for the Science of Human History), who is leading a large-scale archaeobotaby project focussed on Central Asia sites. Also this year we collected soils samples that will be sent to Germany for analysis.

Activities and results

The investigation led in the **citadel** allowed us to increase our knowledge on the layout of the early medieval palace and gave us important information on the main building phases in particular as far as the perimeter corridor of surveillance is concerned. We had already demonstrated that the corridor ran all over the four sides of the palace because in the past seasons we had exposed segments in all the sides. The northern side was fully exposed, the western and eastern sides mostly exposed, while the southern one was the less investigated. Moreover, the segment of southern corridor already unearthed in the eastern sector of the palace evidenced that the southern side of the citadel, i.e. the one exposed towards the *shahristan*, was the poorly preserved.

This year the investigation concentrated in the SW corner of the palace. The upper levels dating to

the medieval period consisted in a wide mud brick floor that extended in the majority of the area. The floor was cut by several features that can be divided in four categories: holes, fireplaces, drainage systems and burials (**Fig. 3**). Of particular interest is a drainage system of *tashnau* type, excavated down for 2 meters (**Fig. 11**). While the upper canalization was made by reused storage vessels, the lower part was instead formed by tubular tubes of large size, never found before. It is not excluded that the tubes are dated to the early medieval period and they could have been originally located in the *shahristan*, where they were horizontally positioned. As already documented in the past years of excavation, the western area of the citadel was used as cemetery, probably because of the presence of the marble tombstone located nearby, where a local saint was buried. This year we discovered two well-preserved burials belonging to adults and several small holes that probably belonged to children (**Figs. 7-8**).

As far as the structures dated to the early medieval period, we completed the excavation of the western corridor, now fully exposed (**Fig. 11**). We also identified the SW corner of the palace and we exposed another segment of the southern corridor (**Fig. 10**). The excavation confirmed that also in this area the corridor was poorly preserved: the wall that delimited it externally was collapsed and partially destroyed by a large hole that contained pottery dating to the medieval period. If we imagine a main access to the citadel in this area, destroyed by the hole, we should consider the existence of a secondary access, possibly trough the system of galleries accessible from the eastern gate. Alternatively, the main access was on the southern side but it located eastwards from the area excavated this year and thus not discovered yet. In the next season we plan to extend the investigation in order to clarify the issue of the access.

Coming back to the perimeter corridors, up to now no way of access from the perimeter corridors to the inner palace was identified, so the discovery of the passages C-D that led from the southern corridor into the core of the palace acquires particular importance (**Figs. 4, 6, 10**). Other two passages were also identified: passage A and passage B, the last one not very clear. The passages were probably realized in different times and at least two of them obstructed, suggesting important changings in the viability of the palace. An important aspect connected to these passages concerns the so-called 'inner corridor' internal to the palace, already identified in the past years. This corridor, narrower than the surveillance one, encircled the *western sector* of the palace (i.e. the dwelling area) on north, east and on west, where only a small segment was exposed in the past years. This year we identified another segment of this inner corridor: the study of the stratigraphy and of the wall alignments revealed that this corridor didn't exist in the very first building phase of this wing of the palace. The access from the palace to the southern corridor was instead guaranteed by the passage D, that should have been not the main one but a secondary access, considered its width. Access A, instead, connected the western to the southern corridor from the beginning: this one is not a surprise, in fact in the past years it was already evidenced that the corridors were not a continuous space but four segments delimited by walls at the corner and characterized by passages.

In a second time, not clear from the chronological point of view, the walking level inside the inner palace was increased of ca. 40-50 cm and it was created the inner corridor. Passage C was also realized at that time, opening a passage into the brickwork of the wall. On that occasion, this wall was reinforced by a new curtain (*rubashka*) on its southern side and two sufa were built. Moreover, probably at that time or shortly after, passages A and D were closed by brickwork. Interestingly, in the past years of excavation we already discovered that another passage that connected the same western corridor to the north one, at one moment in time was obstructed. So, when the inner corridor was realized, if someone wanted to go inside the western sector of the palace from the southern corridor, he should have walked trough the entire inner corridor and he should have reached the central inner corridor that allowed the access both to the western and to the central sector of the palace. Certainly a measure of protection of the inner palace, where the dwellings were located, even though the presence of other accesses is not to be excluded. Changing in the layout of the palace, as registered also in the eastern sector, were probably connected with the historical events and the new needs of the inhabitants. The inner viability needs to be further investigated in order to clarify with more precision the chronology of these changings, but for the moment we can say that, although no traces of fire have been so far detected in the western sector (as instead registered in the eastern sector at the time of the Arab conquest of the region), this wing of the palace seems to have functioned until the late 7th beginning of the 8th cent. AD.

As far as the **shahristan** is concerned, the excavation led this year has provided substantial contributions to our understanding of the architectural and social transformations within the lower city during the Medieval and subsequent modern periods. The systematic excavation of the trenches in *Shahristan 1-East* has revealed critical insights into the site's historical development, particularly following the Islamic conquest. The absence of typical architectural features associated with urban habitation — such as residential structures, commercial spaces —indicates a significant shift in the spatial organization of the lower city. The discovery of a sealing platform (**Figs. 13, 15**) constructed from mud bricks repurposed from earlier structures suggests a conscious architectural strategy aimed at redefining the use of the site in the post-conquest era. This platform appears to have served as a foundational element for subsequent constructions, reflecting a transition in building practices that aligns with broader socio-political changes in the region. The stratigraphic analysis of the trenches revealed a complex layering of construction materials, with alternating strata of soft and hard soil indicative of meticulous foundation preparation. The identification of two distinct rooms characterized by baked and unbaked bricks points to the development of multifunctional spaces that likely catered to the evolving needs of the community during the 18th and the 19th centuries (**Fig. 16**). The architectural features uncovered suggest that these structures may have facilitated both domestic activities and communal gatherings, underscoring the adaptability of the inhabitants in response to changing social dynamics. Furthermore, the limited presence of ceramics and artefacts from the medieval period implies that the lower city, at least in

this area, may not have been a focal point for continuous habitation during this time. Instead, it is posited that social life and daily activities were primarily concentrated within the citadel, where more substantial and permanent structures, such as bathhouses, have been identified. This spatial separation between the citadel and the lower city suggests a delineation of functions, with the latter potentially serving as a ceremonial or communal area for special occasions, supported by the presence of features indicative of public gatherings. The evidence of a significant architectural discontinuity between the Medieval and modern periods raises important questions about the socio-cultural impacts of the Islamic conquest on local communities. The repurposing of earlier architectural elements, combined with the construction of new foundations, reflects a continuity of place while simultaneously marking a transformation in the socio-political landscape. This duality highlights the resilience of local traditions amidst external influences, suggesting that the inhabitants of Vardanzeh adapted their architectural practices to align with new cultural paradigms while retaining elements of their historical identity.

In conclusion, the findings from this excavation season not only enhance our understanding of Vardanzeh's historical trajectory but also contribute to the broader discourse on urban development in the area during periods of significant cultural transition. Future research endeavours should focus on further elucidating the relationships between the architectural remains uncovered and the socio-cultural developments in the region, particularly regarding the interactions between the indigenous populations and incoming influences following the Islamic conquest. Such investigations will be essential for reconstructing a comprehensive narrative of the historical dynamics that shaped Vardanzeh and its role within the broader context of Central Asian history.

Pottery

A total of 1405 pottery fragments were unearthed this year, among them 1099 un-diagnostic (78%) and 306 (22%) diagnostic potsherds: the majority is represented by un-glazed ware (83%) while the 17% consisted in glazed ware (**Figs. 17-22**). The total number of the diagnostic potsherds was calculated considering all the single fragments of rims, bases, functional parts (also from the same broken vessel), as well as the vessels found complete and the walls decorated with decorative motifs or incised signs (tamga/nishan). This year the majority of the potsherds was collected in the citadel, while only the 3% of the total was found in the Shahristan 1-East, where the activities were mainly focused on the excavation of the mud brick platform, where clearly the pottery was very limited. As far as the functional classes within the diagnostic pottery unearthed this year, we evidence that the most common class is represented by the storage ware (48%), followed by the table ware (22%). Cooking ware and glazed tableware were found in equal measure (10%), while the pottery used in canalization is represented in total by the 8 %, among pipelines and storage ware reconverted in pipelines. Glazed ware, almost exclusively represented by tableware vessels, is

the 10% of the pottery unearthed this year. Finally, the 2% of the category of other uses includes a fragment of mercury pot, a toilet pot (*tuvak*) and three oil lamps.

Finds

This year we registered a total of 28 finds, among coins, bronze and iron finds, glasses, terracotta finds and stone finds. Dilmurod Kholov, conservator at the Ark Museum of Bukhara, cleaned and glued the metal finds that were covered by rust and broken.

The **metal artifacts** include three bronze coins, eleven iron finds and two bronze finds (**Figs. 23-26**). As far as the coins is concerned we can say that they are all poorly preserved and of difficult interpretation. Specimen Inv. 1029, found in the citadel, can be dated to the second half of the 11th-12th cent. AD; specimen Inv. 1045, discovered in the shahristan, is a copper coin of Western Sogdiana type (6th-7th cent. AD). For the third specimen (Inv. 1024), found in the citadel, we can say something more: it can be interpreted as a Shaybanid coin dating ca. to the first half of the 16th cent. AD. Small iron objects, mostly fragments of larger finds and thus of difficult interpretation were discovered this year. Among the recognizable finds we have a heel shoe, two fragments of hooks, the tips of a tweezers and the handle of a buckle. With regards to the large iron and bronze finds, interesting tools used for agricultural purposes were discovered this year in the shahristan: we refer to the two fragments of shovels and to the two examples if hoes, one in iron, almost identical to the ones still used nowadays, and one in bronze, more refined.

The **glass artifacts** are in total six (**Fig. 27**): three of them are fragments of the well-known circular disks used as window elements. Diameter range goes from 9 to 18 cm, the most common color is light green, but occasionally we found also finds in olive green color. We also found a fragment of rim that belonged to a small vessel, probably a jug, and a small bead realized in glass past, of light green color. All this finds can be dated to the medieval period, while a fragment of bottle covered by an iridescent patina, showings letters in Cyrillic and found in the shahristan, can be dated to the Russian epoch (end of 19th- beginning of the 20th cent. AD).

As far as the **terracotta artifacts** (**Fig. 28**) we have four unglazed finds, two glazed finds and a porcelain find. Among the unglazed specimens, very interesting is a triangular loom weight (Russian: *grusila*) probably carved from a piece of pottery vessel. The last unglazed find is a fragment of oil lamp, more specifically part of the circular oil tank. The glazed finds includes fragments of two oil lamps covered with turquoise glazing. The **stone finds** unearthed this year are in total three and they include a crystal slab, a marble token and a seal stone probably dated to the Sasanian period, currently under study.

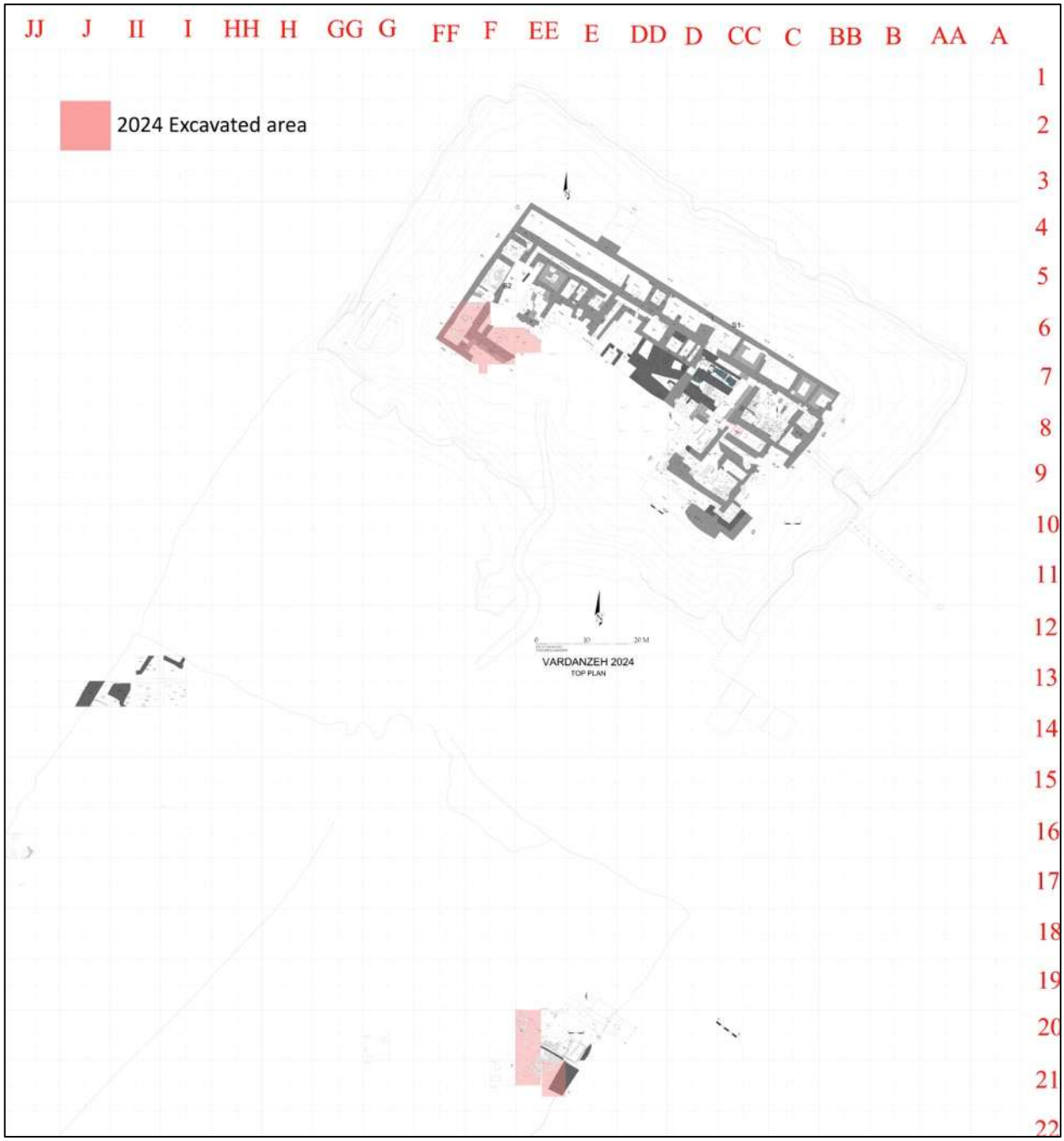

Fig. **1** Vardanzeh, general plan of the 2024 excavated squares (topography by S. Mirzaachmedov on O. Cerasuolo reliev).

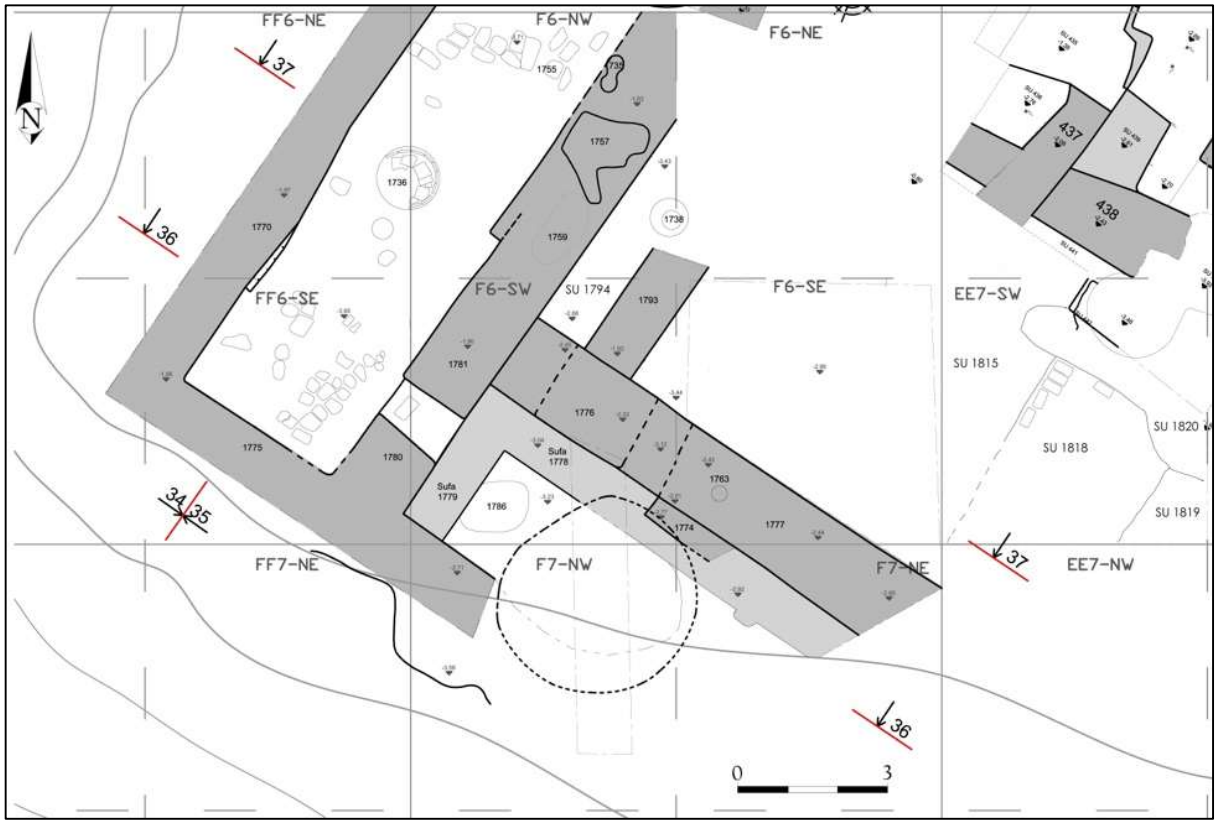

FIG. 2 Citadel: early medieval phase (topography by S. Mirzaachmedov on O. Cerasuolo reliev)

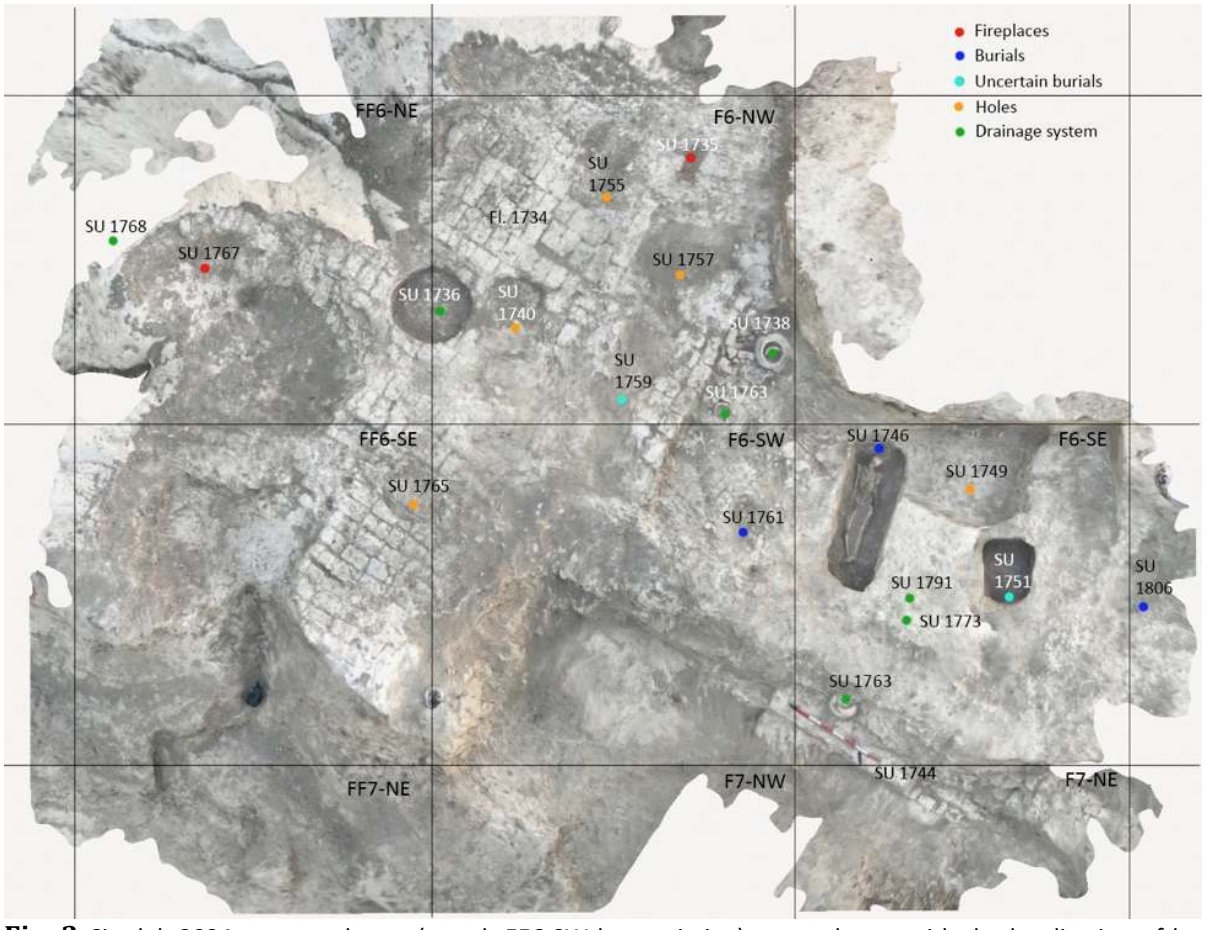

Fig. 3 Citadel, 2024 excavated area (trench EE6-SW here missing): upper layers with the localization of burials, drainage sistems, holes and fireplaces (Polycam, top view).

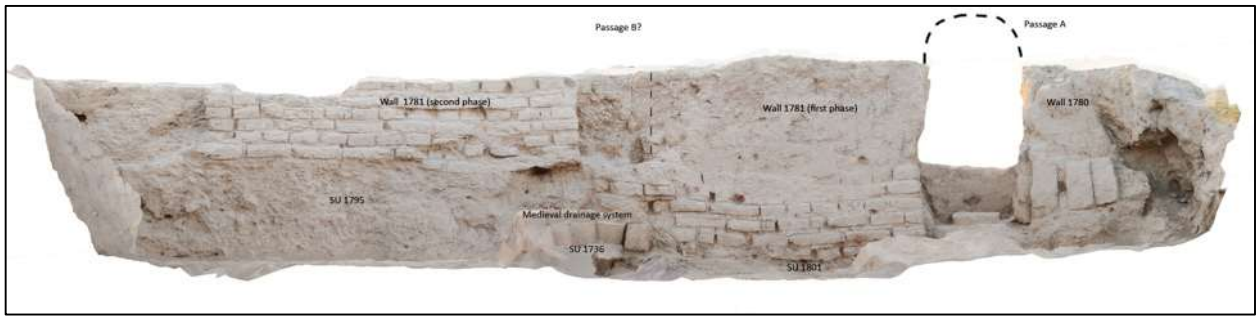

Fig. 4 Trench FF6-NE, F6-NW, FF6-SE: western perimeter corridor, walls 1780-1781 (Polycam, view from W).

Fig. 5 Unglazed ware: bases of large pipelines.

Fig. 6 Trench F6-SW: general view of passages C and D (Polycam, view from S).

FIG. 7 Trench F6-SE: burial 1746 (view from S).

FIG. 8 Trench EE6-SW: upper level, holes and burials (Polycam top view).

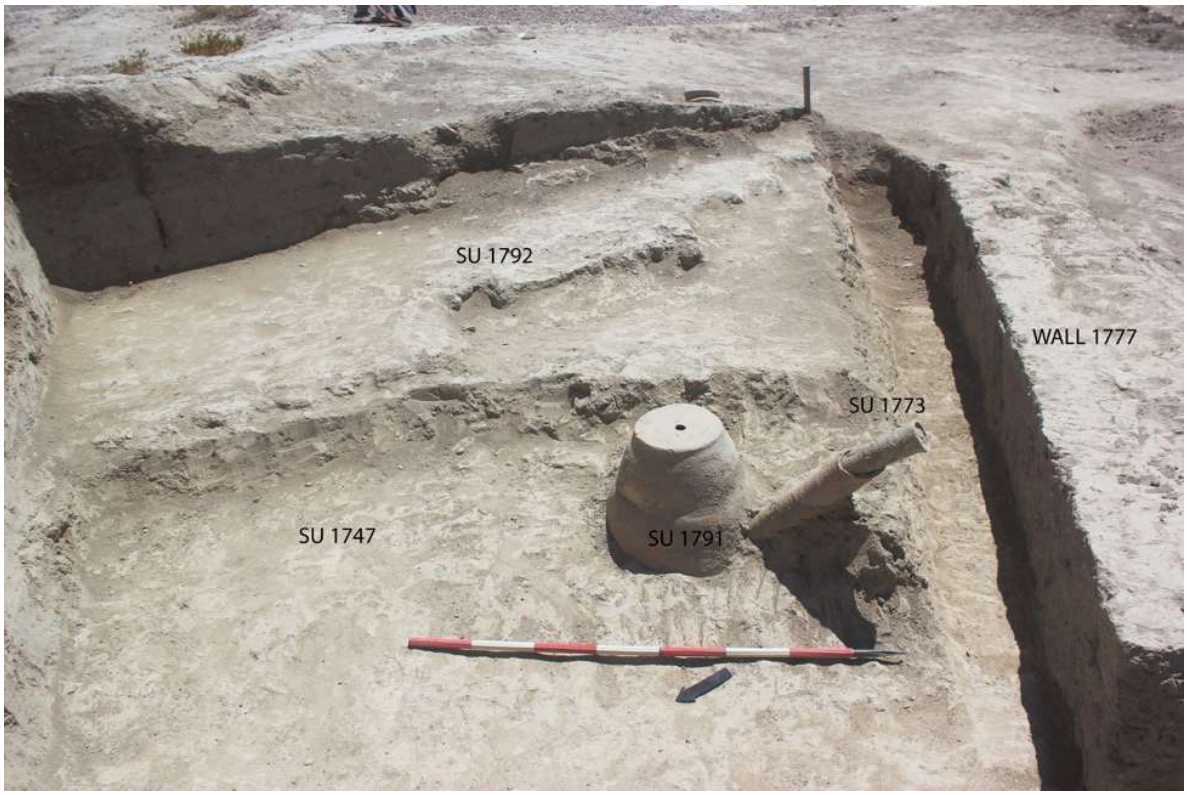

FIG. 9 Trench F6-SE: canalization systems SU 1773 and SU 1791 (view from E).

Fig. 10 Citadel, W and S perimeter corridors and passages into the proper palace (Polycam, top view).

Fig. 11 Citadel, general view from W.

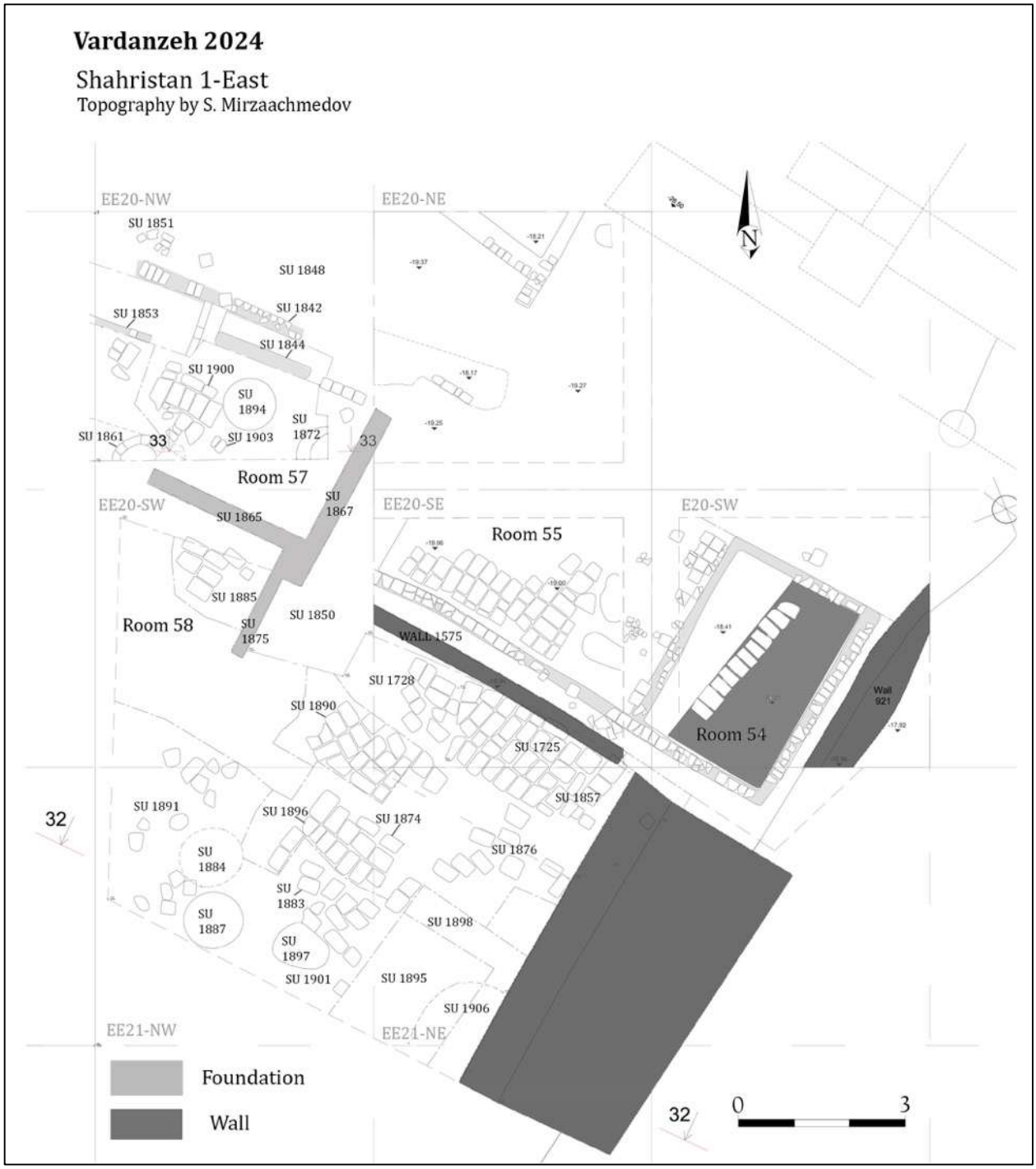

Fig. 12 Shahristan, plan of the excavated structures (topography by S. Mirzaachmedov).

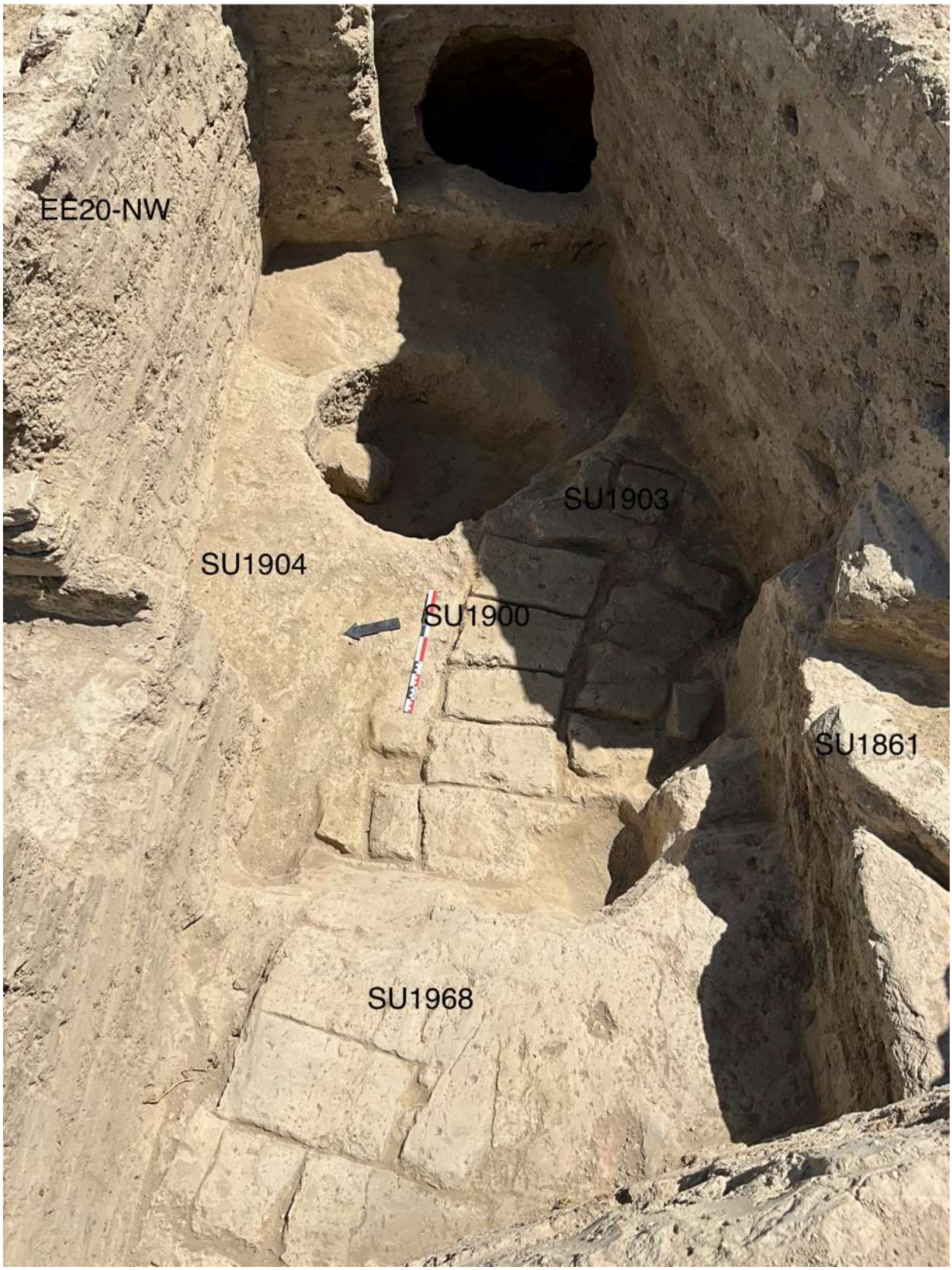

FIG. 13 Trench EE20-NW: baked bricks SU1868-1903, part of the sealing platform; collapse in mud bricks SU1861; floor 1900 in mud bricks part of the sealing platform; walking passage SU 1904 (view from W).

FIG. 14 Trench E21-NW: shahristan wall 1710=91; mud bricks, part of the sealing platform (SU1725) (view from W).

FIG. 15 Trenches EE21-NE/EE21-NW/EE20-SW: sealing platform (Polycam).

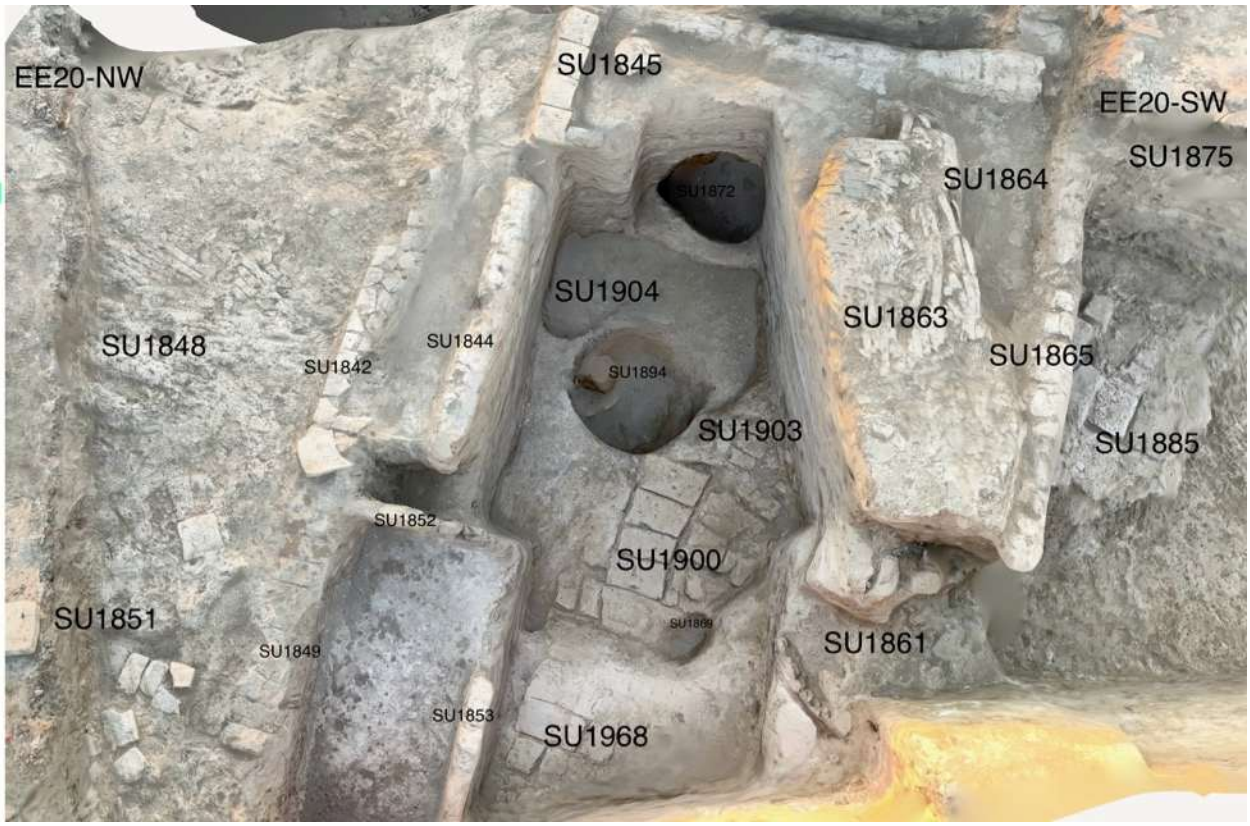

FIG. 16 Trenches EE20-NW/EE20-SW: rooms 57-58 (Polycam).

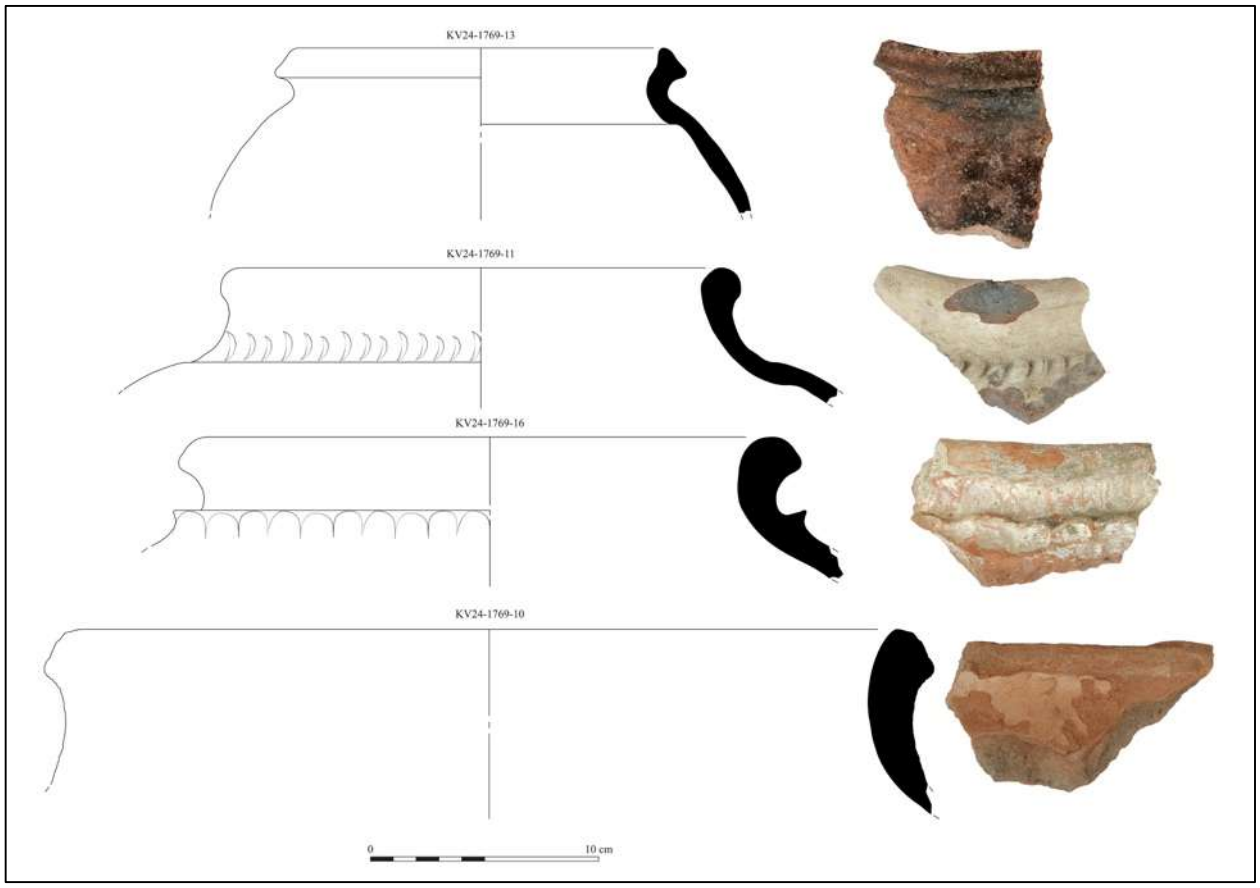

Fig. 17 Unglazed ware (SU 1769): jars decorated with finger marks impressions (11, 16); plain jar (10); cooking pot (13).

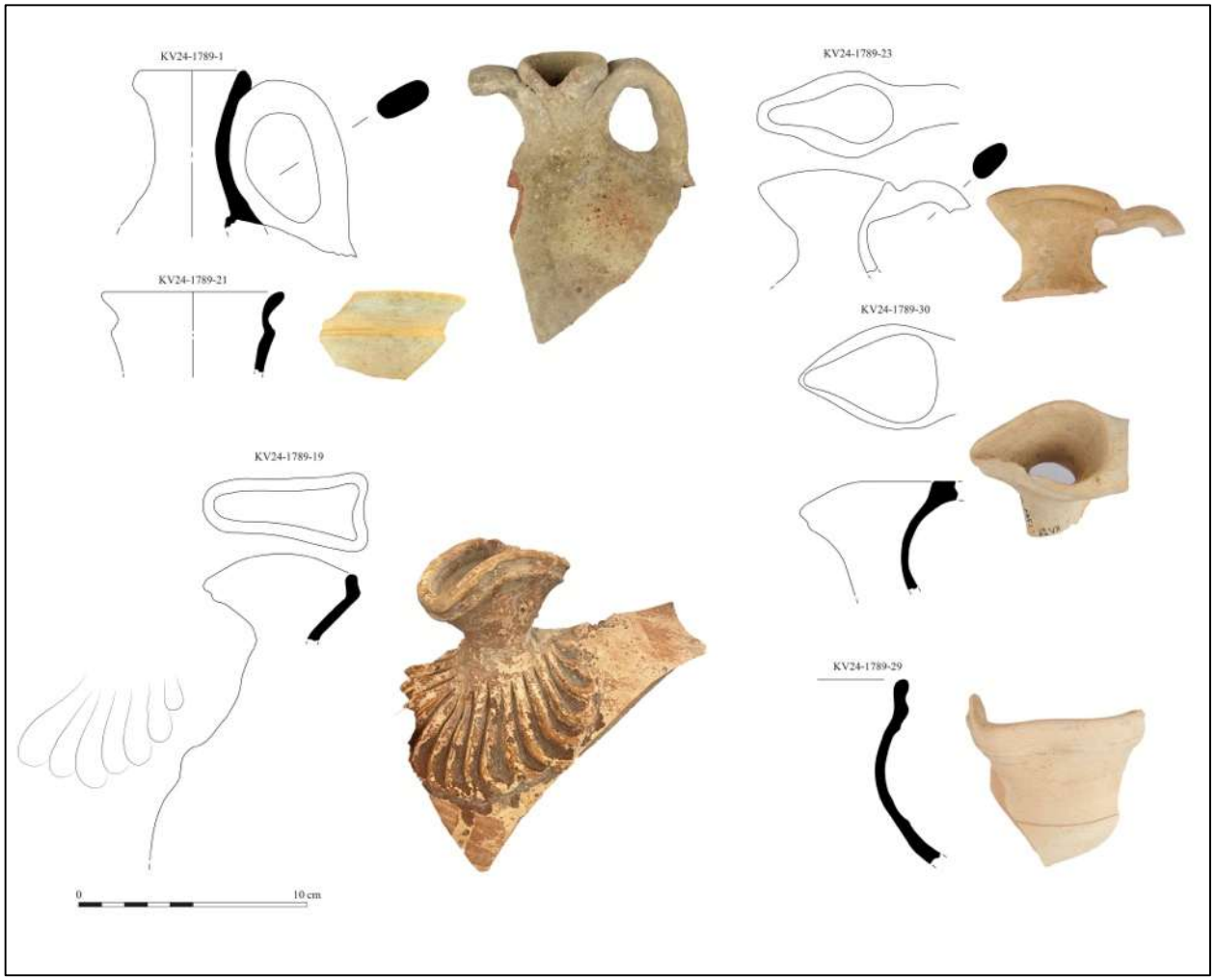

Fig. 18 Unglazed ware (SU 1789): narrow necked jug with two handles (amphora like type) (1); narrow neckd jugs with spout (19, 23, 30); large necked jug with spout (29); large necked jug (21);

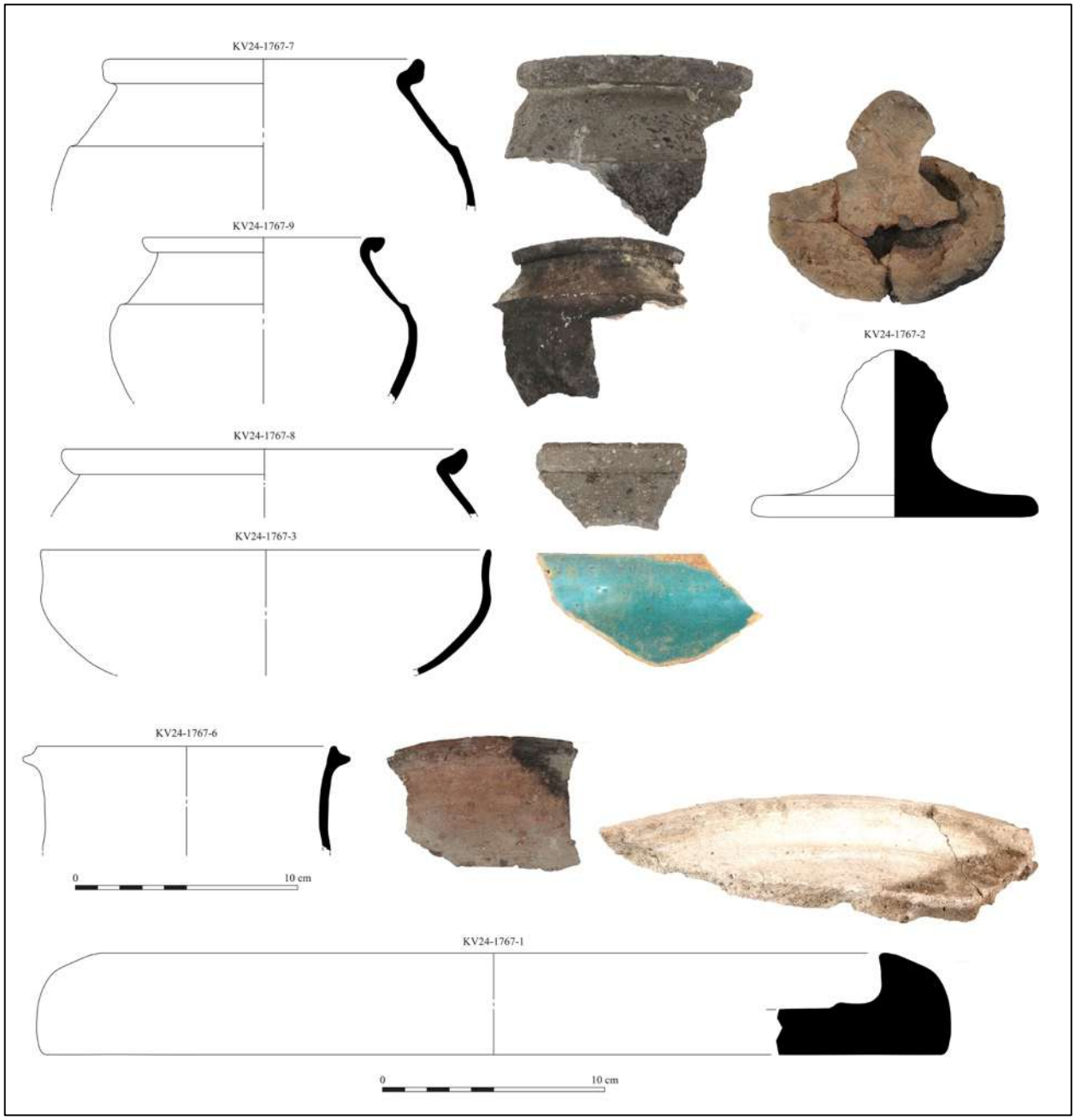

Fig. 19 Unglazed ware (SU 1767): cooking pots (6, 7, 8, 9); modelled lid (2); tray (1); glazed ware: bowl (3).

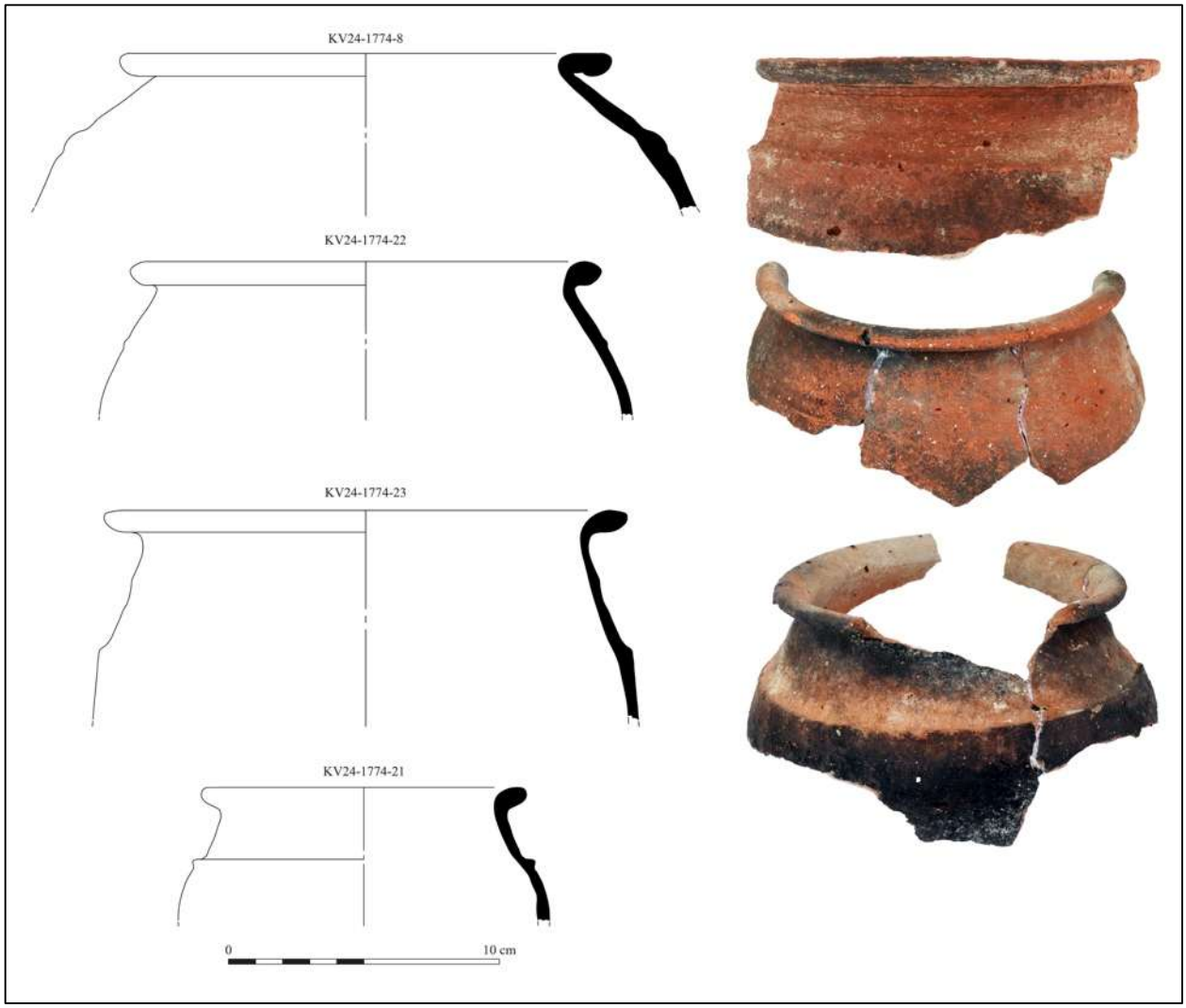

Fig. 20 Unglazed ware (SU 1774): cooking pots.

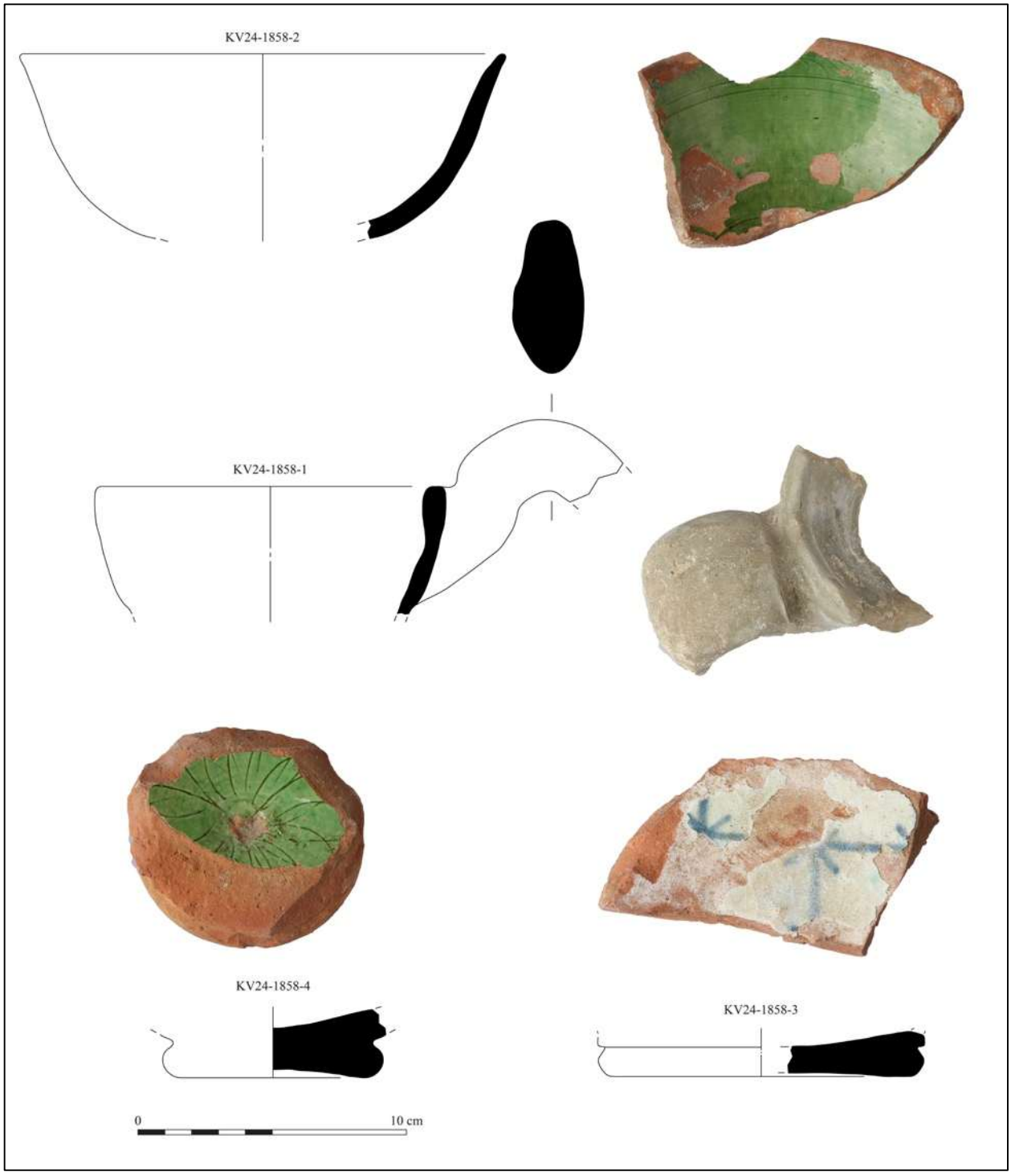

Fig. 21 Unglazed ware (SU 1858): jug (1); glazed ware: bowls (2, 4); dish (3).

Fig. 22 Unglazed ware (SU 1862): glazed ware: toilet pot (1); bowls (2, 5); plate (3).

Fig. 23 Bronze coins: second half of the 11th-12th cent. AD (Inv. 1029); western Sogd coin dating to the 6th-7th cent. AD (Inv. 1045); Shaybanid coin dating to the first half of the 16th cent. AD (Inv. 1024).

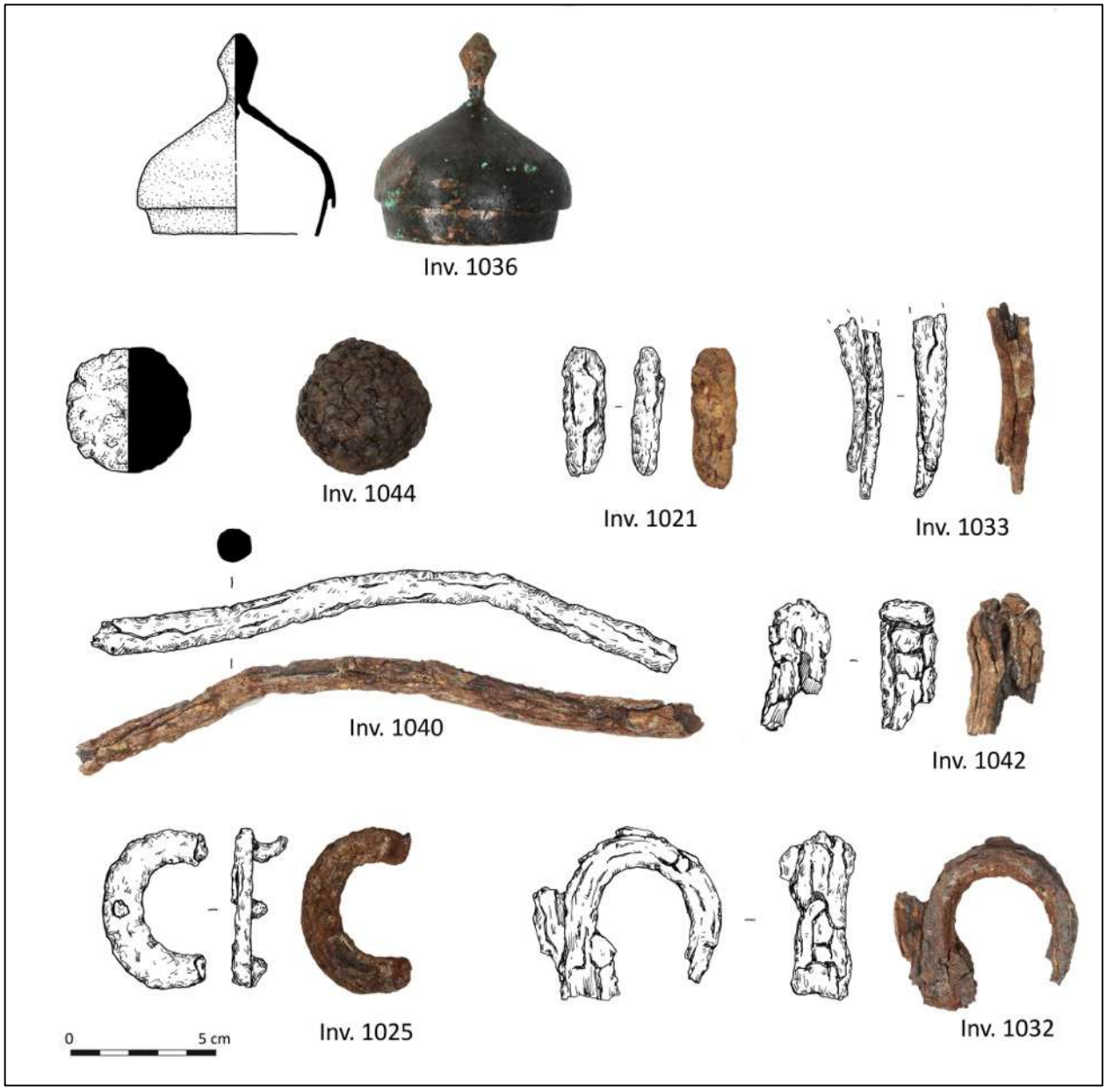

Fig. 24 Iron finds: spherical unknown object (Inv. 1044); tip of unknown object (Inv. 1021); tips of tweezers? (Inv. 1033); fragment of handle of a bucket? (Inv. 1040); fragment of hook? (Inv. 1032-1042); heel shoes (Inv. 1025); Bronze finds: lid of teapot (Inv. 1036).

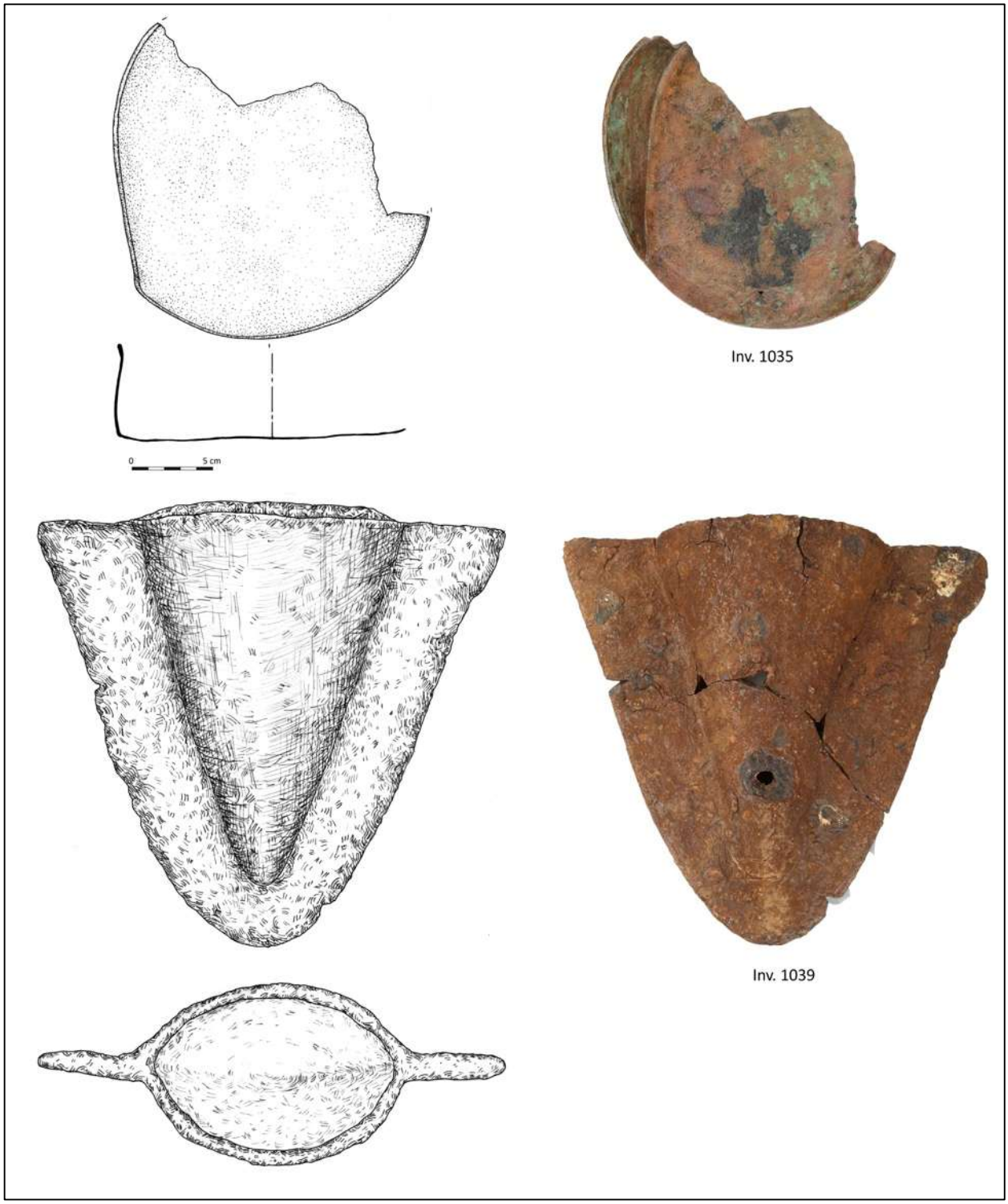

Fig. 25 Iron find: fragment of shovel? (Inv. 1039); bronze find: fragment of hoe? (Inv. 1035).

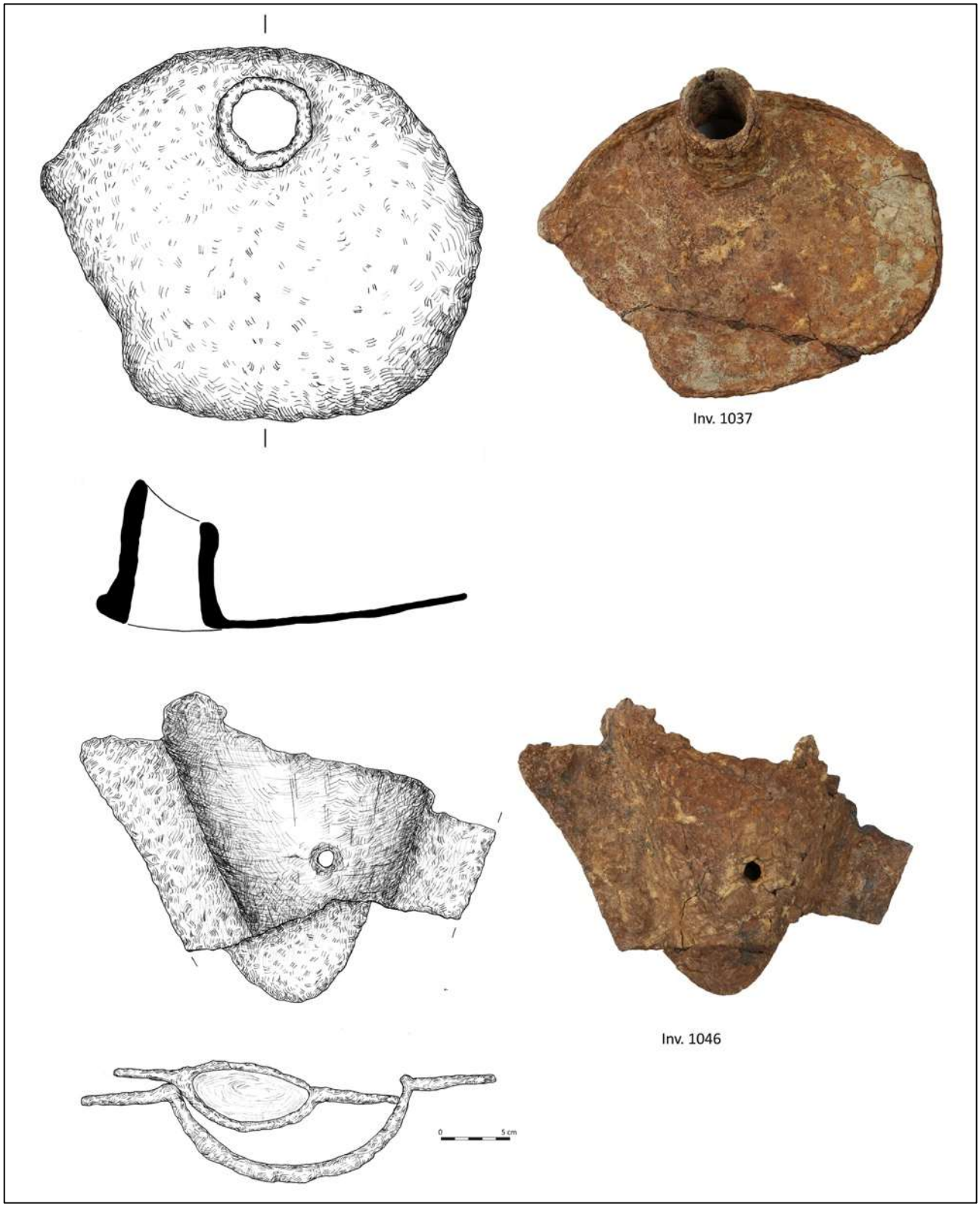

Fig. 26 Iron finds: hoe (Inv. 1037); fragment of shovel (Inv. 1046).

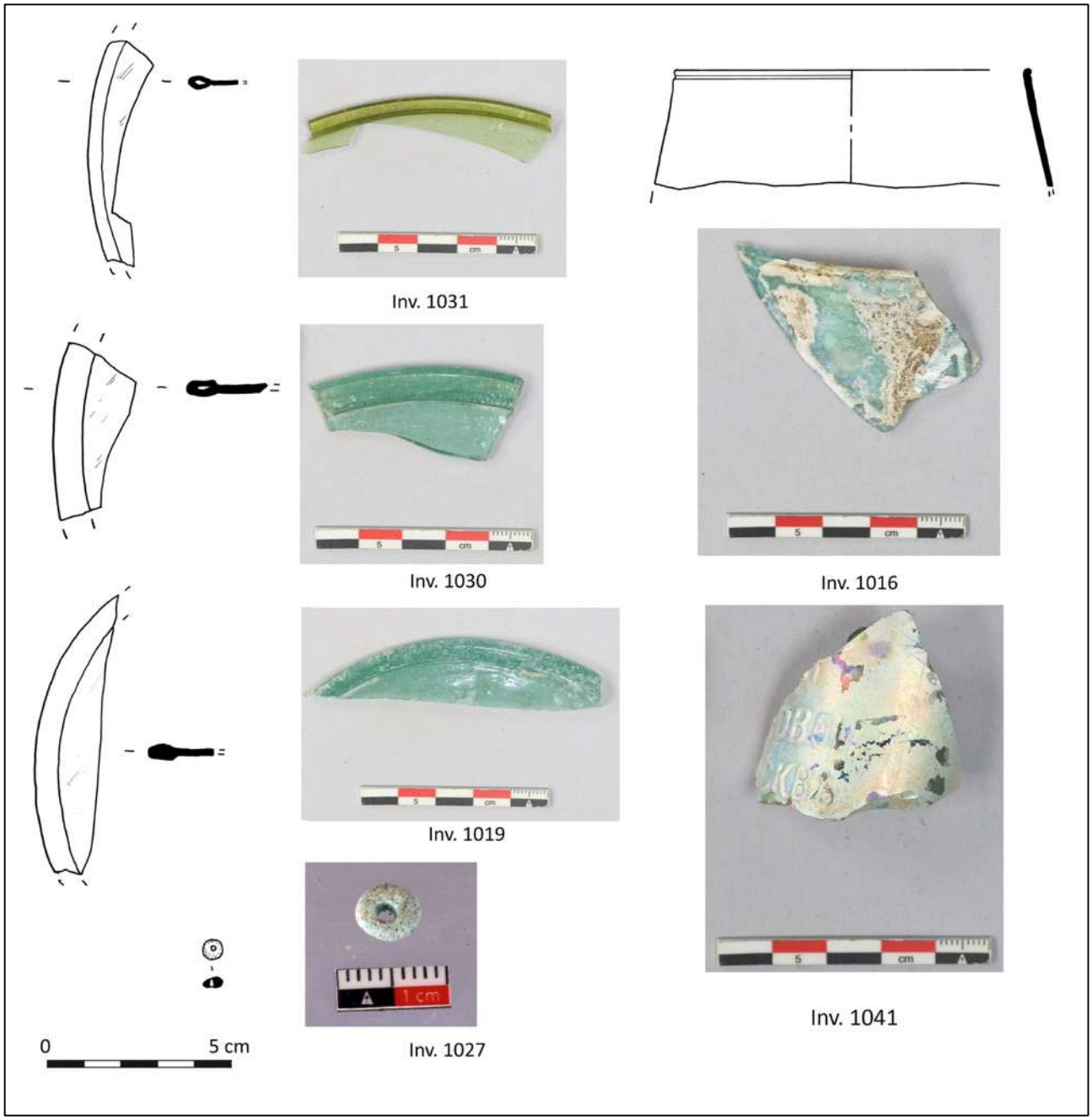

Fig. 27 Glass finds: circular windows (Inv. N. 1019, 1030, 1031); jug (Inv. 1016); russian bottle (Inv. 1041).

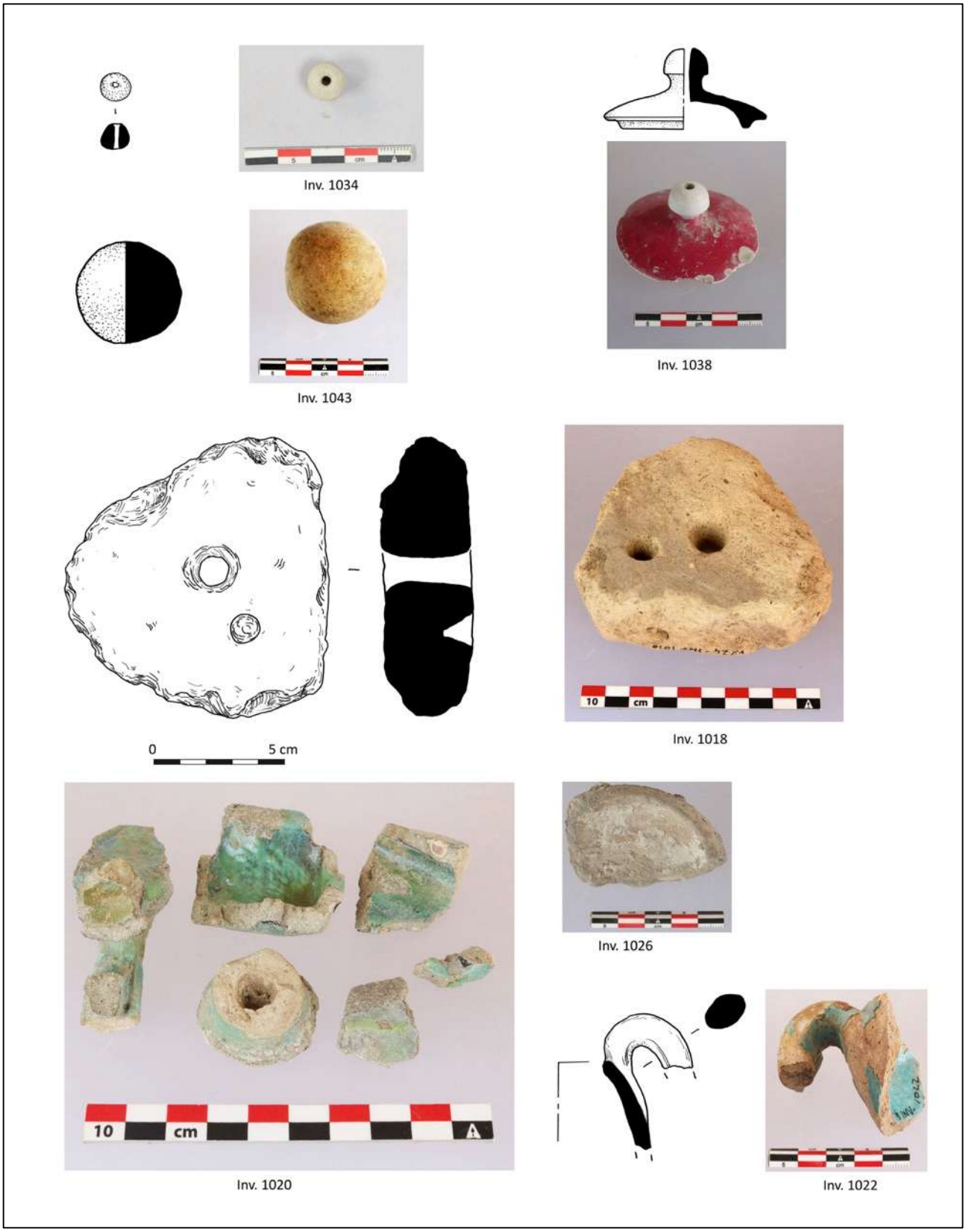

Fig. 28 Terracotta finds: fragments of glazed oil lamp (chirag) (Inv. 1020, 2022); fragment of unglazed oil lamp (Inv. 1026); loom weight (Inv. 1018); bead (Inv. 1034); ball (toy?) (Inv. 1043); porcelaine lid (Russian Empire period) (Inv. 1038).

Fig. 29 Workers of 2024 campaign.

Fig. 30 Workers of 2024 campaign.

Fig. 31 Workers of 2024 campaign.