

VARDANZEH 2025 Short report

Introduction

The fourteenth archaeological excavation on the site of Vardanzeh (ancient Vardāna) was carried out between September 28 and November 4, 2025. All the activities concentrated in the lower city (*shahristan*), in three different sectors located in its northern area (*shahristan 1, sector A*) and in the southern area (*shahristan 2, sectors B and C*) (Fig. 1). Sector A included two trenches 5x5 m wide and half part of 5 trenches, for a total surface of ca. 100 square meters. Sector B was localized along the western boundary of the *shahristan 2*, where traces of aligned structures were clearly visible on the surface also before the excavation. Here we opened 8 squares in the area to the east from the perimeter wall and a probing trench outside the perimeter wall. Sector C was situated southwards, to the north of a large depression probably used as basin (*hauz*) and it was chosen because of the presence of several slags scattered on the surface. Here we opened trench SS37-SW, measuring 5x4 m. The total surface investigated this year corresponds to 225 square meters.

The research staff was composed of five archaeologists: Silvia Pozzi, Ilaria Vincenzi, Dzamal K. Mirzaachmedov and Alexandr Bokhter in quality of senior archaeologists, while Akniyet Seidigali was employed as junior archaeologist. Jacopo Bruno, Senior postdoc in Central Asian and *Iranian Archaeology at the Institute of Iranian Studies*, Austrian Academy of Science, collaborated in the preliminary study of the pre-Islamic ware found in this season. 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 (301), while the digitalization of the drawings was realized by a group of specialists supervised by S. Mirzaachmedov. Munira Sultanova, architect and conservator working at the *Samarkand Archaeological Institute*, drew a selection of small finds. The conservator, Dilmurod Kholov, conservator at the *Museum of Ark* in Bukhara, was in charge of the cleaning and the conservation of the artefacts unearthed this year while Anvar Kh. Athakodjaev (*Institute of Archaeology AN Ruz*) was in charge of the cleaning and the study of the coins found during the excavation. Finally, but not for importance, the zooarchaeologist Delphine Decruyenaere from *Muséum National d'Histoire Naturelle* in Paris is in charge of the faunal remain analysis that will be led in 2026.

Activities and results

The combined results from the different sectors investigated this year in the lower city of Vardanzeh provide a coherent picture of long-term use, architectural transformation and discontinuity across the site. In **sector A** (shaharistan 1), the investigation of the quadrangular mound traditionally associated with a mosque revealed the structural incorporation of the older structures into the new ones. At its core lies a substantial Samanid-period “upper building,” whose perimeter walls, corridors, rammed floors and roofing elements constitute a coherent architectural unit, internally and externally articulated by carefully designed circulation surfaces and paths. A destruction horizon—documented by charred beams, burnt deposits and collapsed vaulting—provides a clear terminus for the main use-phase of this edifice, subsequently overprinted by infrastructural installations and late, ephemeral uses (Fig. 2). Crucially, this Samanid monument is structurally anchored in a pre-existing Early Medieval architectural horizon. Extensive mud-brick terracing surfaces form part of an earlier fully articulated built environment consciously retained and embedded within the later constructional logic. (Fig. 3) The well-structured Samanid foundation complex of the southern perimeter wall—with its gypsum-bonded baked brick basal courses, adobe packing, brick foundation capped by pakhsa wall carrying the final wall—is keyed into the earlier fabric, exploiting it as a stable load-bearing substratum (Fig. 5). Intermediate levels, with their repeatedly renewed floors, walkways and hearths, record cycles of use, adaptation and refurbishment in which earlier elements are selectively reused or reinforced rather than systematically effaced (Figs. 4, 6).

As far as the trenches in shahristan 2, in **sector B** the excavation demonstrated how the extant western enclosure that traces the actual profile of the shahristan 2 and its associated internal and external features form a wholly late imperial Russian/early modern construct (Fig. 7) and cannot be related to the medieval fabric or to the pre-Islamic Vardanzeh. The principal element, a pakhsa wall preserved for a height of c. 2.2 m, rests directly on sterile Aeolian sand (Fig. 8). Externally, a secondary and perpendicular pakhsa wall (Fig. 9), clay floors and passages define structured activity and circulation zones beyond the enclosure. On its interior side, late constructions like rooms, sufa, box-like mud brick installations and multi-layered earthen floors, indicate domestic or storage functions tightly integrated with the fortification line whose main scope was probably related to the necessity of containing the sand advance. Deeper levels revealed a complex clay floor horizon draped over dune topography, associated with successively rebuilt walls on a stable SW–NE axis, underlain by another massive pakhsa wall preserved to full height, probably replaced by the more external

one after it was buried under the sand (Fig. 10). The phenomenon of the sudden sand storms, reported also in the 19th cent. AD traveller's chronicles, finds here an archaeological confirmation.

By contrast, the excavation in **sector C**, located in a peripheral part of shahristan 2, didn't evidence similar thick deposits of Aeolic sand as those ones found in sector B, despite the upper phase was almost coeval (late 18th –19th into the early 20th cent. AD). The remains unearthed here attest a multi-period anthropogenic sequence dominated by domestic, sanitary and possibly small-scale craft activities (Fig. 11). The upper levels comprise deposits rich in ceramics, faunal remains, traces of burning and a complex of structures including also drainage systems and a large tandoor, as well as underlying refuse and ash pits (Figs. 12-13). Functionally, this horizon possibly represented a service courtyard of a residential complex, where waste disposal, drainage, heating, cooking and craft production were spatially integrated, as further suggested by the reuse of large storage jars as drainage systems and the presence of toys and gaming pieces. Beneath these late deposits, an earlier structural horizon still characterized by holes and fireplaces but with few traces of structures, would suggest an exploitation of this area as landfill. This phase, dated to the medieval period, was probably used for this scope from the 9th-10th cent. AD to the Qarakhanid time. Further excavation of these medieval deposits put in light underlying remains of two parallel walls forming a corridor 2 m wide that represents the most ancient occupation level identified in this trench, since both walls were built on the virgin soil (Fig. 14). Pottery related to this phase do not contain pre-Islamic wares but we detected a black spindle whorl identical to the ones found in the citadel, in the eastern wing of the early medieval palace, as well as a pre-Islamic coin of an unidentified ruler, dating to the 7th cent. AD.

Pottery

We registered 1378 fragments among diagnostics (666) and undiagnostic (712) pottery sherds. From this total, 750 fragments were glazed ware while 808 were unglazed ware. The majority of the pottery was found in sector C, where we discovered several deposits that contained large amounts of fragments thrown away (garbage areas), in several cases archaeologically complete. About the functional classes, more than the half of the whole pottery (56 %) found this year belongs to the tableware, which is mainly formed by glazed plates and dishes dating from the late 18th – 19th cent. AD. A consistent group is represented by the storage ware (27%), mainly large jars but also a lot of basins, both glazed and plain. In less measure we detected also cooking ware (10%) and storage ware reused as pipelines in

drainage systems (5%). The ceramic material unearthed this year from the three sectors of the shahristan indicates an irregular occupation of this area and fix three main phases: the pre-Islamic period (5th –8th centuries) (Fig. 15), the medieval period (10th –early 11th centuries) (Fig. 16) and the final phase dated to the second half of the 19th –early 20th centuries (Figs. 17-20), represented by the most widespread group of ceramics, found throughout the entire area of the settlement.

Finds

The corpus of finds unearthed during the 2025 archaeological campaign, in total sixty-three, includes coins, objects in metal, glass, stone, minerals, ceramic and faience, as well as bone artefacts and organic materials. The majority is dated to the 19th – 20th cent., while few finds can be ascribed to the medieval period (9th - 11th cent. AD). The iron finds includes hand tools and agricultural implements (nails, sickle, hoe, rings, fragments of buckles) (Fig. 21), while among the bronze finds we have the neck of a jug, a button and a flat, pierced disc. The stone find include four objects made of stone and some fragments of un-worked stone, while among the glass finds we have fragments of pots, glasses, bottles, an oil lamp and beads (Fig. 22). The bone finds include some astragalus bones, used as gaming pieces or children's toys locally known as *bujul*, and a whistle dated to the 9th -10th cent. AD, while among the organic material we found some fragments of burned tissues and an embroidered hat (Fig. 23). The terracotta finds, in total eleven and can be divided into the categories of tools, toys, pipes, lamps and porcelain (Fig. 24). The group of tools includes four spindle whorls and a tripod used in pottery kilns to separate the vessels during the firing. The toys include a small ceramic whistle and two fragments of unknown objects, possibly a spinning top and an animal, both dated to the 18th –19th cent. An example of glazed candlestick (*shamdon*) and a pipe, both probably dated to the 19th -20th cent., were also found.

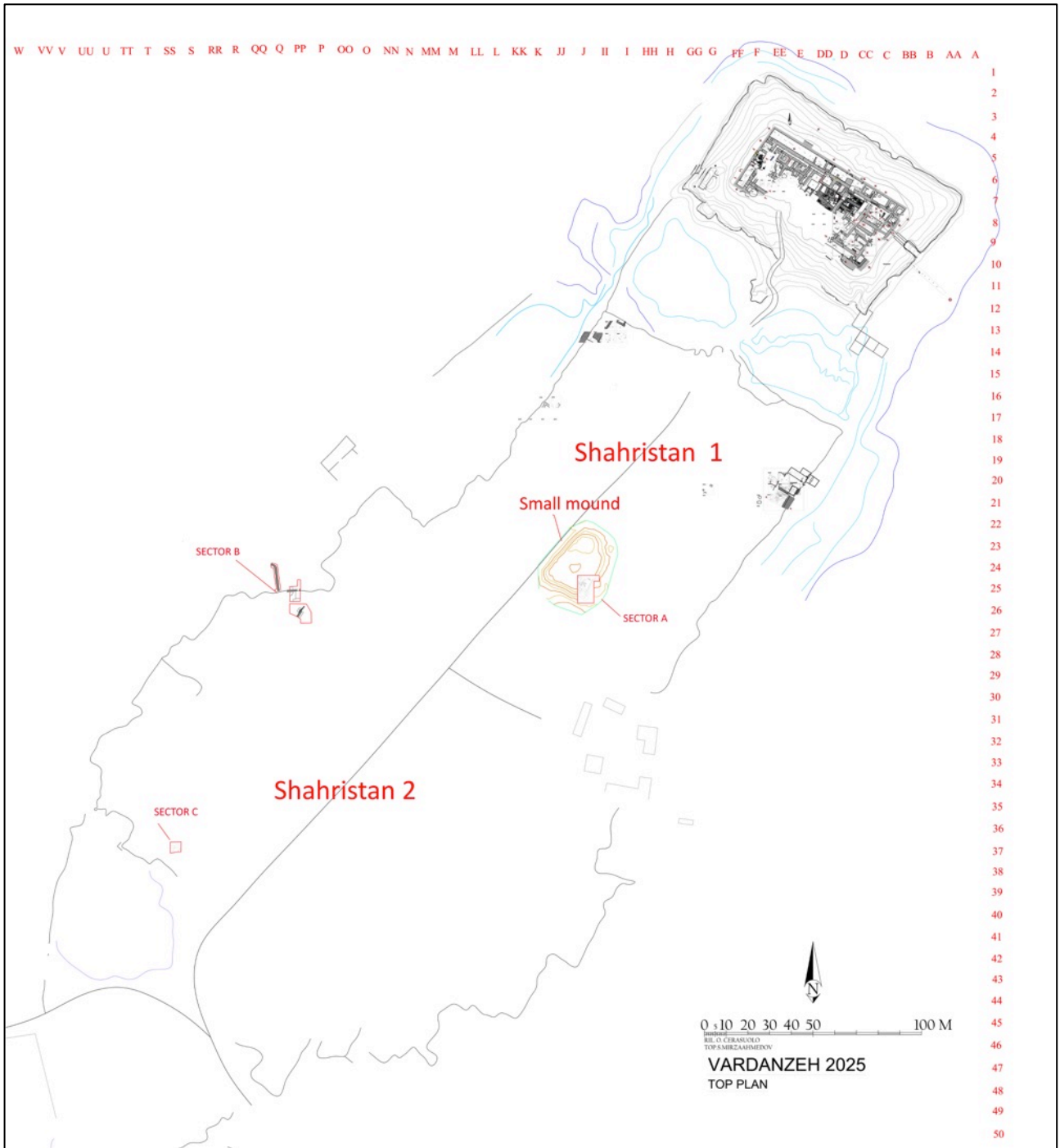


Fig. 1 General plan of the site (topography by S. Mirzaachmedov on O. Cerasuolo plan).



Fig. 2 Shah-1-east, sector A (J25-NW, J25-NE): corridors around SU 1962 and vaulted structure SU 1955 (view from W).



Fig. 3 Shah-1-east, sector A (J25-NE, J25-NW): terracing platforms (view from S).



Fig. 4 Shah-1-east, sector A (J25-NW): particular of basin SU 2030 (view from N).



Fig. 5 Shah-1-east, sector A: general view from SE.



Fig. 6 Shah-1-East, sector A: situation at the end of excavation (3D model top view).



Fig. 7 Shah-2-west, sector B (PP25-SW): structure 2000 on left and room 59 on the right side (view from S).



Fig. 8 Shah-2-west, sector B (PP25-SW): pakhsa perimeter wall 2002, internal side (view from S).



Fig. 9 Shah-2-west, sector B (Q24-NW/SW; Q25-NW): wall 2018, outside the shahristan (view from N).



Fig. 10 Shah-2-west, sector B PP26-NW/SW; PP26-NE): semi-circular structure SU 2018 (view from W).

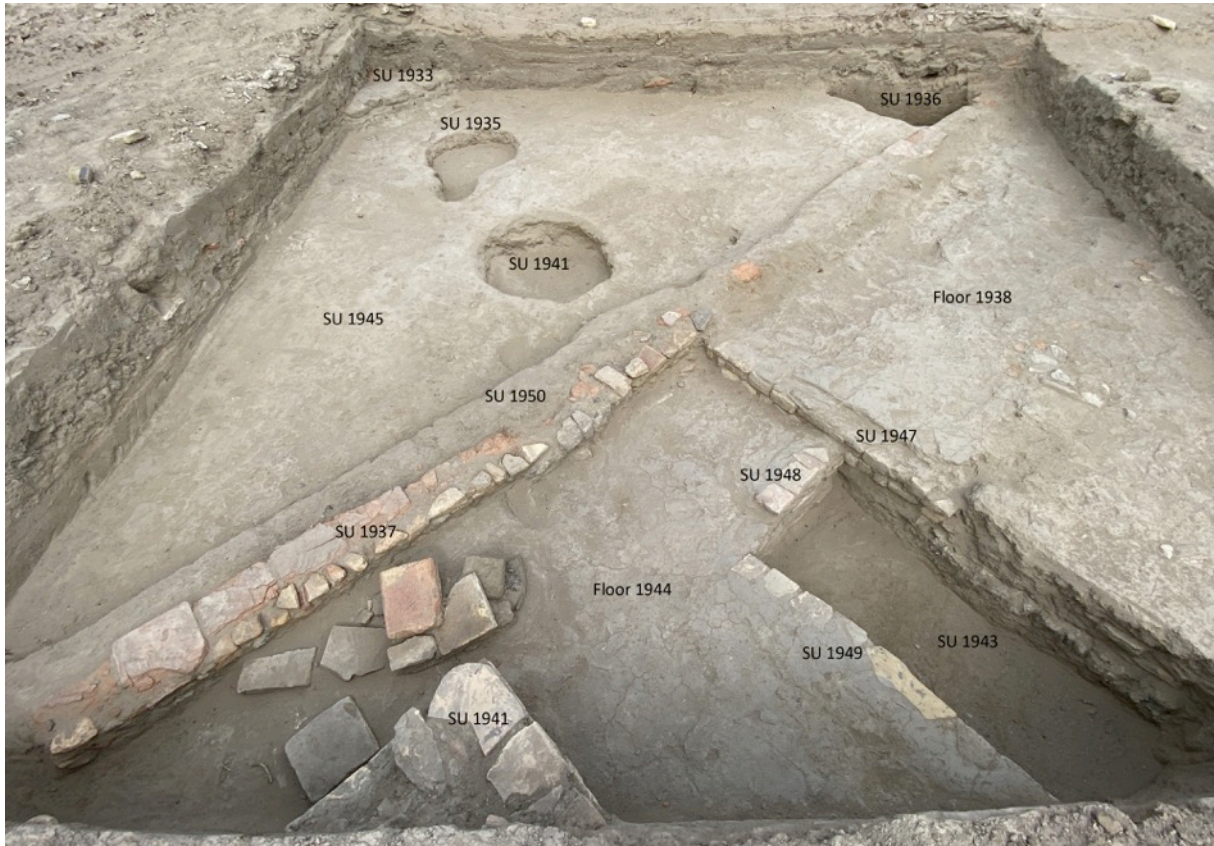


Fig. 11 Shah-2-west, sector C: wall 1937, baked brick structure SU 1941, rectangular pit SU 1943 (view from S).



Fig. 12 Shah-2-west, sector C: drainage pits SSU 2100-2103 after the removal of the floor (top view from SW).



Fig. 13 Shah-2-west, sector C: holes SSU 2113-2114 (view from W).



Fig. 14 Shah-2-west, sector C: walls 2127-2128 (view from E).

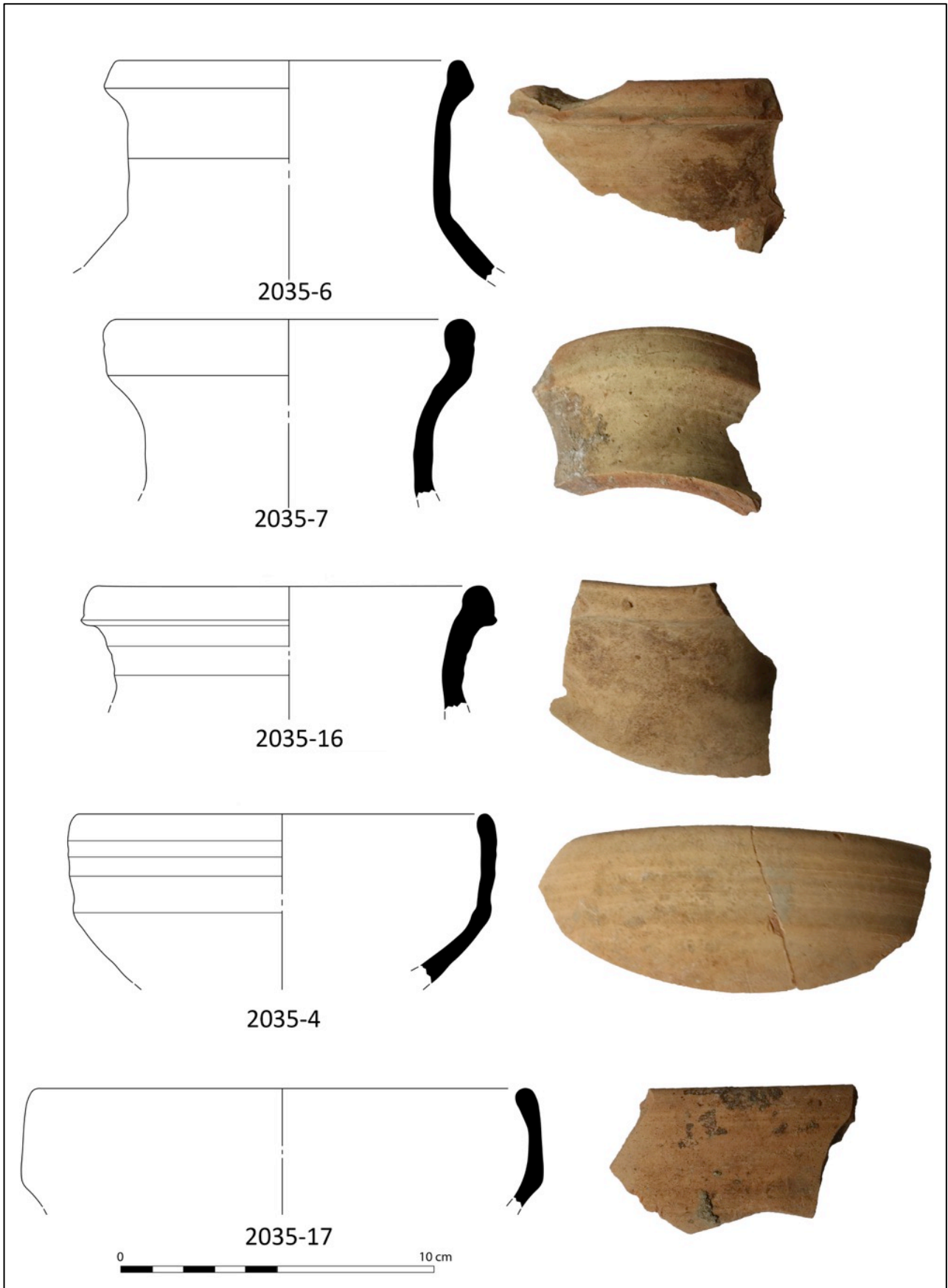


Fig. 15 Sector A. Unglazed ware: large necked jugs (2035-6, 2035-7, 2035-16); bowls (2035-4, 2035-17).

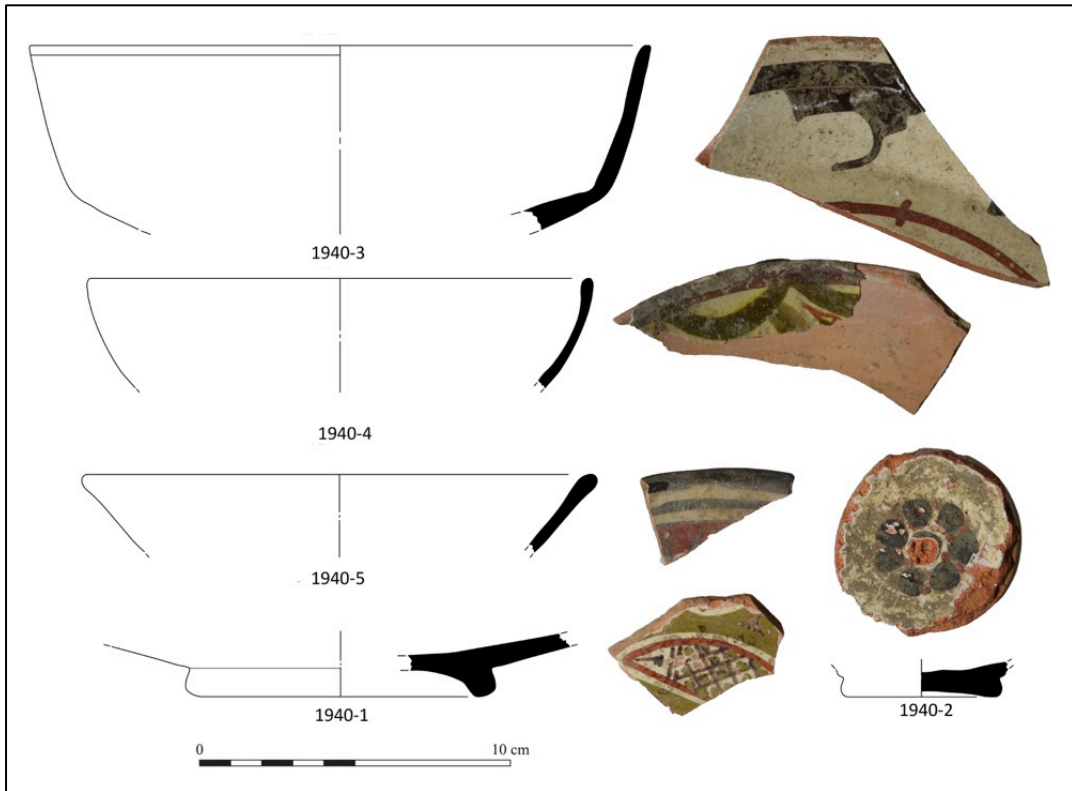


Fig. 16 Sector A. Glazed ware: bowls (1940-2, 1940-3, 1940-4, 1940-5), plate (1940-1).

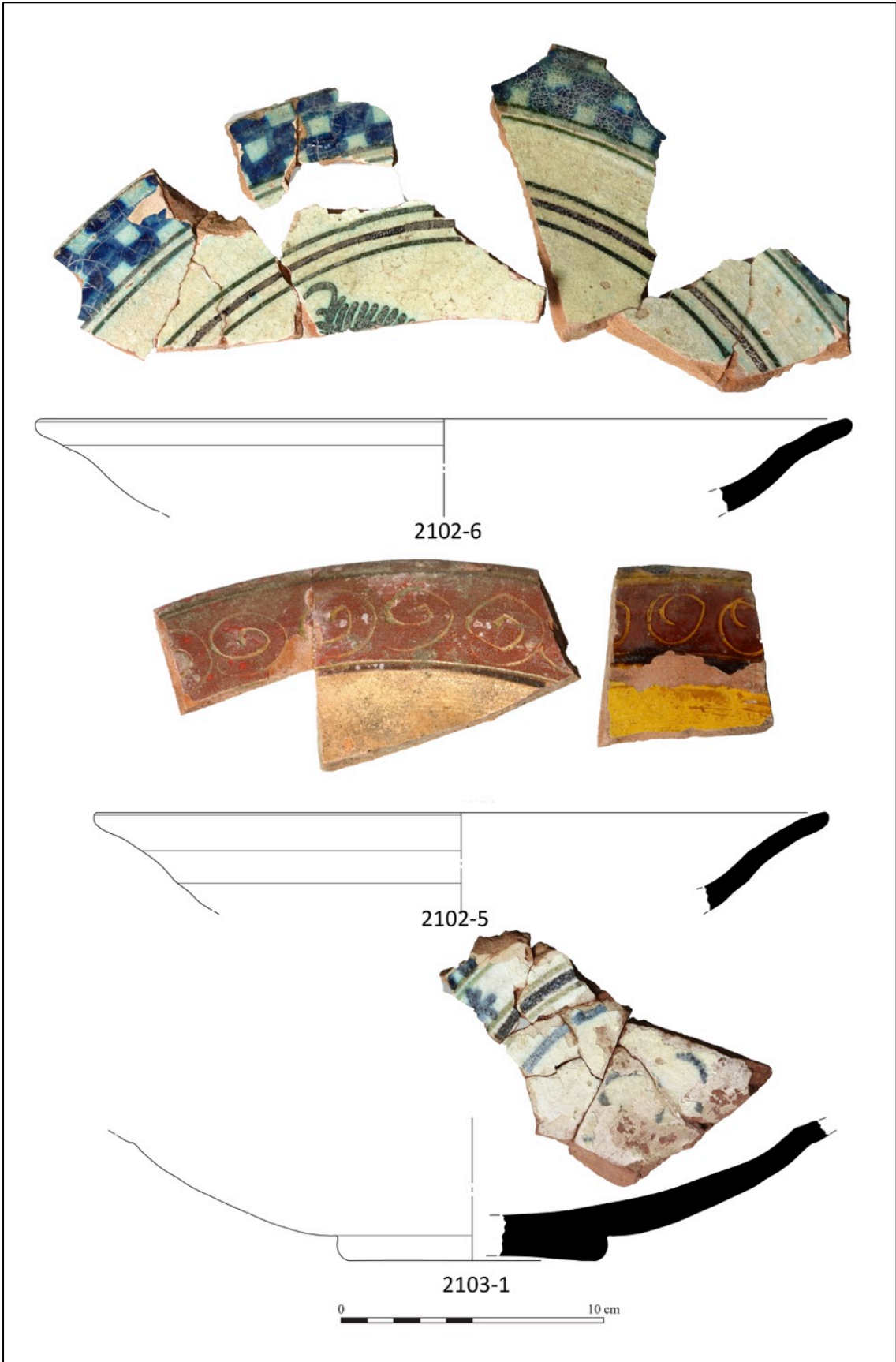


Fig. 17 Sector C. Glazed ware: dishes.

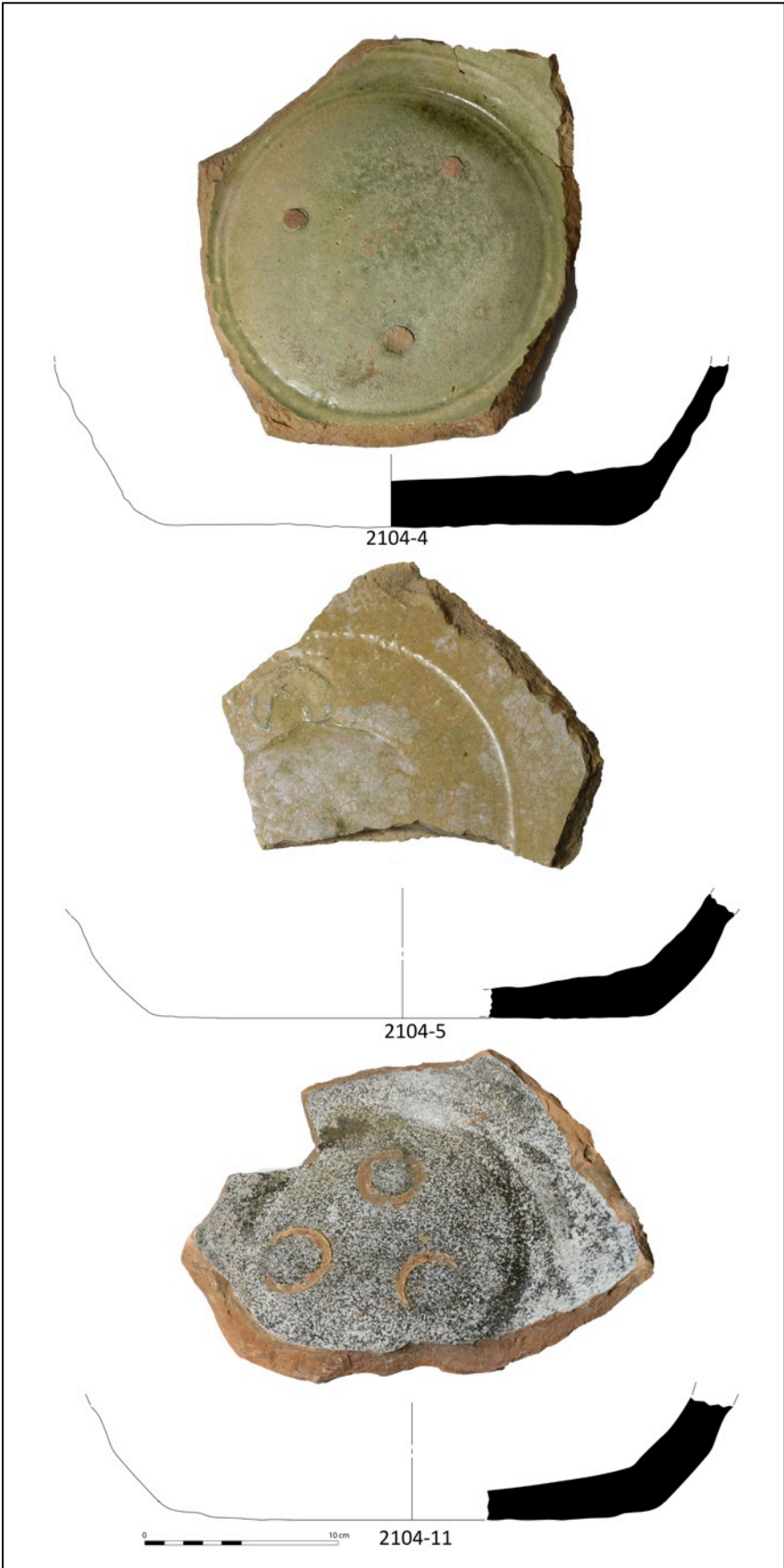


Fig. 18 Sector C. Glazed ware: basins.

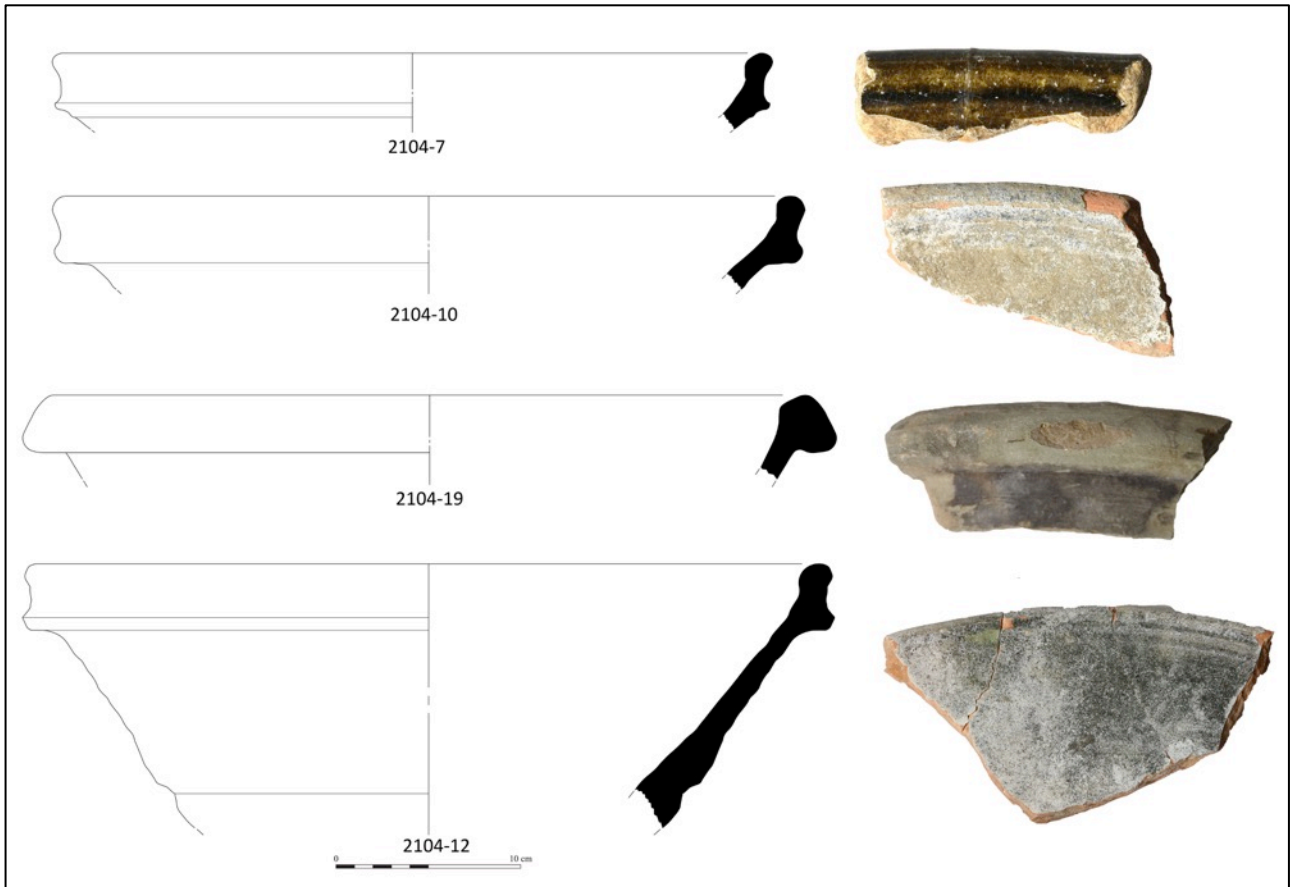


Fig. 19 Sector C. Glazed ware: basins.

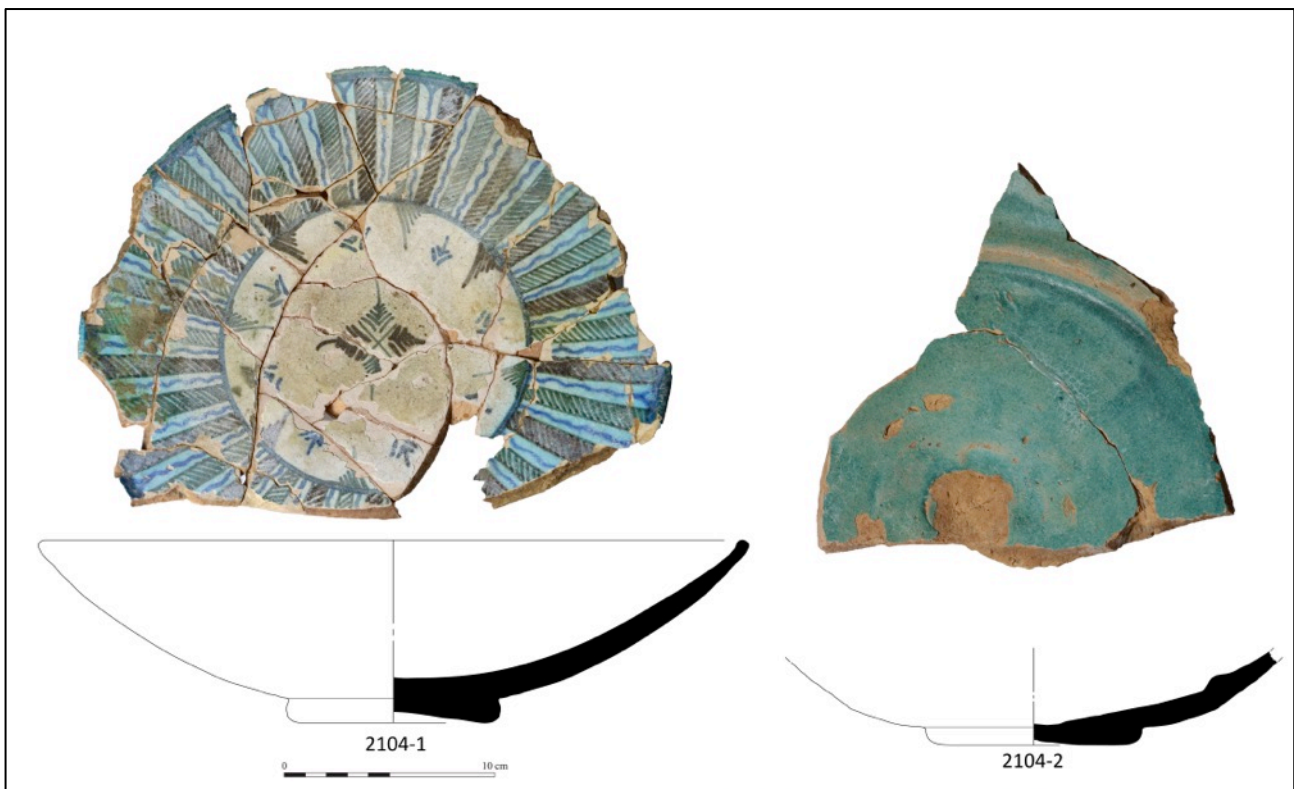


Fig. 20 Sector C. Glazed ware: dishes.

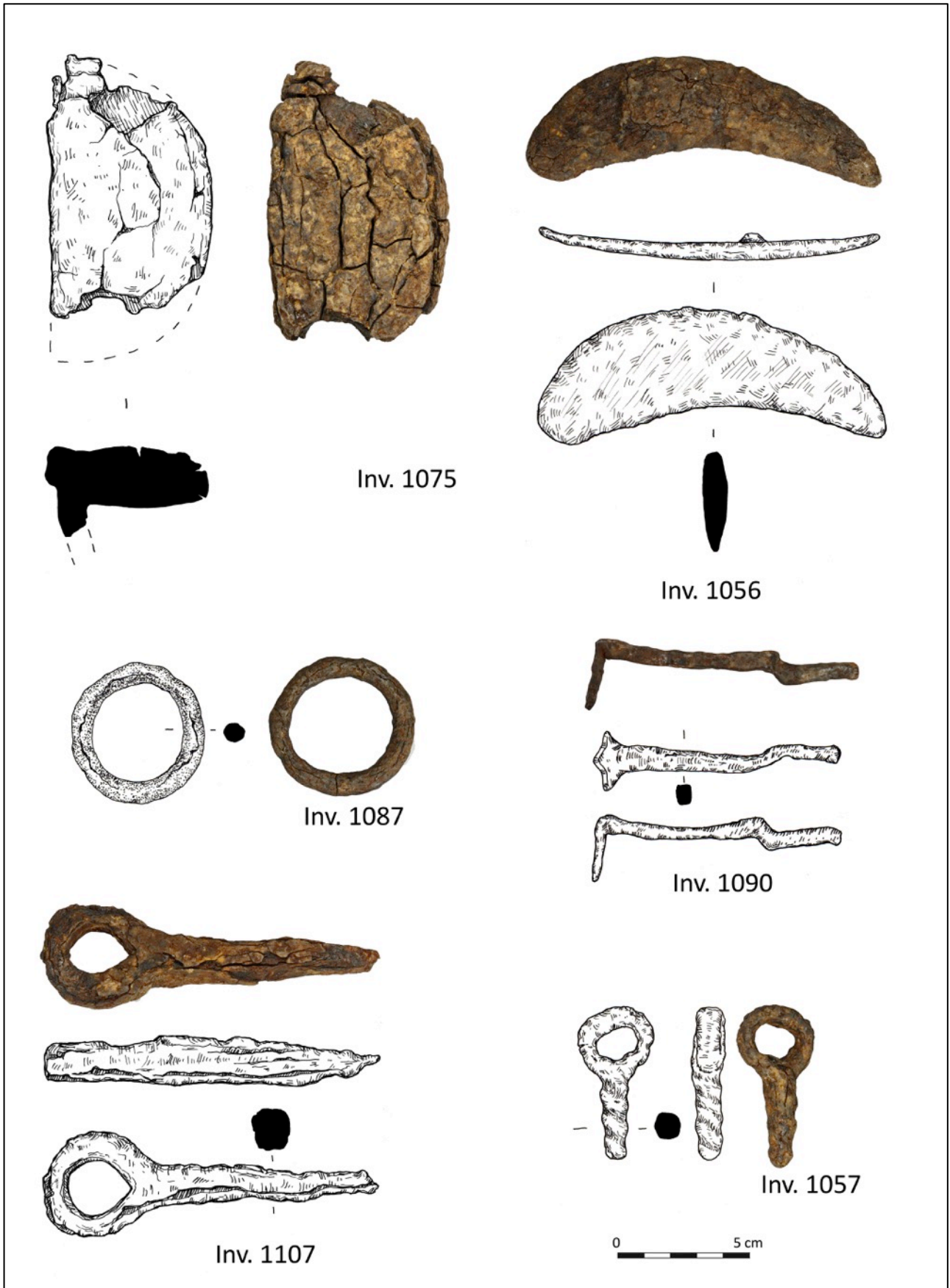


Fig. 21 Iron finds: scraper? (Inv 1075); sickle (Inv. 1056); ring (Inv. 1087); eye-headed nail (Inv. 1057, 1107); nails (Inv. 1090) (Drawings by M. Sultanova).

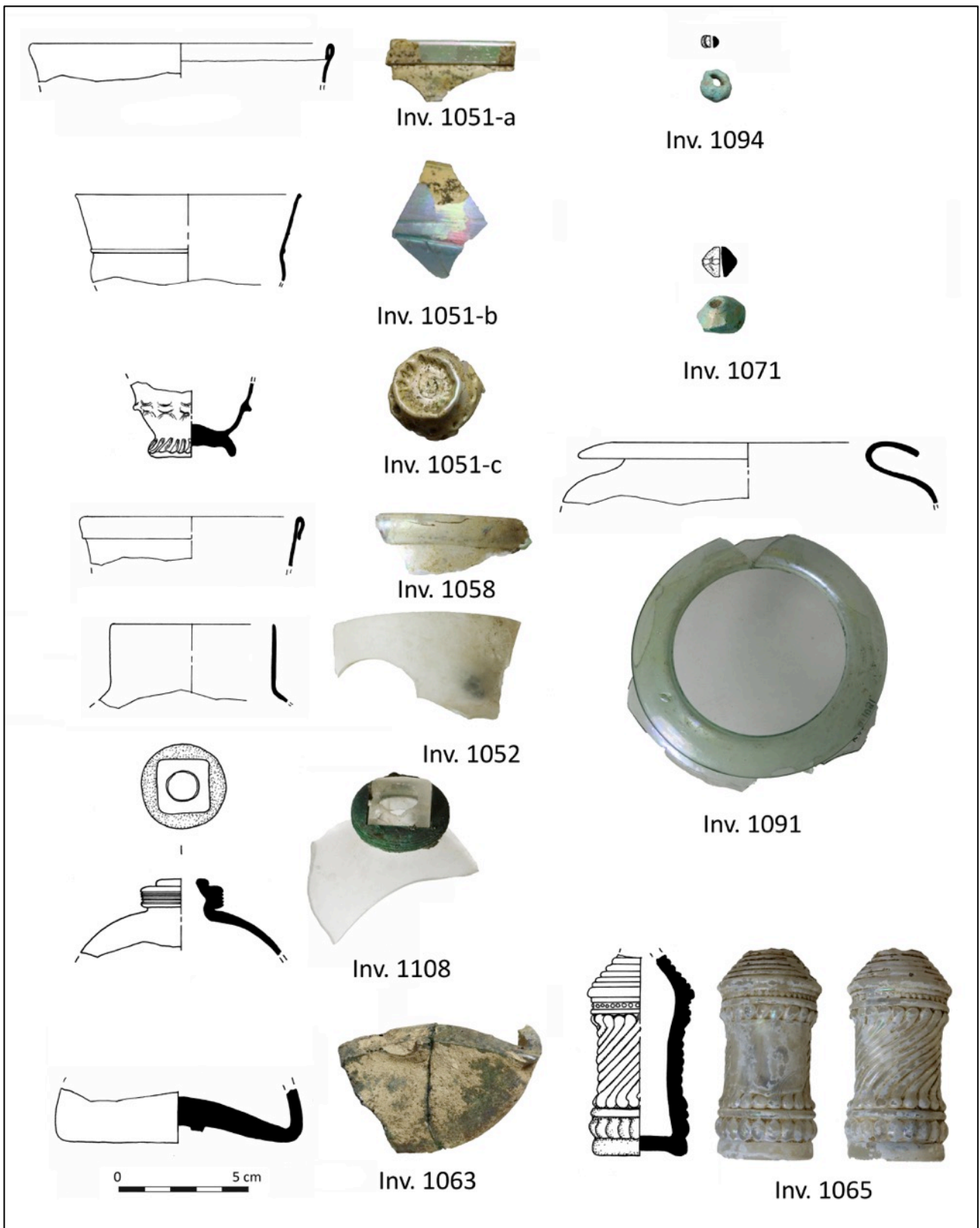


Fig. 22 Glass finds: glass (Inv. 1051-b); base of small pot (Inv. 1051-c); open shaped cups (Inv. 1051-a; 1058); open mouthed vessel (Inv. 1052); oil lamp (Inv. 1108); base of a thick walled vessel (Inv. 1063) decorated glass bottle (Inv. 1065); rim of a glass pot (Inv. 1091); glass past bead (Inv. 1094); glass bead (Inv. 1071)(Drawings by M. Sultanova).



Fig. 23 Bone and organic finds: bone whistle (Inv. 1102); bujuls (Inv. 1074-1084); hand made hat (Inv. 1079); burned rolled cotton rope (Inv. 1071); burned tissue (Inv. 1098)(Drawings by M. Sultanova).

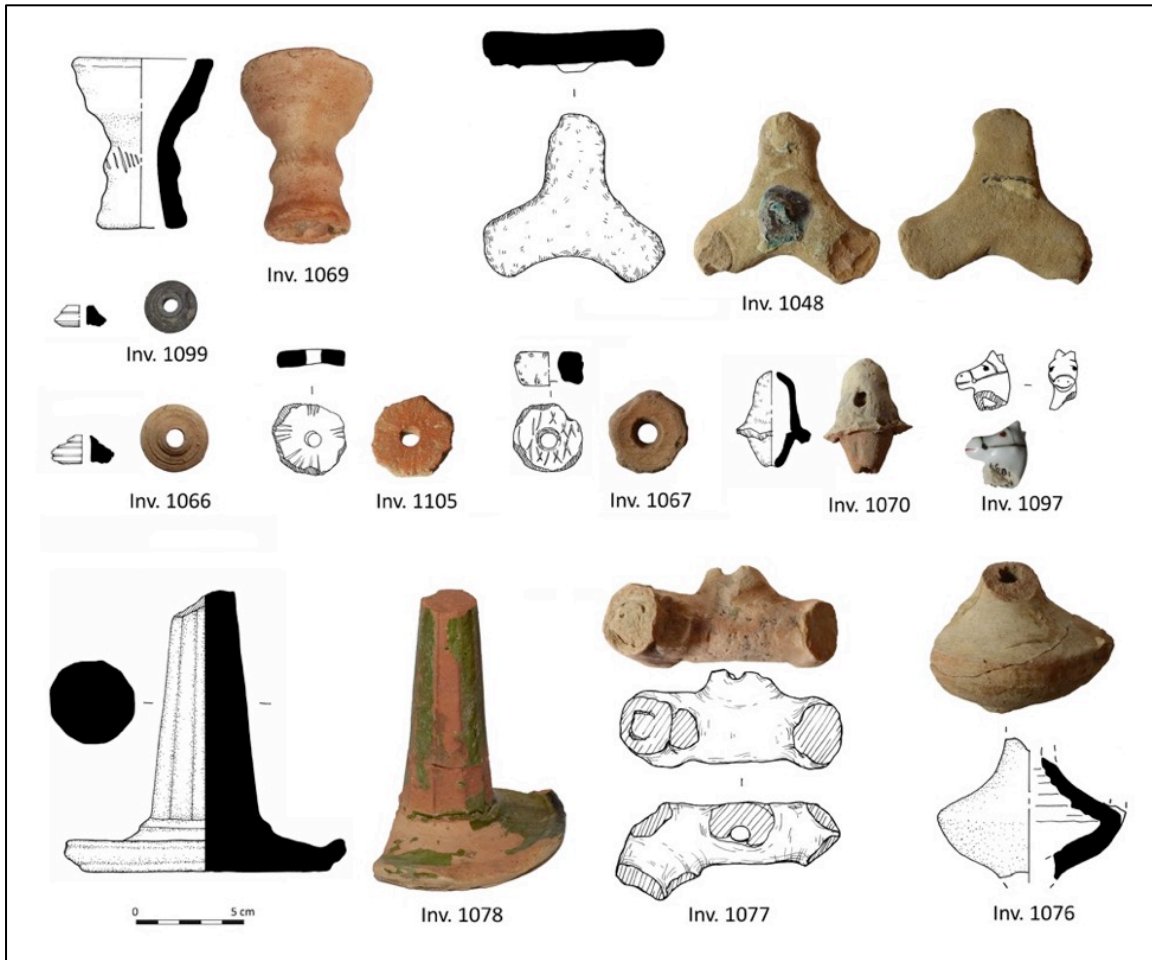


Fig. 24 Terracotta finds: smoking pipe (Inv. 1069); spindle whorls (Inv. 1066, 1067, 1099, 1105); firing spacer (Inv. 1048); whistle (Inv. 1070); spinning top (Inv. 1076); toy (Inv. 1077); porcelain figurine (Inv. 1097); candlestick (Inv. 1078) (Drawings by M. Sultanova).



Fig. 25 Team that worked in 2025 excavation.



Fig. 26 Team that worked in 2025 excavation.