

THE BEGINNING OF THE COPPER AGE IN THE BLAGOEVGRAD VALLEY, SOUTHWEST BULGARIA: THE SITES OF MOSHTANETS– CHUKATA AND STRUMSKO

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Abstract

This paper considers the results of the investigations of two prehistoric sites in the southern part of the Blagoevgrad Valley, southwest Bulgaria: Moshtanets–Chukata and Strumsko. Being situated at the highest points of opposing hills on either side of the Struma River, these small, fortified settlements were strategically located in difficult-to-access areas allowing them control over the key routes to the Kresna Gorge and the Aegean coast to the south, the Upper Struma Valley to the north, and the Vardar Valley to the west. Radiocarbon dating of material from the sites suggests that they existed during the first quarter of the fifth millennium BC, at the beginning of the Copper Age. The study focuses on the ceramic repertoire from the sites; the most distinctive shapes and recurring combinations of technological, typological, and decorative characteristics are examined and the common elements and trends in the ceramic production of both settlements are highlighted. Based on the evidence of absolute chronology, ceramic assemblages, stratigraphic sequences, topography, and settlement layout, the author theorizes that both sites might have co-existed as parts of a single community that shared common organizational structure for at least some time of their life-cycles.

Keywords: Early Copper Age – Struma River Valley – prehistoric sites – ceramic assemblages – radiocarbon dating – social structure.

<https://doi.org/10.53250/stprae18.23-62>

Introduction

This paper presents the preliminary results of the investigations of the prehistoric site located in the Chukata locality near the village of Moshtanets, southwest Bulgaria. Based on a comparison with the evidence from the significantly larger settlement site of Strumsko situated in the Kaymenska Chuka locality just across the river Struma, the common features and development trends are outlined for the beginning of the Copper Age in the area of the Blagoevgrad Valley.

The early fifth millennium BC is an underexplored yet pivotal time for the formation of societies during the emergence of copper metallurgy. The proximity of Moshtanets and Strumsko to the well-documented copper ore deposit in the area of Boboshevo (Chohadzhiev 1998, 10) where pieces of native copper have been uncovered, further highlights the significance of the region's geographical location.

Both prehistoric sites sit at the tops of the hills on the opposite banks of the Struma River, in the southern part of the Blagoevgrad Valley, just before the river valley narrows into the Kresna Gorge. Both sites occupy dominant positions in the surrounding landscape, offering excellent visibility to the north and south along the river's course. The relative elevation of the Chukata Hill above the Struma River's bank is approximately 115 m, while that of the Kaimenska Chuka Hill is about 80 m. The distance between the sites is 1.3 km (fig. 1).



Figure 1. Map showing the location of the sites of Moshtanets–Chukata (1) and Strumsko (2).
Image Credit: <https://maps-for-free.com/> and the author.

The investigations at the prehistoric site of Moshtanets–Chukata

The site of Moshtanets is situated on the steep slopes and the flat top of the Chukata Hill on the right bank of the Struma River, at the base of a terrace in the Vlahina Mountain. It was registered in 2014 during a field survey prior to the construction of the Struma Motorway (Chukalev et al. 2015, 824ff). A small-scale excavation was conducted in September 2016 (Bacvarov & Katsarov 2017), and magnetic gradiometry was carried out in 2023 (figs. 2 and 3; Bacvarov et al., in print).

A relatively even distribution of isolated, undiagnostic, and unidentifiable pottery sherds and small burnt daub pieces was recorded on the ground surface across the entire slope of the terrace. The slope is intersected by several dirt roads, an agricultural channel, and natural channels formed as a result of erosional processes.

In the lowest part of the investigated area of the terrace, several severely disturbed cut features from the Late Iron Age were identified. No cultural layer was recorded in the remaining trenches on the slope. The isolated sherds dating to the Early Chalcolithic and the Late Iron Age are relocated.

Cultural layers and archaeological features were recorded only in three small trenches in the northeastern part of the terrace, at the relatively flat top of the hill, where the magnetic survey was conducted. The magnetic field in the surveyed area is relatively disturbed – the background values of the magnetic gradient range from ± 2 to 3 nT – indicating that the surface environment is nonhomogeneous and contains shallow geological ‘disturbances’ (bedrock). Against this backdrop, especially in the central parts of the area, a large number of anomalies with varied shapes and sizes, and medium to high intensity (ranging from 7–8 to 30–40 nT and above) were recorded. Some of these anomalies have linear characteristics and may be related to remains of house walls. The remaining anomalies are oval or amorphous in shape and are likely caused by cut features or accumulations of material exposed to heating in the past. All anomalies with the indicated intensity found within the surveyed area seem to suggest human activities in the past (fig. 4).

Numerous anomalies were also identified characterized by alternating very high positive and negative values of the magnetic gradient, ranging from several tens to several hundred nT. They are all caused by shallowly buried iron objects, varying in size, most likely of modern origin. A particularly high concentration of such anomalies was found in the far southwest and southeast quadrants.

Four trenches were made in the same part of the site. In the westernmost trench, no cultural layer was recorded, and the bedrock was uncovered at 0.60 m below the ground surface. The gray or gray-brown sediment contained relocated archaeological material: sherds (including from the Late Iron Age), faunal remains, and small burnt daub pieces. Archaeological features were identified in the other three trenches.

Trench BH9 (figs. 5 and 6). In the northern part of the trench, remains of the corner of a burnt structure were uncovered (feature 4). It was constructed of a wooden frame and clay daub, and had a shallow (ca. 0.70 m) cut under the floor. The feature was identified



Figure 2. *The site of Moshtanets–Chukata: panoramic view from the site of Strumsko. Image Credit: K. Bacvarov.*

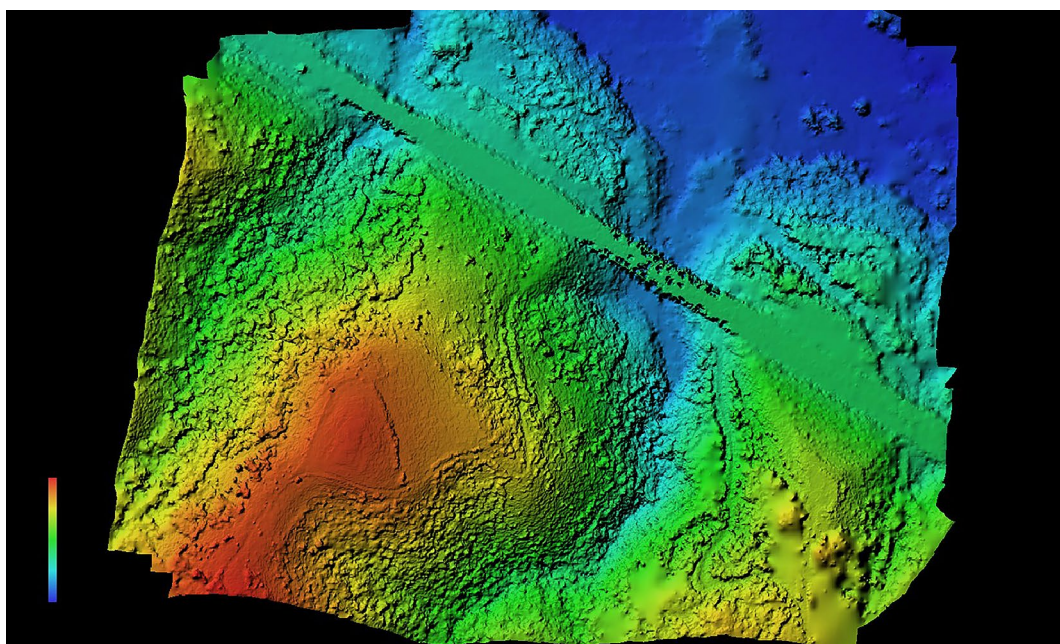


Figure 3. *Digital elevation model of the area of Moshtanets–Chukata. Image Credit: P. Leshtakov & T. Chetashki.*

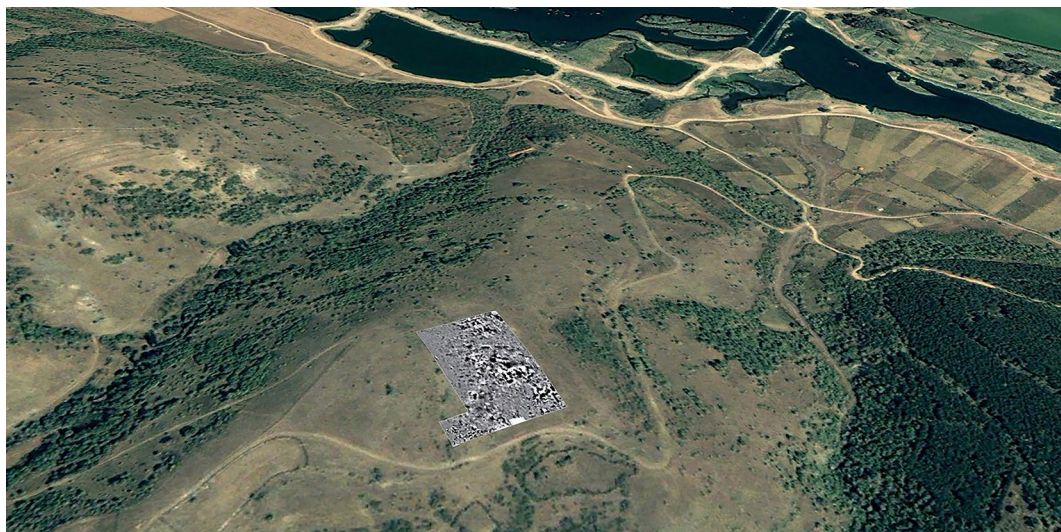


Figure 4. *Fluxgate gradiometry at Moshtanets–Chukata. Image Credit: Google Earth, N. Tonkov & P. Leshtakov.*

at a depth of approximately 0.40 m below the ground surface and was NW–SE/NE–SW oriented. Only the southern end of the house was excavated (ca. 1 m²). The ruins formed a dense layer of burnt daub pieces of varying sizes and degree of firing, with a gradient from east to west. A posthole measuring 0.12 m in diameter was recorded in the corner. The burnt daub pieces were more densely packed to the north and at greater depth. They were positioned both above and within the cut, likely having sunken down after the perishable material of the floor burned out.

Three layers were distinguished in the fill of the cut under the floor. The upper layer, 0.20–0.25 m thick, was predominantly composed of burnt daub pieces and also contained a grindstone fragment and a piece of clay plaster from the base of a thermal installation. The middle layer measured up to 0.20 m thick and consisted of a reddish-brown, loose sediment with a low concentration of sherds and animal bones, and a large amount of scattered daub pieces. The bottom layer measured up to 0.30 m thick – compact, grayish sediment with tiny burnt daub lumps and charcoal pieces as well as a few sherds and animal bones.

Trench BF6 (figs. 7 and 8). At a depth of 0.60 to 0.80 m below the ground surface, a ‘scatter’ of rubble stones was uncovered over the entire area of the trench covered by a brown sediment layer containing small rocks and burnt daub pieces and extending in all directions beyond the excavated area (feature 3). The stones were arranged in several ‘rows’, up to three in total, with a maximum height of 0.35 m, overlapping one another. They vary in size, with smaller stones located at the top of the scatter. Secondarily fired sherds with weathered surfaces of medium and large size were found among and on top

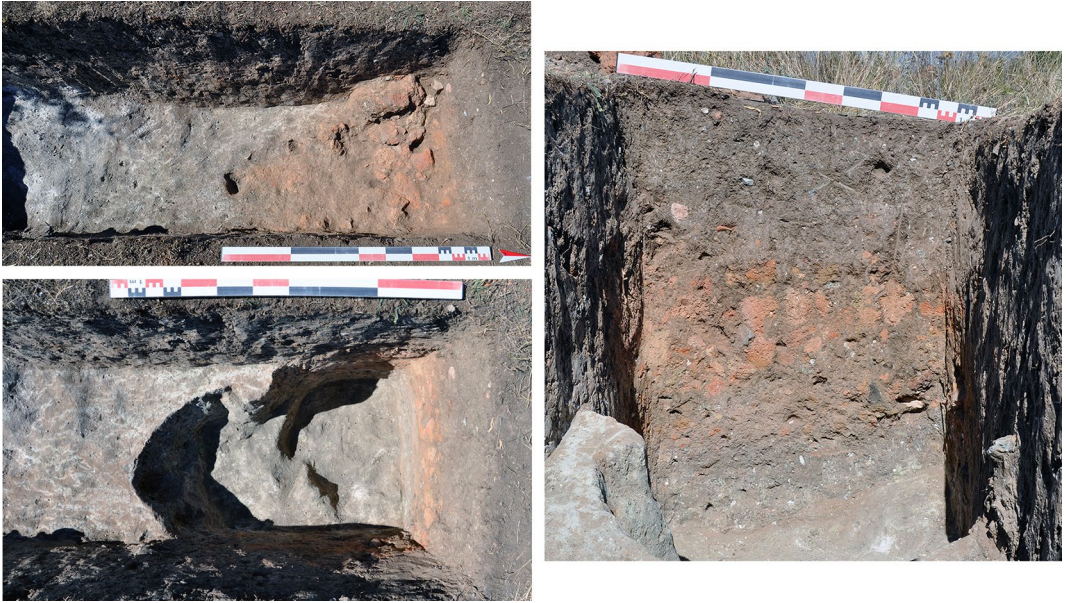


Figure 5. Feature 4 at Moshtanets–Chukata. Left: at the level of identification (above) and after excavation (below). Right: profile. Image Credit: K. Bacvarov.

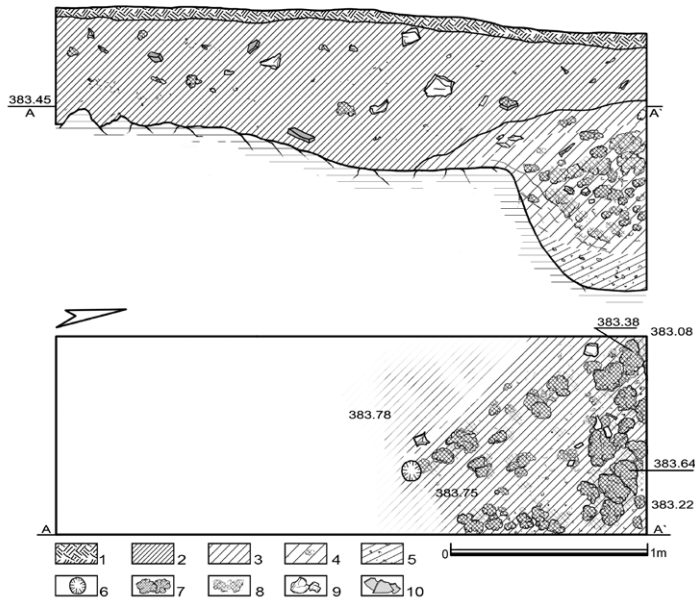


Figure 6. Line drawing of feature 4 at Moshtanets-Chukata. Above: profile of trench BH9. Below: layout of feature 4. Key: (1) plowzone; (2) topsoil; (3) brown sediment; (4) brown sediment colored in reddish by weathered burnt structural debris; (5) gray sediment; (6) postholes; (7) pieces of burnt structural debris; (8) shapeless pieces of burnt structural debris; (9) stone; (10) sherds. Image Credit: G. Katsarov.



Figure 7. *Feature 3 at Moshtanets–Chukata. Image Credit: K. Bacvarov.*

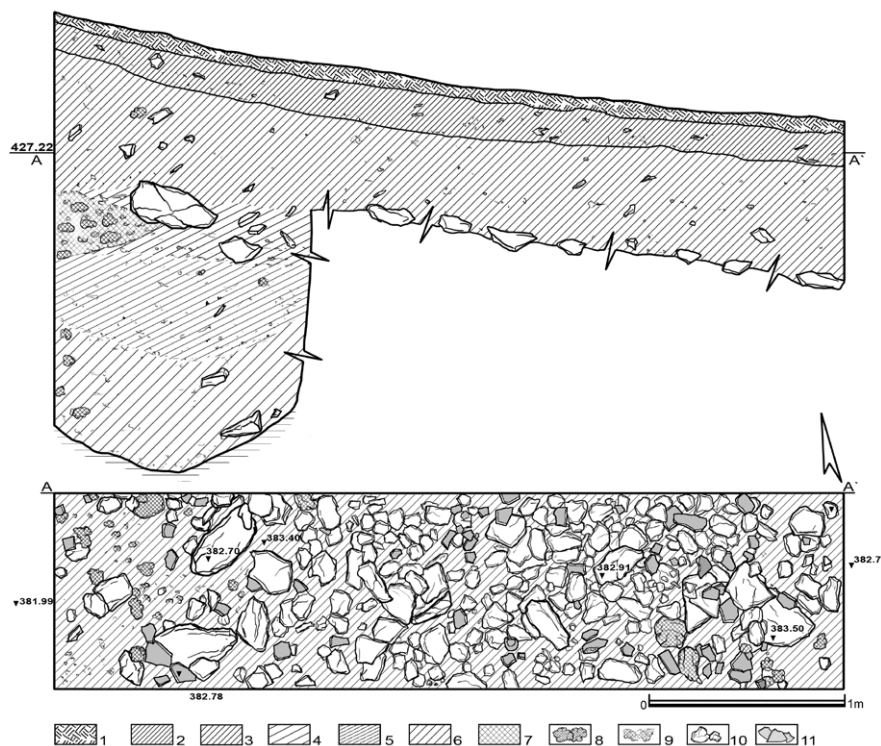


Figure 8. *Line drawing of feature 3 at Moshtanets–Chukata. Above: profile of trench BF6. Below: layout of feature 3. Key: (1) plowzone; (2) topsoil; (3) gray-brown sediment; (4) brown/gray-brown sediment; (5) gray sediment; (6) light brown sediment; (7) dark brown sediment; (8) pieces of burnt structural debris; (9) shapeless pieces of burnt structural debris; (10) stone; (11) sherds. Image Credit: G. Katsarov.*

of the rocks, as well as single pieces of red or orange-colored burnt daub and plaster from thermal installations. Below the stones, two layers were recorded with a total thickness of up to 1.20 m: (1) the upper layer was gray in color, had fine texture and contained charcoal fragments, small burnt daub pieces and sherds; (2) the lower layer, brown and loose, contained numerous sherds and charcoal pieces.

Trench BE9 (figs. 9 and 10). In the northern part of the trench, ca. 0.40 m below the ground surface, beneath a brown sediment layer containing many small rocks and burnt daub pieces, a 'scatter' of rubble stones and sherds was uncovered (feature 5). It measured 1.40 m (east–west) x 1 m (north–south) and extended beyond the excavated area to the west, north, and south. Five large rocks were found at its eastern end. To the west, a loose deposit was investigated that was composed of secondarily fired, weathered sherds and small stones. The stone scatter was not excavated in depth and its use and possible relation to feature 3 remain unclear. East of this feature, three layers were recorded in the trench, with a total thickness of up to 2 m. The uppermost, gray-brown layer, 0.60–0.80 m thick, contained a high concentration of secondarily fired, weathered sherds. It covered a grayish, loose layer measuring up to 0.60 m thick and containing small charcoal pieces and a few sherds. The bottom layer was gray, loose, and measured up to 0.80 m thick, with just several sherds. Two pits were recorded in the southeastern part of the trench, their fill showing the same characteristics as the lowermost layer.

Absolute chronology

A series of nine radiocarbon dates were obtained from Moshtanets-Chukata, three each from the trenches that yielded archaeological features (table 1). The dates from trench BH9 were made on material associated with the burnt debris of feature 4: one from the bottom layer of the cut fill (SUERC-95969) and two from the middle layer (SUERC-95968 and SUERC-95967). The calibrated dates fall within a relatively narrow range covering the first century of the fifth millennium BC and should be considered a *terminus ante quem* for the building.

The dates from trench BF6 were made on material from feature 3. They span a slightly wider chronological interval, with the first two (SUERC-95964 and SUERC-95965) calibrated to between 4950–4800 cal BC. The third date (SUERC-95966) is significantly earlier and seems to be an outlier, so it should be excluded from further consideration.

The dates from trench BE9 were made on material from the layers below feature 5. Two of them (SUERC-95959 and SUERC-95960) come from the bottom layer, while the third is from the layer above it (SUERC-95958). The latter is calibrated to between 5000–4850 cal BC, while the former two show very similar values. Although these dates were obtained from lower layers, they relate to a later period and fall within the chronological range of 4850–4700 cal BC. The animal bones used may have been part of the deposit filling the pits whose boundaries were difficult to distinguish.



Figure 9. Trench BE9 and feature 5 at Moshtanets–Chukata. Left: layout of feature 5. Right: west profile of trench BE9. Image Credit: K. Bacvarov.

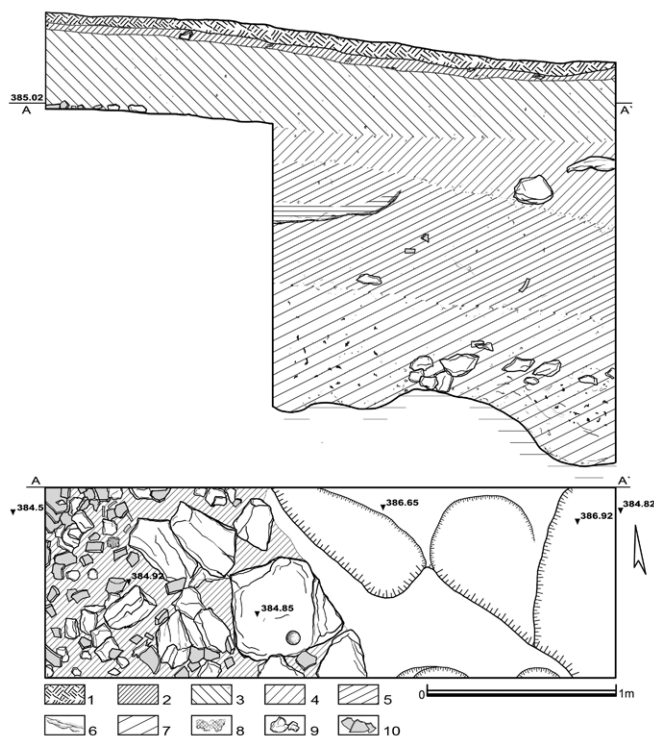


Figure 10. Line drawing of trench BE9 and feature 5 at Moshtanets–Chukata. Above: profile of trench BE9. Below: layout of feature 5. Key: (1) plowzone; (2) topsoil; (3) brown sediment colored in reddish by weathered burnt structural debris. (4) gray-brown sediment; (5) gray sediment; (6) strip/streak of material from the natural, (7) light gray sediment; (8) shapeless pieces of burnt structural debris; (9) stone; (10) sherds. Image Credit: G. Katsarov.

Lab Code	Context ID	Material	¹⁴ C Age BP	¹⁴ C Age cal BC (95.4%)
SUERC-95958 (GU56377)	BE9	Ovis/Capra: molar	6039 ± 28	5007–4844 cal BC
SUERC-95959 (GU56378)	BE9	large ruminant: rib	5878 ± 28	4802–4691 cal BC
SUERC-95960 (GU56379)	BE9	Bos taurus: 1st phalange	5922 ± 28	4848–4720 cal BC
SUERC-95964 (GU56380)	BF6	large ruminant: rib	5993 ± 28	4953–4796 cal BC
SUERC-95965 (GU56381)	BF6	Ovis/Capra: metacarpal	5973 ± 28	4939–4788 cal BC
SUERC-95966 (GU56382)	BF6	large ruminant: long bone	6144 ± 28	5208–5008 cal BC
SUERC-95967 (GU56383)	BH9	Bos taurus: 1st phalange	6025 ± 28	4997–4842 cal BC
SUERC-95968 (GU56384)	BH9	Ovis/Capra: molar	6084 ± 28	5065–4910 cal BC
SUERC-95969 (GU56385)	BH9	Cervus elaphus: metatarsal	6083 ± 28	4925–4910 cal. BC

Table 1. Radiocarbon dates from the site of Moshanets–Chukata.

The identification of this previously unknown prehistoric site and the results of its investigation provide new insights into the settlement pattern at the beginning of the Copper Age in the northern part of the Middle Struma Valley. Even though a limited area was excavated, it indicates the presence of a small settlement situated at a strategic and difficult-to-access location. The findings of magnetic gradiometry and excavation at Moshtanets–Chukata reveal well-preserved layers and features. Moreover, a burnt house and a large structure built of stones arranged in several ‘rows’ were recorded. The structure’s characteristics resemble another feature uncovered at the nearby site of Strumsko on the opposite bank of the river Struma that has been interpreted as a stone wall with a palisade (Pernicheva 1993).

The prehistoric site of Strumsko

The prehistoric settlement site of Strumsko has been known in the literature since 1970 (Stoyanova-Serafimova 1970, 71). In 1975, G. Toncheva conducted small-scale digs at the site, and in 1978–1979, L. Pernicheva and I. Kulov carried out more extensive excavations there (Pernicheva & Kulov 1979 and 1980). In the early 1990s, M. Stefanovich investigated a Late Bronze Age site at the lower part of the hill (Stefanovich & Bankoff 1998).

The Copper Age settlement is located on a high, naturally protected hill with steep, almost inaccessible southern and southwestern slopes; the other slopes are also difficult to access due to the significant gradient of the terrain, except for the gentle northern slope. Similarly to the site of Moshtanets–Chukata on the right bank of the Struma River, the settlement of Strumsko in the Kaimenska Chuka locality dominates the surrounding area with visibility to the south and north along the river’s course (fig. 11).

The archaeological investigations were conducted on the northern slope of the hill in two areas – East and West – covering a total area of ca. 420 m²; five small test-trenches were made as well in the southernmost part of the same slope (fig. 12). The settlement covered only a strip of the gentle northern slope and did not extend on the southern slope or the highest part of the hill. The thickness of the cultural layer ranged from 0.30 to 1 m, reaching up to 1.40 m only in a small section of the highest part of the West area. Two distinct occupation levels, house remains, and a fortification system were revealed. The houses occupied a relatively narrow area measuring 80–100 m long. They followed the general orientation of the settlement aligned in the slope’s direction, mainly NE to SW. A common construction technique involved foundations trenches for the walls or parts of the walls. The occupied area was terraced through rock cutting and, to some extent, by filling lower zones with clay or clay mixed with finely crushed rock (Pernicheva 1993, 97).

A fortification system was revealed in the West area consisting of a stone wall and a palisade, which enclosed only the northwest, higher part of the settlement (Pernicheva 1993, obr. 1). The excavated part of the fortification was ca. 35 m long. The outer part of



Figure 11. *The site of Strumsko: aerial view from Moshtanets–Chukata. Image Credit: K. Bacvarov.*

the structure consisted of a stone facing on top of a low clay bank with a maximum width of 2.20 to 2.40 m. Up to three rows of stones were preserved in height. According to the excavator, the wall had two primary functions: to reinforce the sloping terrain and to support the palisade behind it. The palisade followed the direction of the outer fortification and consisted of two or three rows of posts with a diameter of 0.20–0.30 m.

Two radiocarbon dates were made on samples from the remains of wooden posts in houses dating to the first occupation period and situated in the West (Bln-2612) and East (Bln-2611) area, respectively (table 2). As with Moshtanets–Chukata, the calibrated dates fall within the first quarter of the fifth millennium BC (Görsdorf & Bojadžiev 1996, 142).

Lab Code	Context ID	Material	14C Age BP	14C Age cal BC
Bln-2612	grid square Z6; 1.30 m	charred wood	5990 ± 50	4940–4810 cal BC
Bln-2611	grid square I2; 0.65 m	charred wood	5950 ± 60	4910–4780 cal BC

Table 2. *Radiocarbon dates from the site of Strumsko (after Görsdorf & Bojadžiev 1996, 142).*

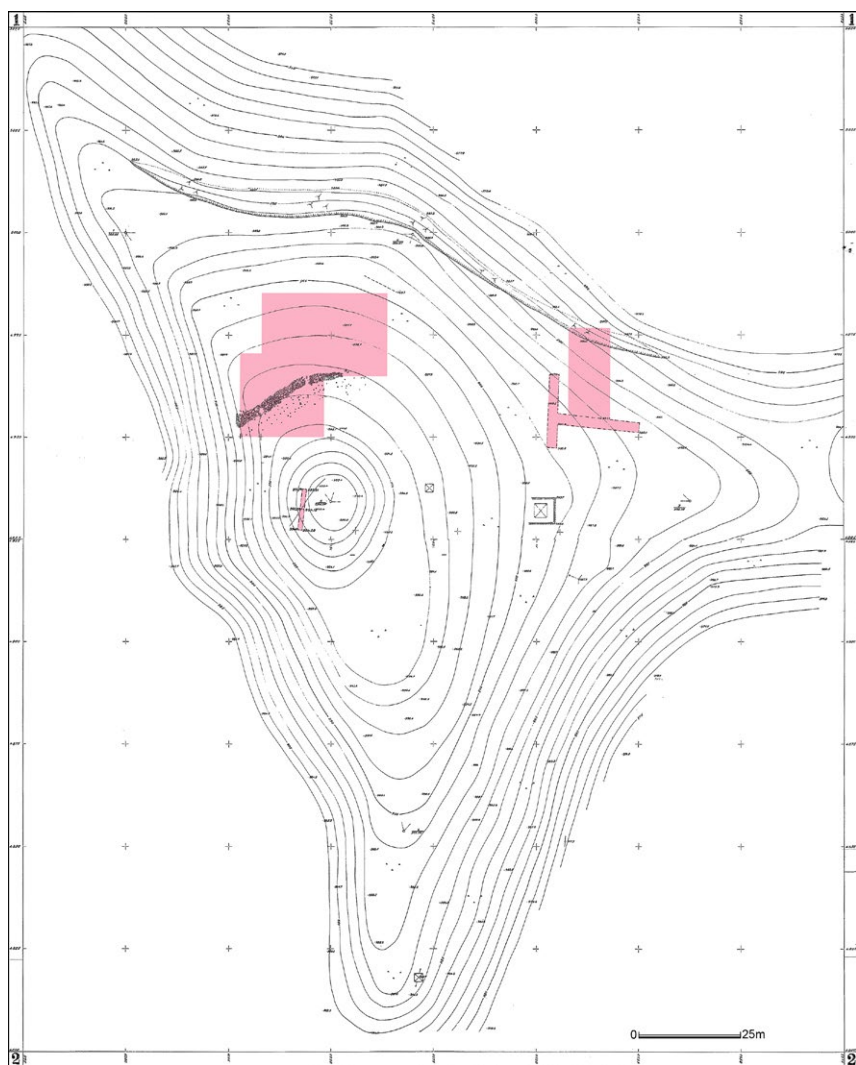


Figure 12. *Topographic map and location of the surveyed area at Strumsko. Image Credit: Blagoevgrad Regional Museum of History & G. Katsarov.*

The dates from both sites cluster around 6000–6050 BP and fall within the 5000–4800 cal BC range (fig. 13). The larger series from Moshtanets–Chukata entirely fits within this period, with the exception of two slightly later dates (SUERC-95959 and SUERC-95960). The latter might be explained by a later occupation which was not identified within the limited area of the test trenches. Meanwhile, the two dates from Strumsko narrow the chronological interval for the early occupation phase of the site to 4900–4800 cal BC. The resulting absolute chronology seems to suggest that both sites

existed simultaneously, a theory that should be further confirmed by comparing their ceramic assemblages.

The ceramic assemblages

The ceramic assemblage of Moshtanets–Chukata is smaller, poorly preserved, and highly fragmented. Most of the pots were made from well-purified clay with fine mineral inclusions. In some cases, larger grains are observed measuring up to 2 mm and rarely 3 mm in size. The majority of the vessels have light gray, gray-black, gray-brown, or brown-red, well-smoothed or occasionally polished surfaces. The light gray pots are particularly thin-walled and were made of very well-purified paste.

At Strumsko, vessels with light gray, gray-black, gray-brown, or brown-red, well-smoothed or rarely polished surfaces predominate in both occupation phases. In the ear-

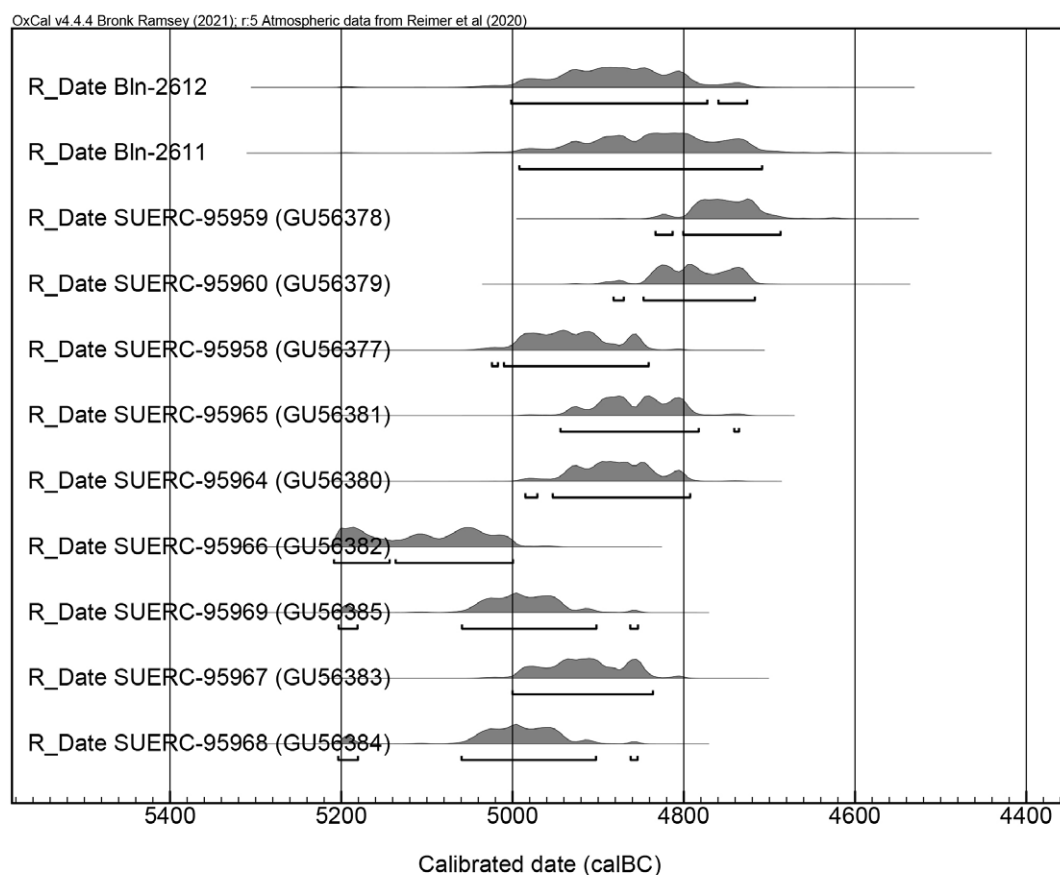


Figure 13. Calibration plot of the radiocarbon dates from Moshtanets–Chukata and Strumsko. Generated with OxCal v4.4.4. Image Credit: OxCal online <https://c14.arch.ox.ac.uk/oxcal/OxCal.html>.

lier level of occupation, brown-red ceramics are evenly distributed or slightly more prevalent, while gray, gray-brown, or gray-black ceramic surfaces predominate in the later level. The paste is well-purified, with fine mineral inclusions. However, larger grains are often observed measuring up to 2 or 3 mm, or even 7–8 mm in size. The light gray, ‘cement-colored’ vessels are extremely thin-walled and were made of very well-purified paste.

The ceramic repertoires of both sites include bowls, deep bowls, cups, two-handled vessels (a.k.a. amphora-like vessels), jugs, jars, lids, strainers, and pot-stands. The following description will focus on the most characteristic and common shapes.

Much of the typological diversity of the Late Neolithic shapes continued into the Early Chalcolithic, while the Late Neolithic painted decoration in the Akropotamos style declined (Chohadziev 2007, 89). During the transition between the Late Neolithic and Early Chalcolithic, black painted decoration on a red background became prevalent. A single sherd with black-painted decoration on a red background was found at Moshtanets–Chukata (fig. 14.1), but it is identical to the material from Strumsko, where painted ceramics appear in both phases of occupation (fig. 14.3 and 4, 7–11, and 13–15). The main shapes featuring painted decoration are vessels with two vertical handles and bowls. Three categories of painted decoration were identified: linear, bichrome, and thick red patterns, with the linear type predominating. Complex patterns are prevalent, occasionally difficult to define, with a tendency to fill larger areas with black paint. Hatched semi-ellipses and triangles are also encountered (Grembska-Kulova 1998, 43).

The ceramic assemblage of Strumsko also includes vessels with bichrome decoration (fig. 14.2, 5 and 6, and 12). The most common patterns are ellipses and broad bands filled with red paint and outlined with black lines. The surface of these ceramic vessels is red in color. The painted decoration in the Akropotamos style from Strumsko was analyzed and published by M. Grebska-Kulow (Gembaska-Kulova 1994; 1998, and 2007).

A key criterion for the beginning of the Copper Age is the appearance of graphite decoration on ceramic vessels. Only a few such sherds were found at Moshtanets–Chukata (fig. 15.1), while the examples from Strumsko are significantly more numerous. The quantitative analysis of the ceramic assemblage of Strumsko shows that out of 1400 processed sherds and whole vessels, just under 70 sherds have graphite decoration (fig. 15.2–13). They are relatively evenly distributed stratigraphically, with a gradual increase in the upper level of occupation. Shapes with graphite decoration include bowls, deep bowls, and jugs. They are thin-walled, with well-smoothed or sometimes polished, brown to dark brown or black-brown surfaces. Overall, these shapes have a soft profile, and deep bowls often have wide open mouths (fig. 30.5). The decoration is positive, with some open forms decorated on both the inner and outer surfaces (fig. 15.4–6). Linear patterns predominate, featuring relatively wide lines (up to 6–10 mm), though narrower lines, 2–5 mm in width, are also found. Often, thinner lines form groups of 3 to 5 parallel or tightly spaced lines appearing as a wider line. There is significant similarity in the patterns painted with black paint on a red background.

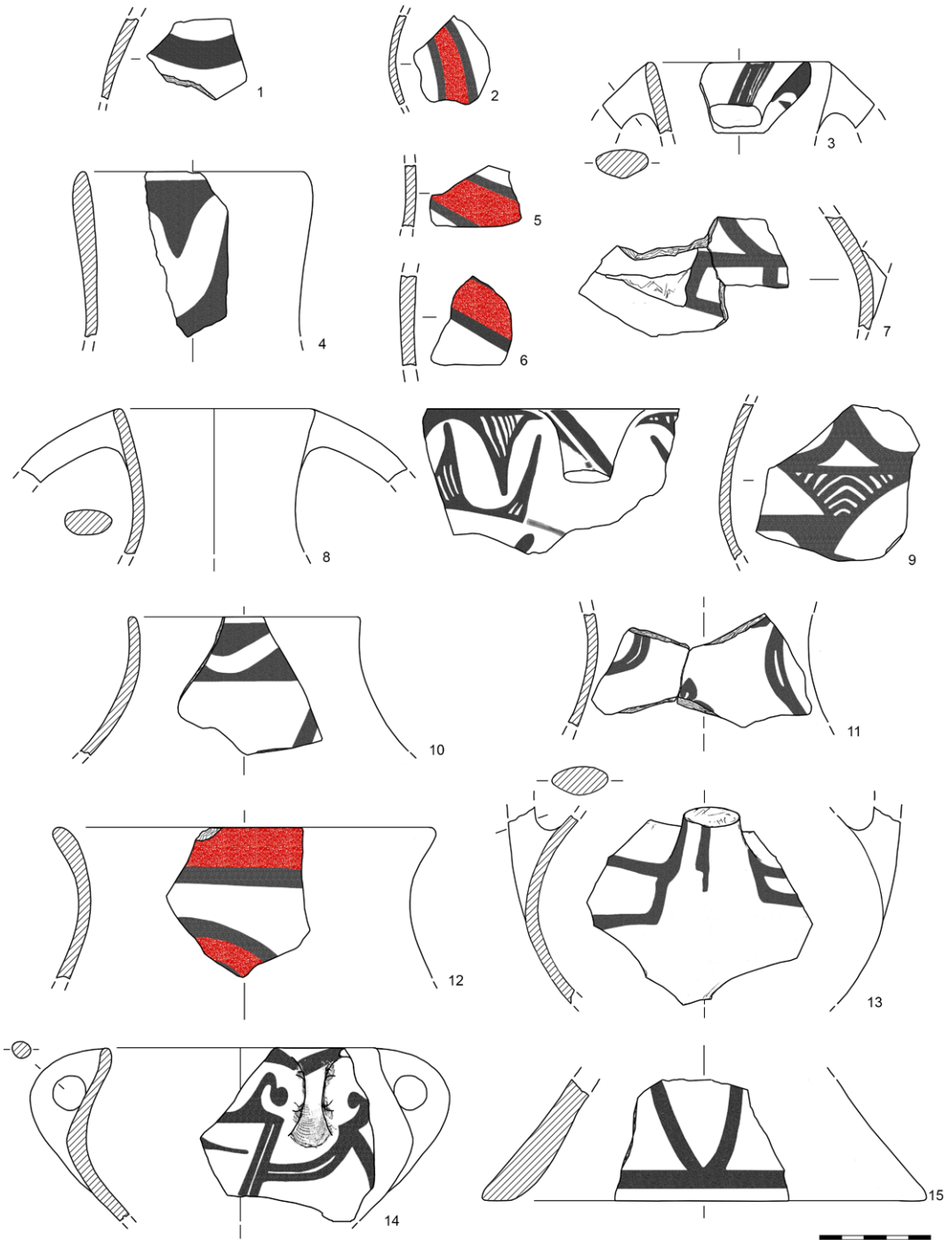


Figure 14. Painted pottery: (1) Moshtanets–Chukata; (2–15) Strumsko. Image Credit: G. Katsarov (1, 7, and 13) & M. Grębska-Kulow and G. Katsarov (2–6, 8–12, 14, and 15).

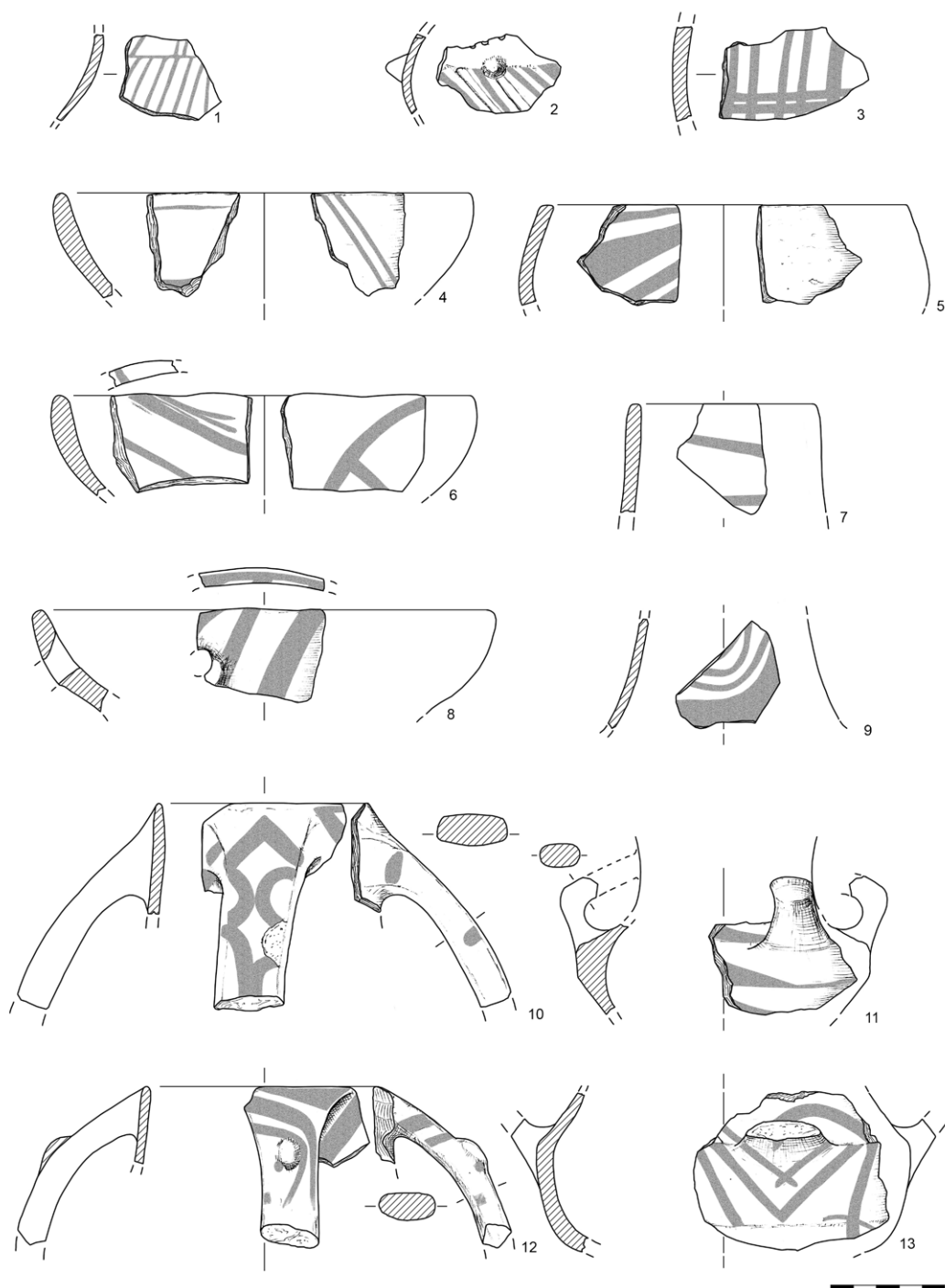


Figure 15. *Graphite-painted pottery: (1) Moshtanets–Chukata; (2–13) Strumsko. Image Credit: G. Katsarov (1–6 and 8–13), & M. Grębska-Kulow and G. Katsarov (7).*

Another characteristic element of the Early Chalcolithic ceramic assemblages in the Middle Struma Valley that is well represented both at Moshtanets–Chukata (fig. 16) and Strumsko (fig. 17), are the two-handled vessels. The handles start from the rim or just below it and usually end at the carination. They are solid and are decorated with grooves, fishbone channeling, or incisions, and feature conical knobs at the top. The decoration covers the entire outer surface of the handles, which have an oval or elliptical cross-section. The vessels typically have a medium-high to high neck of a cylindrical or slightly conical shape, and are generally very thin-walled. Almost all of the pieces in this category are sherds from handles and rims, making their reconstruction uncertain, although most likely they had a spherical, bulging lower part.

In addition to the described vessels, some deep bowls and cups from the ceramic repertoire of Strumsko (fig. 18) also have similar handles. Their decoration mainly consists of fine channeling, and they always have conical knobs at the top. Indeed, bowls and deep bowls are the dominant form in both phases of occupation at Strumsko and at Moshtanets–Chukata. Both types are usually biconical. The deep bowls in these assemblages are biconical with either soft or sharp carination and a low neck, or they are biconical or spherical. The necks of the former are cylindrical or slightly conical and measure less than one-third of the vessel's total height. Their sizes do not vary significantly but can be divided into two groups: (1) with a rim diameter of up to 20 cm and (2) with a rim diameter ranging between 20–30 cm. No significant differences are noted regarding the wall thickness, which is typically between 0.5–1.0 cm, though it can reach up to 1.5 cm in the larger vessels. The rim is usually straight or slightly everted. The outer and inner surfaces are smooth, often well-smoothed or polished, but more frequently are matte rather than glossy.

Most of the vessels of these forms are decorated, although the decoration techniques, ornamental motifs, and compositions are not highly varied. The primary techniques for the deep bowls with low necks include channeling, plastic and impressed decoration, often used in combinations. Instances of a single technique use, such as plastic knobs (fig. 20.4 and 5), are relatively rare. A distinctive decoration scheme features a horizontal band between the neck and the carination of the vessel. A plastic pellet or impressed dimple is often located at the carination, around which is the main ornamental scheme of channeling (figs. 18.3, 19.5, and 20.1–3 and 6). The channeling is shallow, with soft rounded edges, and a width of 5 to 10 mm, either diagonal or arc-shaped, applied in groups with opposing directions around the plastic pellet or impressed dimple.

Another type in this category are the carinated deep bowls. Technologically, they are not different from the previously described types, but their outer surface is not polished, and in some cases, the lower part of the vessel was rusticated. No significant differences are observed in their metric characteristics, except for a relatively small group of vessels whose rim diameter exceeds 30 cm, and in a few examples measures up to 40 cm. A characteristic feature of most carinated deep bowls is the presence of large horizontal

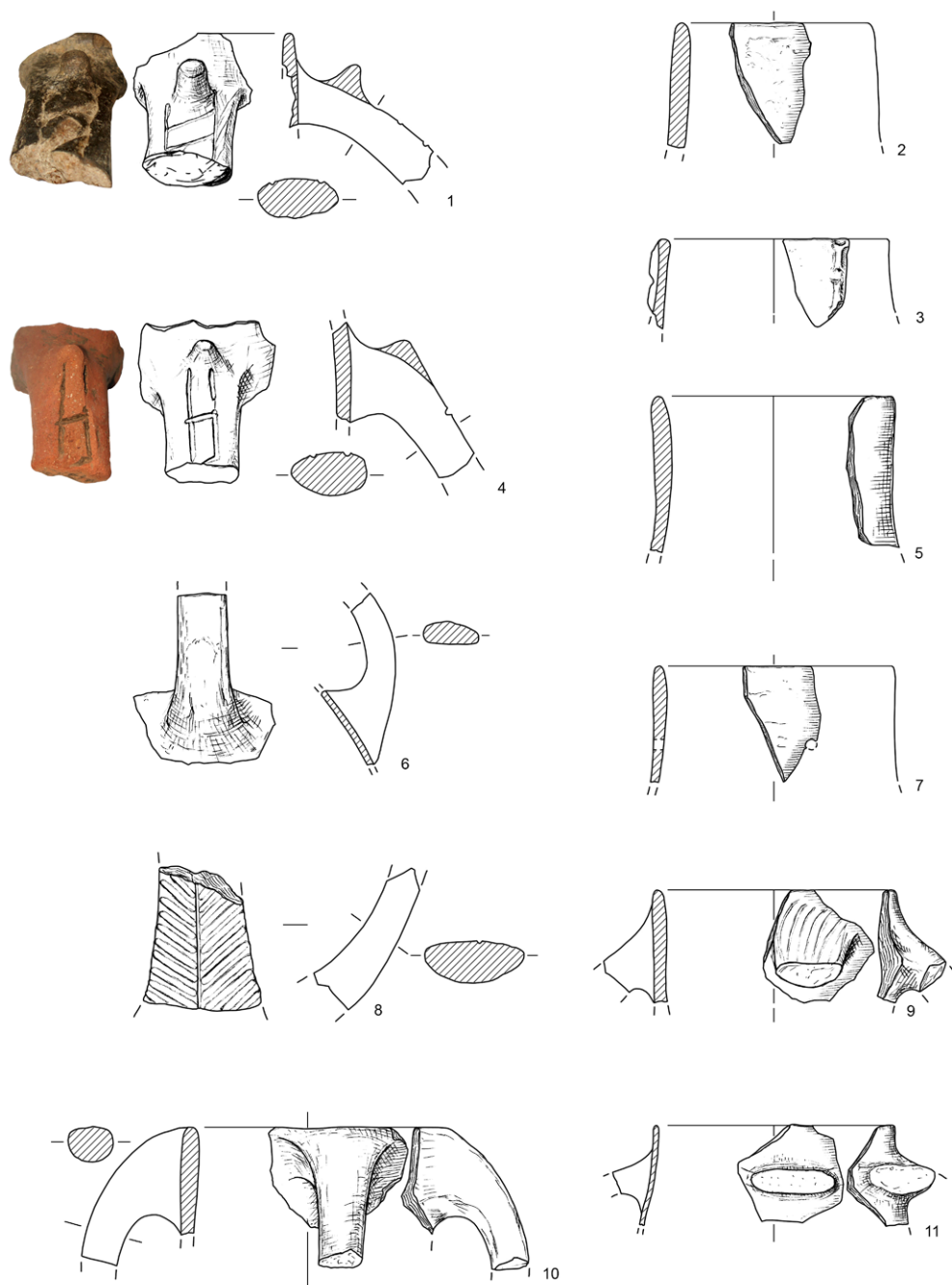


Figure 16. *Amphora-like vessels from Moshtanets–Chukata. Image Credit: G. Katsarov.*

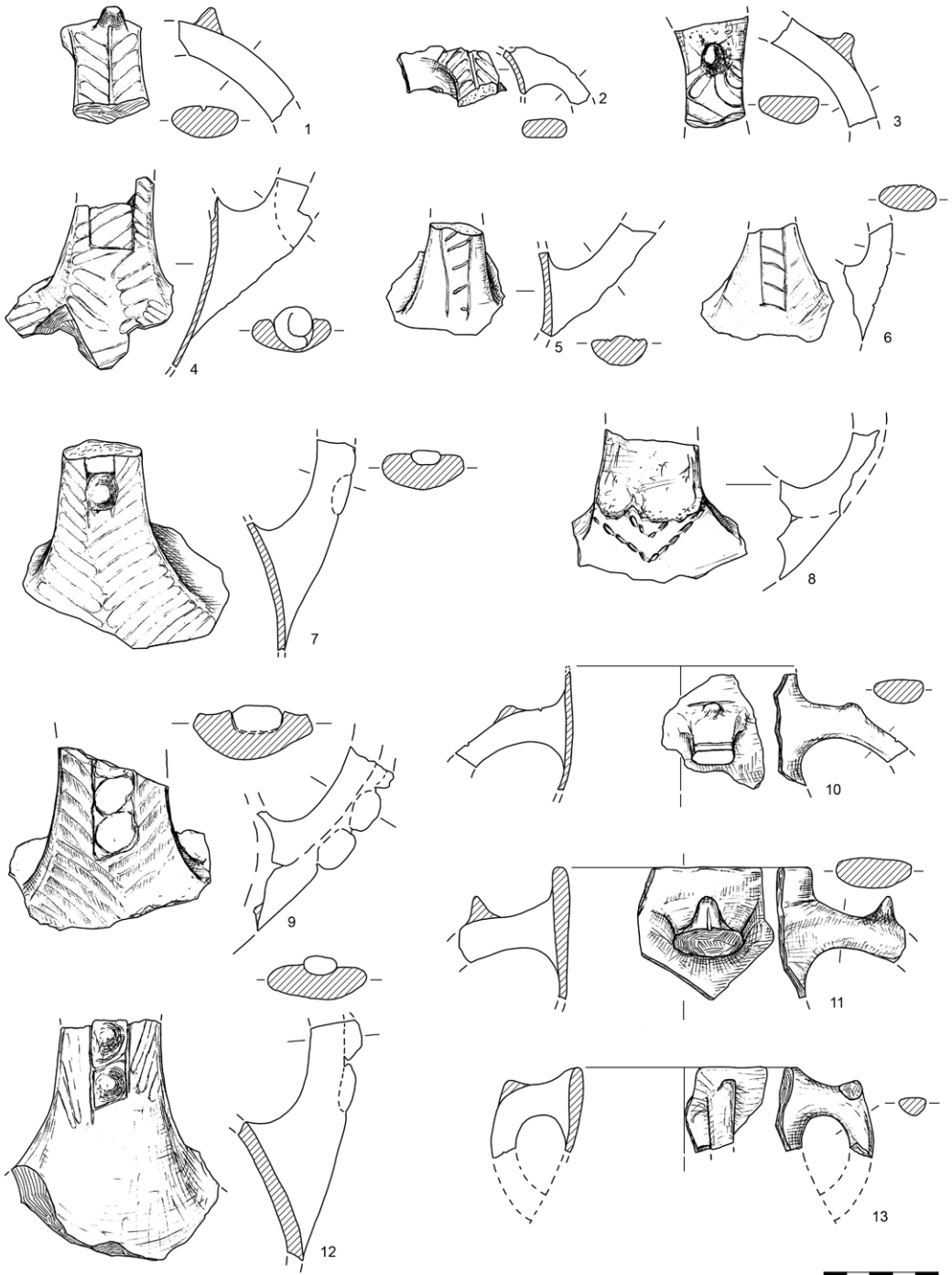


Figure 17. Amphora-like vessels from Strumsko. Image Credit: G. Katsarov.

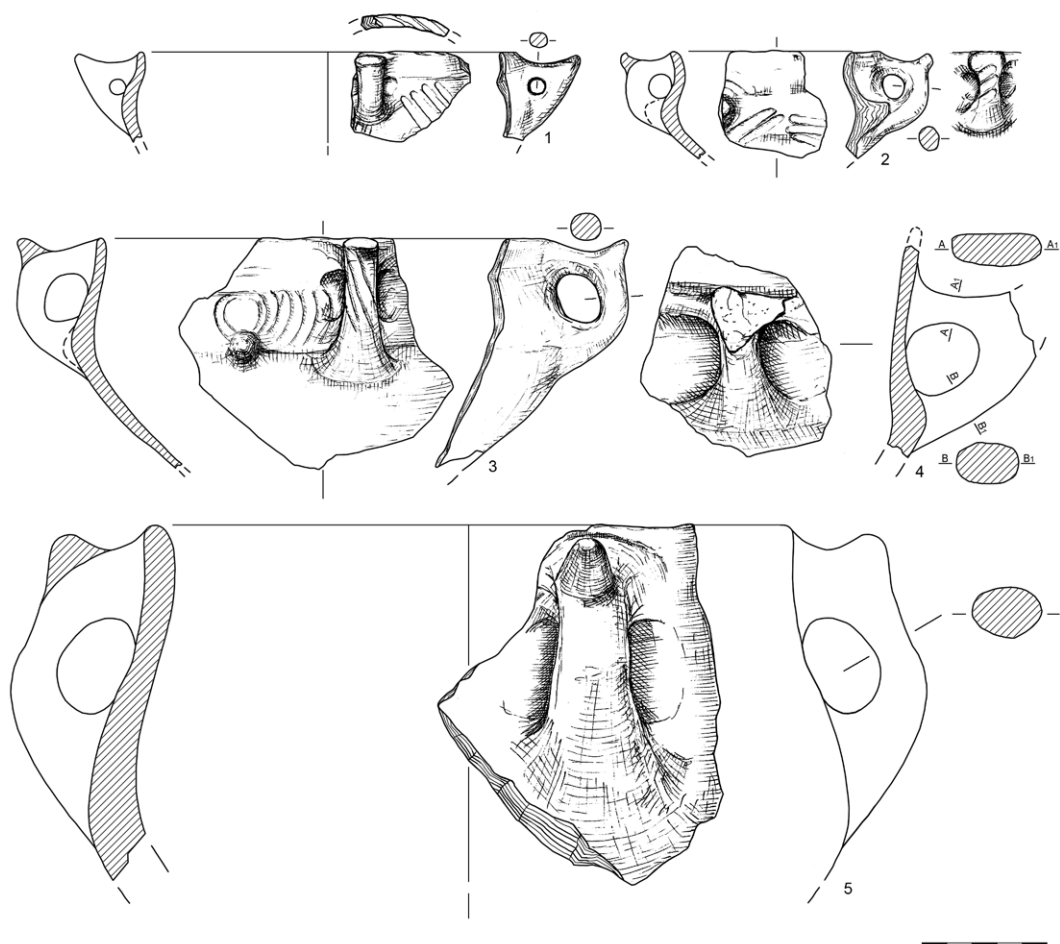


Figure 18. Deep bowls (1 and 3–5) and a cup (2) from Strumsko. Image Credit: G. Katsarov.

knobs or lugs located at the carination. They are solid, and measure up to 3 cm wide and up to 10 cm long in the larger vessels. The available examples of this type are not decorated, but single horizontal knobs covered with arc-shaped channeling (figs. 21.2 and 22.1 and 4) and fine shallow incisions (fig. 22.1) were found at both sites. Vessels with such elements are well represented in the ceramic assemblages of both Moshtanets–Chukata (fig. 21) and Strumsko (fig. 22); at the latter site, they appear in both phases of occupation, but are significantly more frequent in the earlier phase.

The bowl category is primarily represented in the ceramic repertoires of Moshtanets–Chukata and Strumsko by conical, carinated, and hemispherical types. All vessels are relatively deep, and are divided equally into groups based on their rim diameter: larger bowls with diameter of 20–25 cm, smaller bowls with diameter of 15–20 cm, and hemi-

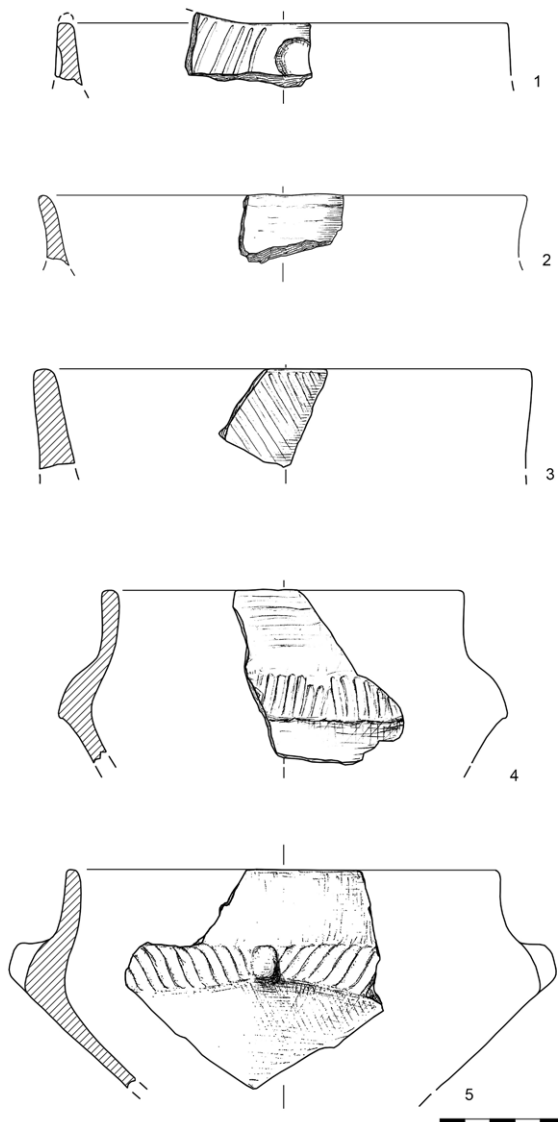


Figure 19. Deep bowls from Moshtanets–Chukata. Image Credit: G. Katsarov.

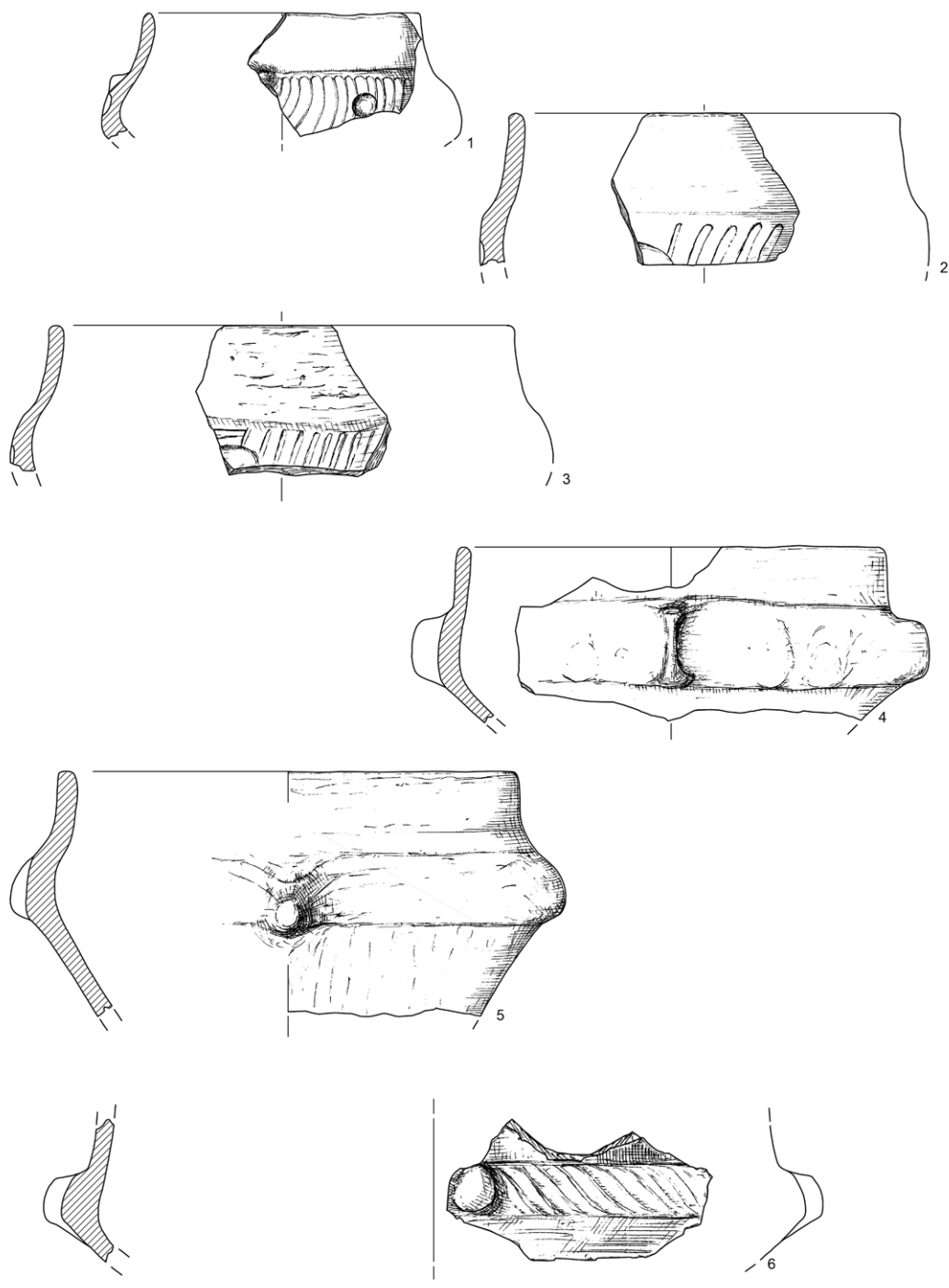


Figure 20. *Deep bowls from Strumsko. Image Credit: G. Katsarov.*

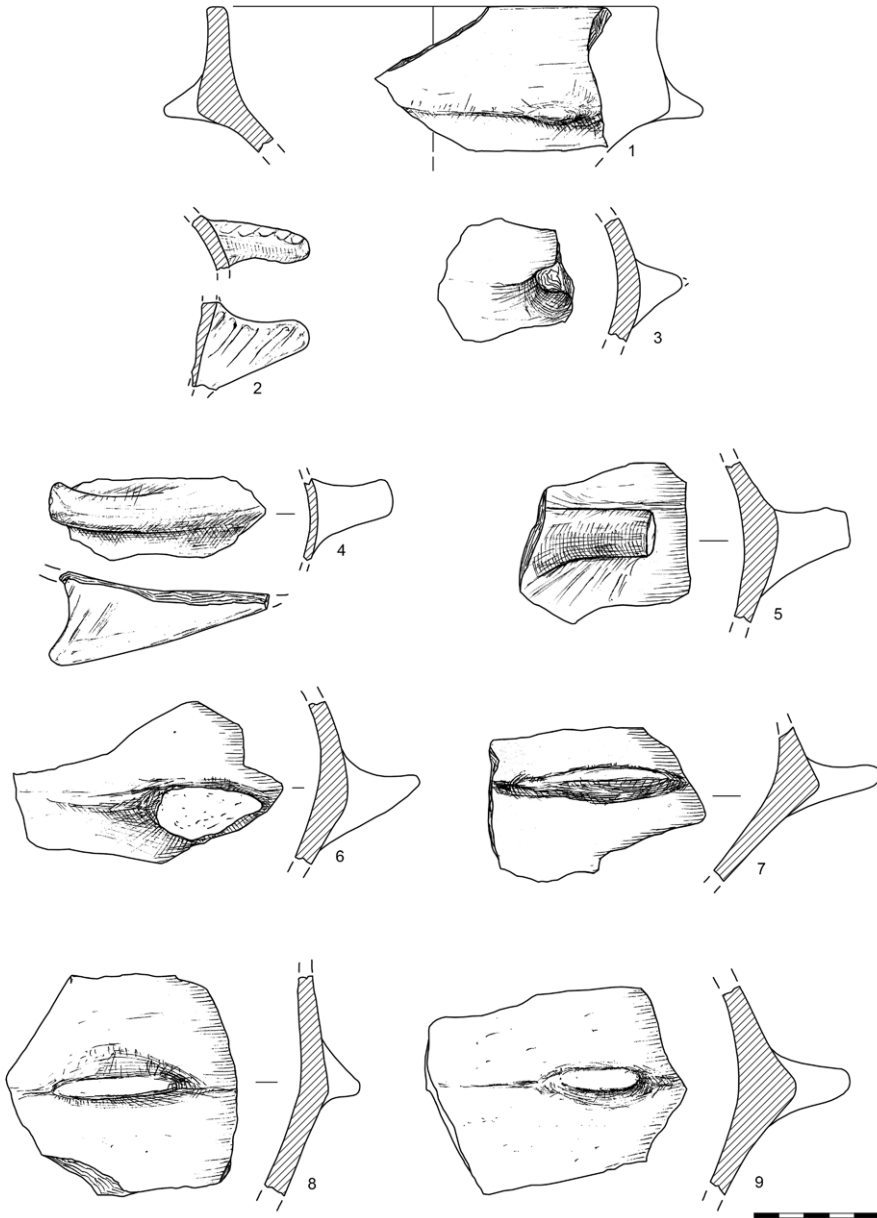


Figure 21. Deep bowls with horizontal knobs (2, 4, and 5) or lugs (1, 3, and 6–9) from Moshtanets–Chukata. Image Credit: G. Katsarov.

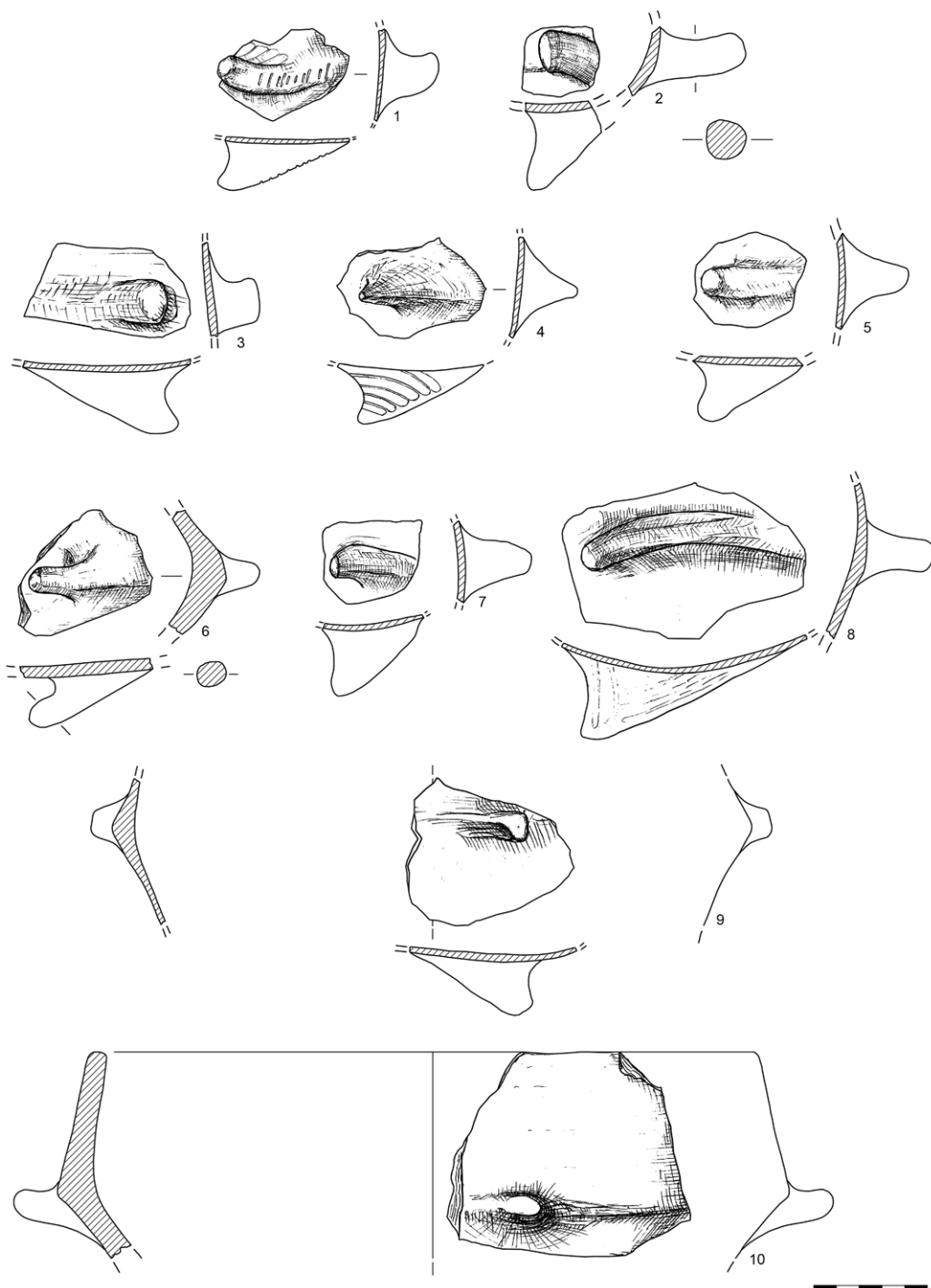


Figure 22. Deep bowls with horizontal knobs (1–9) or lugs (10) from Strumsko. Image Credit: G. Katsarov.

spherical bowls with diameter ranging between 25–40 cm (ca. 20% of the hemispherical bowls). The bowls are relatively thin-walled, with wall thickness measuring up to 0.8–0.9 cm, although thicker pieces are also present, reaching up to 1.0–1.5 cm.

The conical bowls from Moshtanets–Chukata typically have well-smoothed outer and inner surfaces, brown, reddish-brown, or rarely gray-black or black-brown in color. The surfaces of the conical bowls from Strumsko were treated in the same manner, but the brown or reddish-brown and gray or gray-black types are distributed equally. Overall, these vessel types at Strumsko are simply decorated: incisions at the rim, and knobs above the rim and on the outer surface (fig. 24). The examples from Moshtanets–Chukata are all plain (fig. 23).

The surface treatment of the carinated bowls at both sites does not differ from that of the conical bowls. At Moshtanets–Chukata, the former are usually gray-brown or gray-beige in color, while at Strumsko they appear in a somewhat darker range, up to black-brown or gray-black. At the latter site, carinated bowls are represented in both phases of occupation, but are twice as numerous in the earlier phase. Many carinated bowls are decorated, with the decoration type and location being common for this shape. The decoration consists of fine, diagonal or vertical channeling applied above the carination (figs. 25.2 and 3, 26.9 and 10). It is often combined with plastic knobs immediately below the rim (fig. 25.11); knobs also appear with no other decoration (figs. 25.9 and 26.12). In addition to the plastic decoration, channeling is also combined with impressed dimples, also placed on the upper part of the vessels, between the channeling. Single (fig. 26.3 and 5–7) or multiple rows of impressed dimples are applied at the carination (fig. 25.11). In the former case, the diameter is larger, ranging between 1 and 1.5 cm, and such decorated vessels are characteristic mainly of the earlier level of occupation at Strumsko. Some carinated bowls have handles (fig. 25.1 and 12).

In the ceramic assemblage of Moshtanets–Chukata, the hemispherical bowls are underrepresented, likely due to the limited excavation area (fig. 27.2–6). At Strumsko, this type is widespread and appears in both occupation phases, with a noticeable increase in the later period. This is particularly true for graphite-painted vessels, which were found only at Strumsko (fig. 28.1, 4, 6, and 11). In both assemblages, the predominant surface color is brown, with lighter or darker shades. Both outer and inner surfaces are evenly smoothed or polished, except for one example from Moshtanets–Chukata whose outer surface is covered with pattern barbotine (fig. 27.5). Just over 15 percent of the shape's examples are decorated. Among them, vessels with graphite-painted decoration predominate covering the entire outer and often the inner surface (fig. 28.1, 4, and 11), and in some cases, the rim (fig. 28.6). There are few vessels with channeled decoration, which, like the graphite decoration, covers the outer surface and rarely the rim. The channeling is shallow and up to 5 mm wide, with the flutes organized in parallel groups. Some are arc-shaped (fig. 27.2), others are diagonal, sometimes combined in alternating directions.

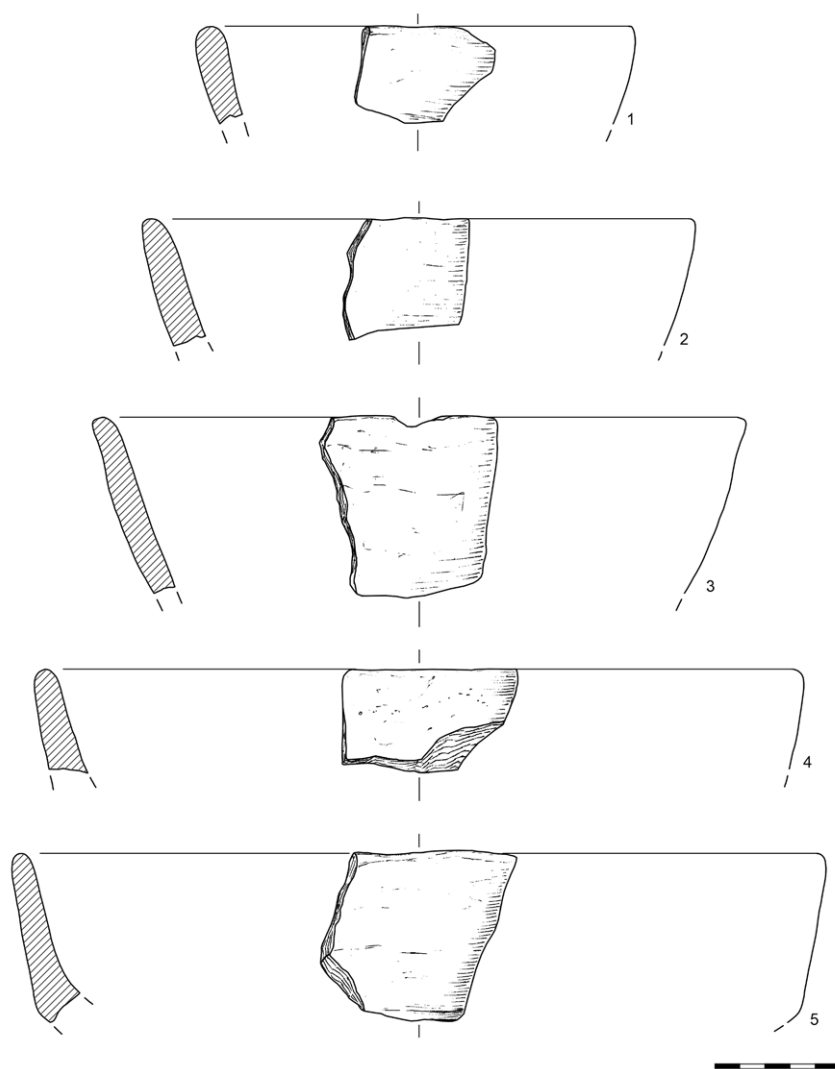


Figure 23. *Conical bowls from Moshtanets–Chukata. Image Credit: G. Katsarov.*

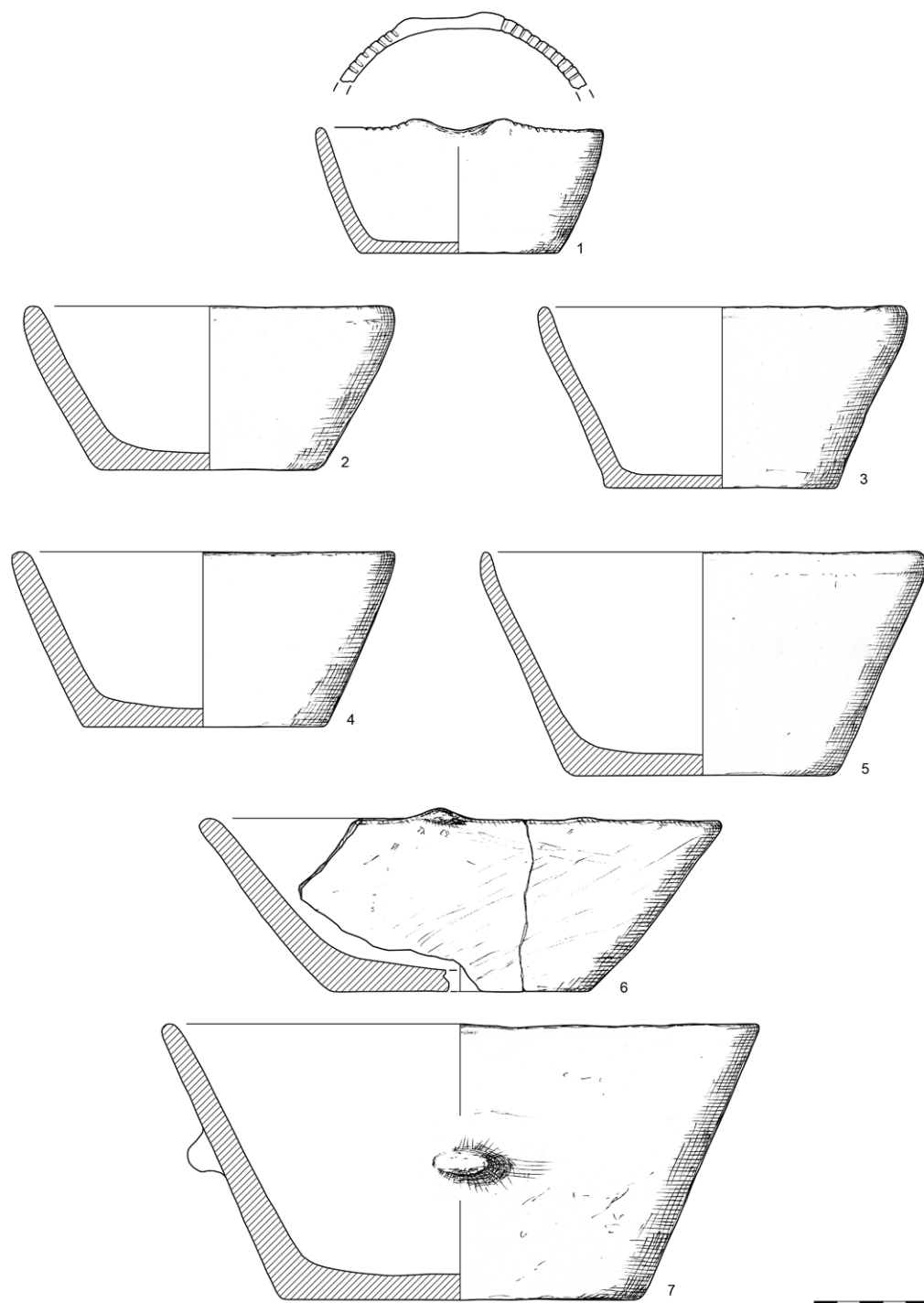


Figure 24. Conical bowls from Strumsko. Image Credit: G. Katsarov.

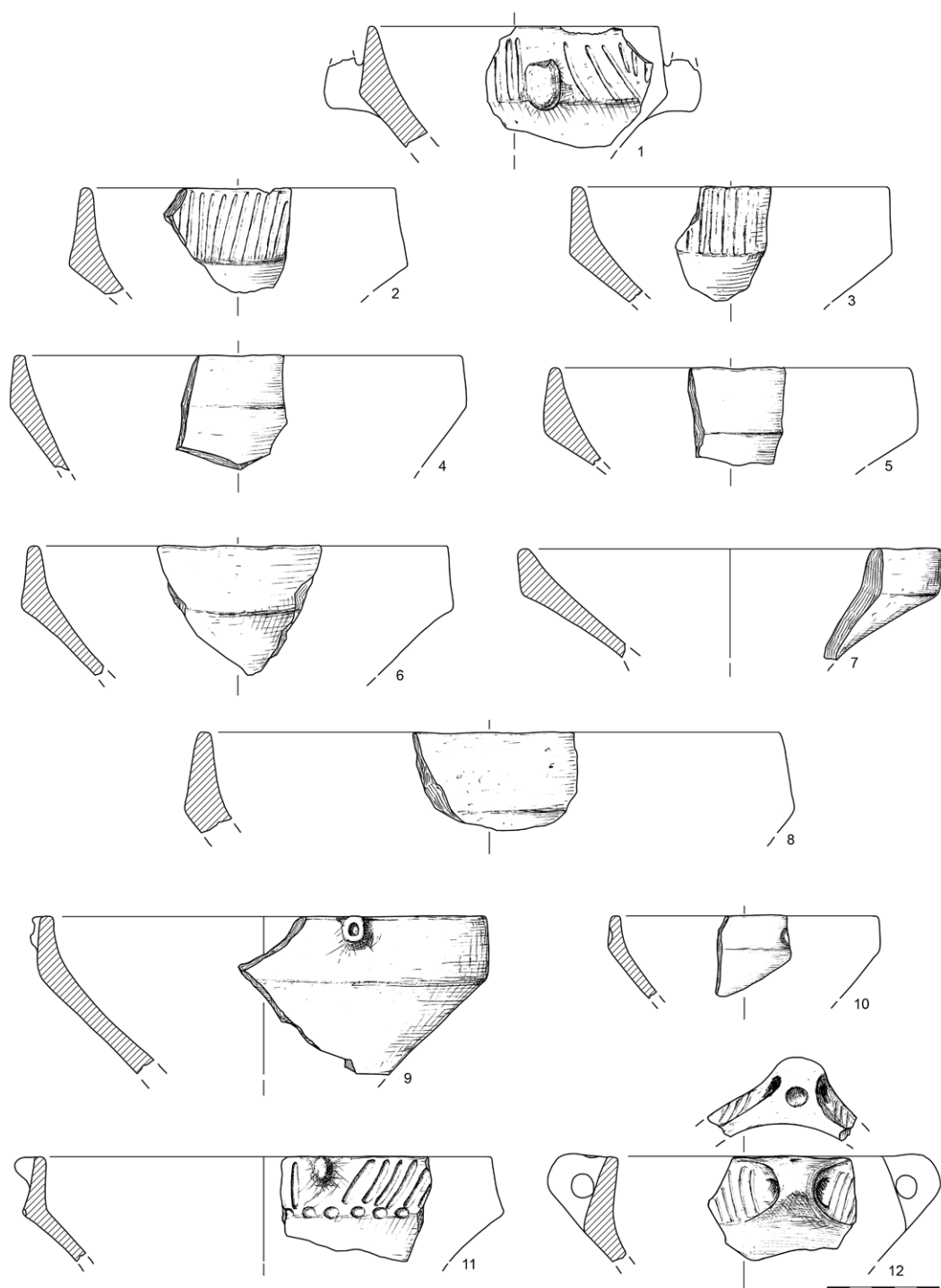


Figure 25. Carinated bowls from Moshtanets–Chukata. Image Credit: G. Katsarov.

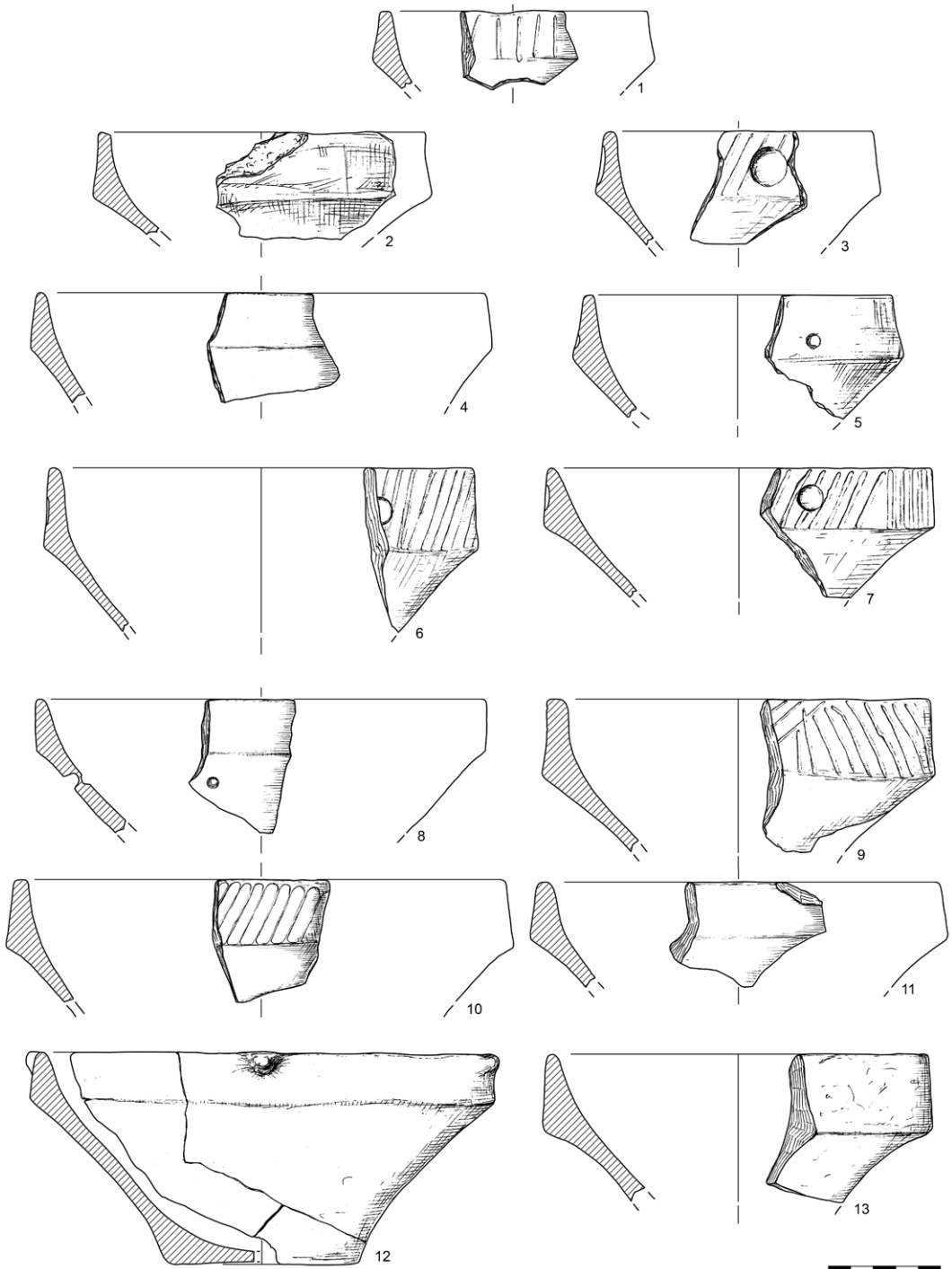


Figure 26. Carinated bowls from Strumsko. Image Credit: G. Katsarov.

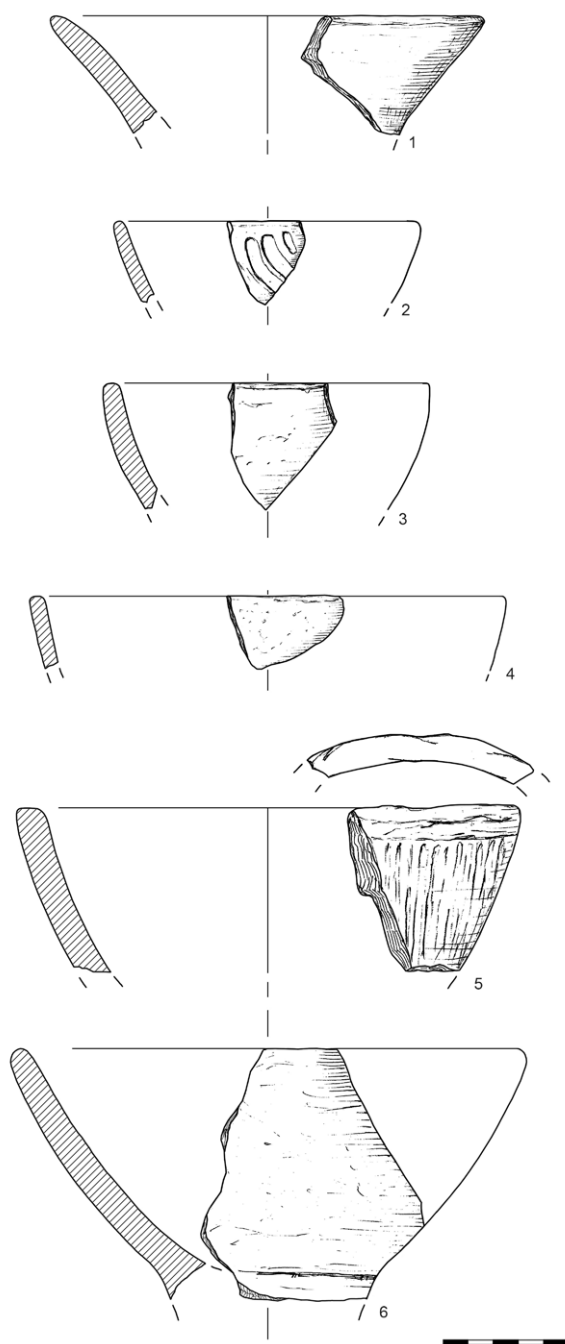


Figure 27. Hemispherical (2–6) and conical bowls (1) from Moshtanets–Chukata. Image Credit: G. Katsarov.

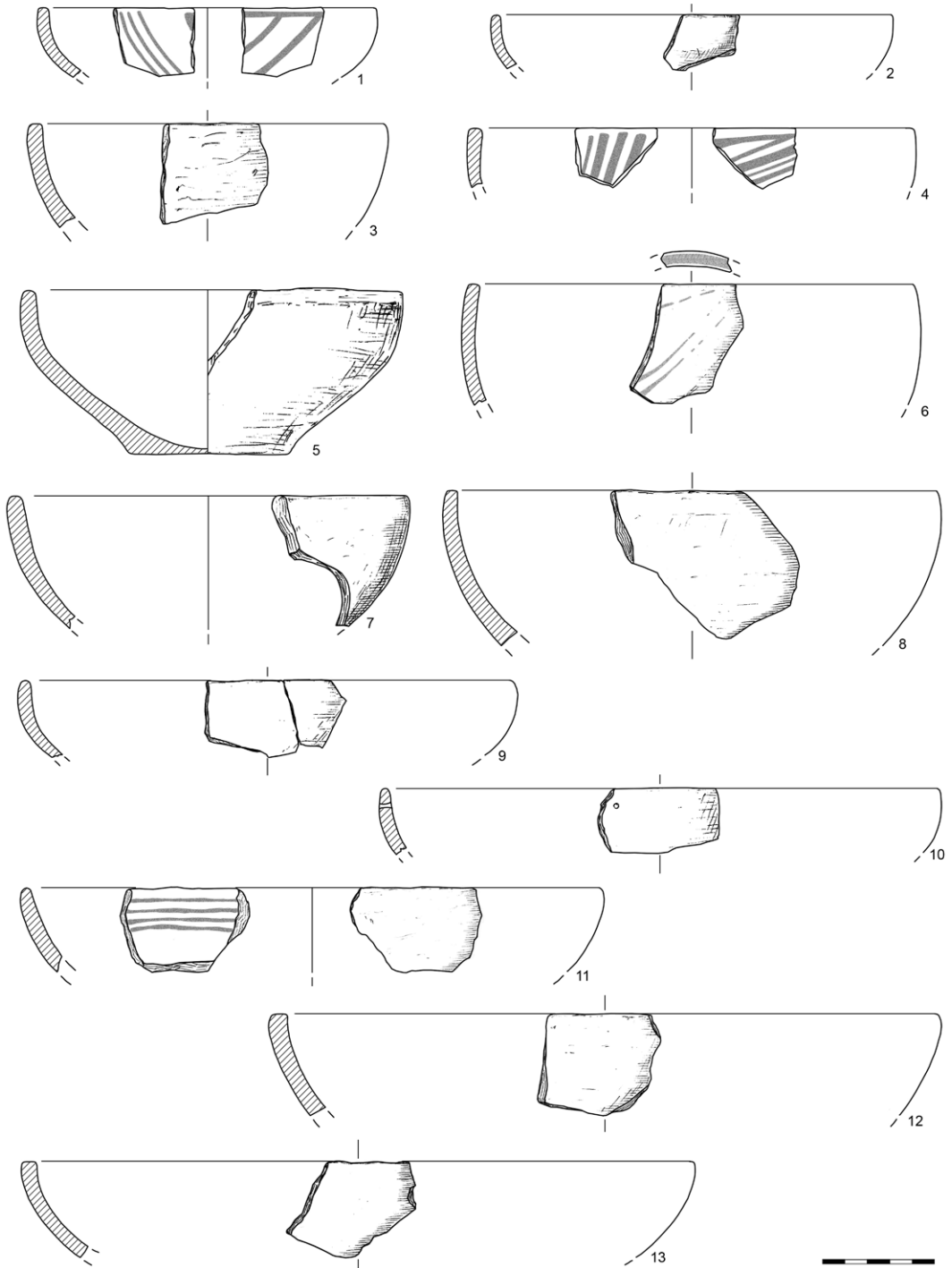


Figure 28. Hemispherical bowls from Strumsko. Image Credit: G. Katsarov.

The bases of the bowls are typically flat or slightly concave, but some conical and hemispherical bowls are placed on sizable hollow or solid pedestals (commonly known as fruit-stands). In the ceramic repertoire of Moshtanets–Chukata, a few pedestal bowls are identified (fig. 27.1 and 6), whereas at Strumsko, they are more common, distributed evenly across both occupation phases (fig. 29). The treatment of the outer surface and the color of the pedestals match those of the upper parts of the vessels described for conical and hemispherical bowls, while the interior is less carefully smoothed. The wall thickness of the pedestals is also consistent with that of the upper parts of the vessels. At Strumsko, solid pedestals were also identified (fig. 29.12). In this specific instance, the vessel was made in parts, which were joined together with a wooden dowel.

The last bowl type I will discuss here are vessels with a smooth S-shaped profile (fig. 30), thus far identified only at Strumsko. They have an elegant, widely open shape, gentle carination, and thin walls, and some of them feature handles (fig. 30.5 and 6). Bowls with a rim diameter of 20–30 cm predominate, with fewer examples having a smaller diameter of 15–20 cm. Both the outer and inner surfaces of the vessels are very well-smoothed or polished, usually brown or gray-brown in color. Both decorated and plain pieces were uncovered, but the latter are relatively few. The most common decoration for this type is graphite painting on both the inner and outer surface. The few preserved sherds from Strumsko reveal linear patterns, with lines ranging in width from 2–3 to 6 mm (fig. 30.5 and 6). There is significant similarity with the patterns painted in black on red. Vessels with channeled decoration are notably more common. Typically, the flutes are shallow, with soft, rounded edges and a width of 3 to ca. 6 mm. As a rule, the decoration is located at the widest parts of the vessels, above the carination. The flutes are mostly inclined and are organized in groups with alternating orientations (fig. 30.1 and 2).

Another type common in the Early Copper Age of southwest Bulgaria are the large conical vessels, referred to by V. Nikolov as ‘open fire cooking pans’ (Nikolov 1987) and by the researchers of Balgarchevo as ‘rusticated dishes’ (Pernicheva et al. 2011, 195). The sherds found at Moshtanets (fig. 31.1–6) and Strumsko (fig. 31.7–12) are identical in terms of technology and shape. They have conical shape with straight or slightly convex walls. Vessels with a rim diameter of 40–50 cm predominate, with fewer examples smaller than 40–45 cm and wall thicknesses ranging between 0.5–1.0 cm. All pieces have thickened, everted rim. The treatment of the inner and outer surfaces of the vessels differs significantly; the inner surface is very well smoothed, while the outer is rough and coarse. According to V. Nikolov (1987, 33), this and the thin walls of the vessels are evidence of their use in food preparation by burying them into embers.

Conclusion

The presence of two small fortified sites located close to each other indicates a well-organized settlement system in the northern part of the Middle Struma region, controlling access to and from the Kresna Gorge and the Aegean coast to the south, the

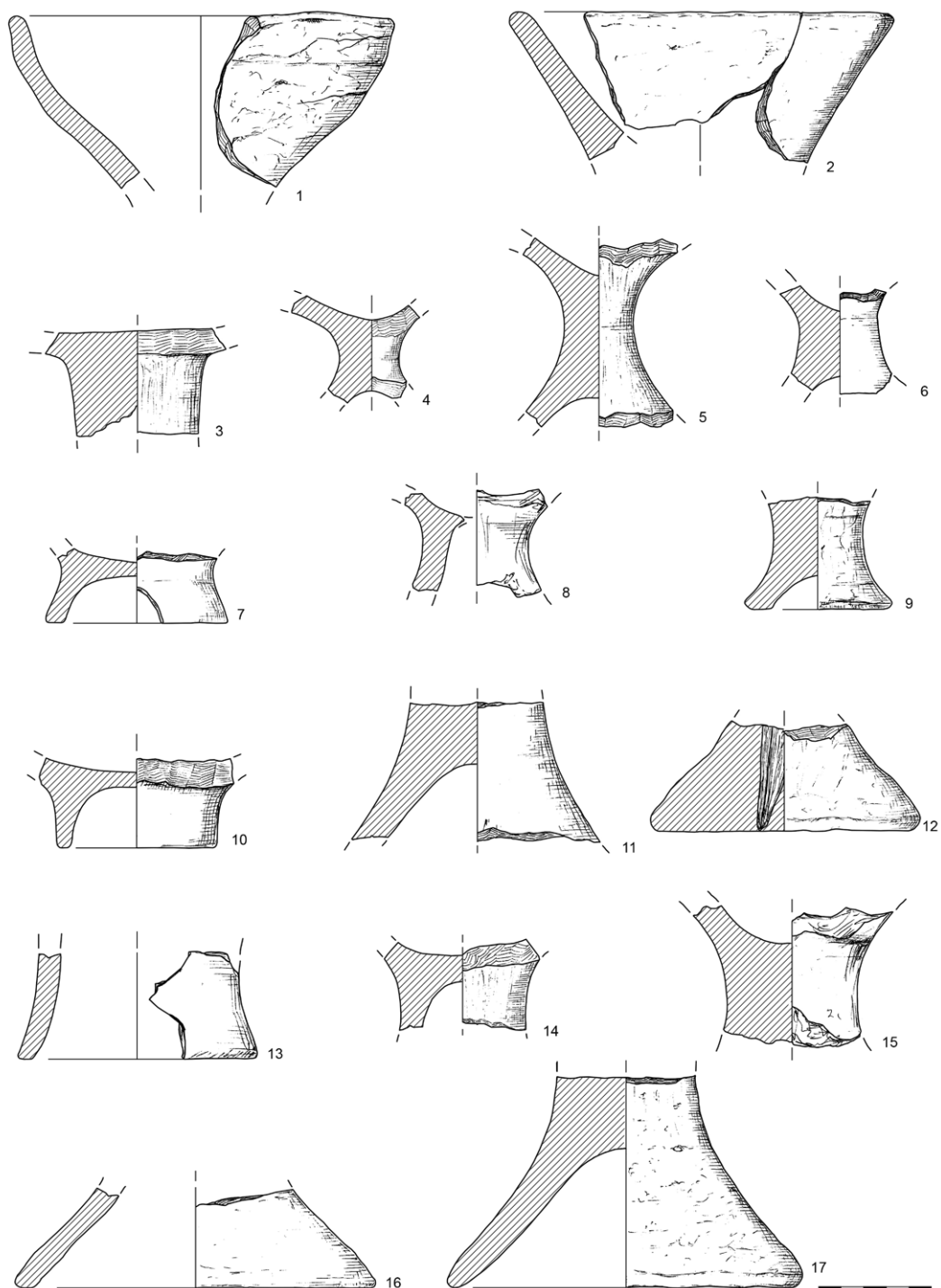


Figure 29. Pedestal bowls from Strumsko. Image Credit: G. Katsarov.

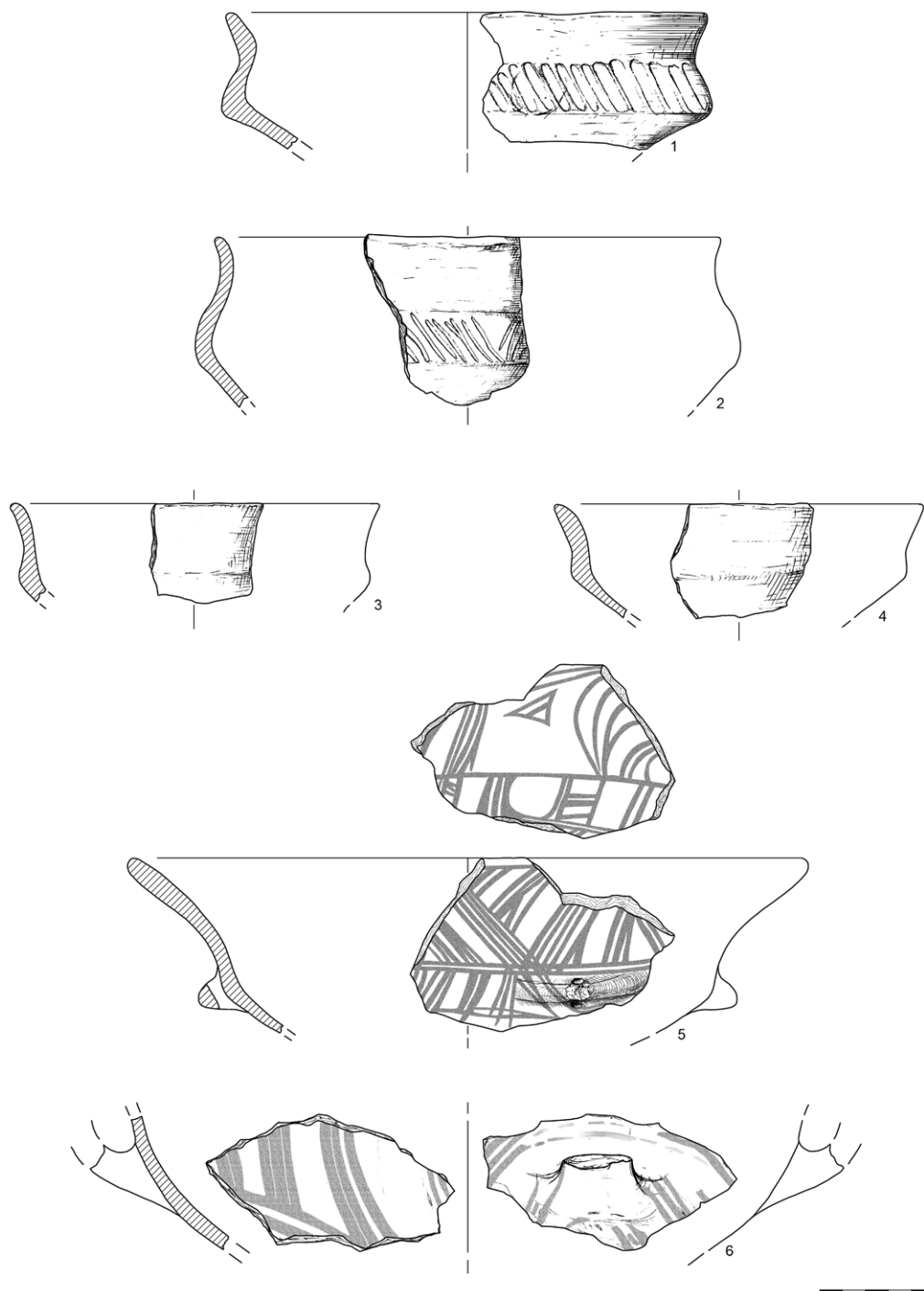


Figure 30. *Bowls with smooth S-shaped profile from Strumsko. Image Credit: G. Katsarov.*

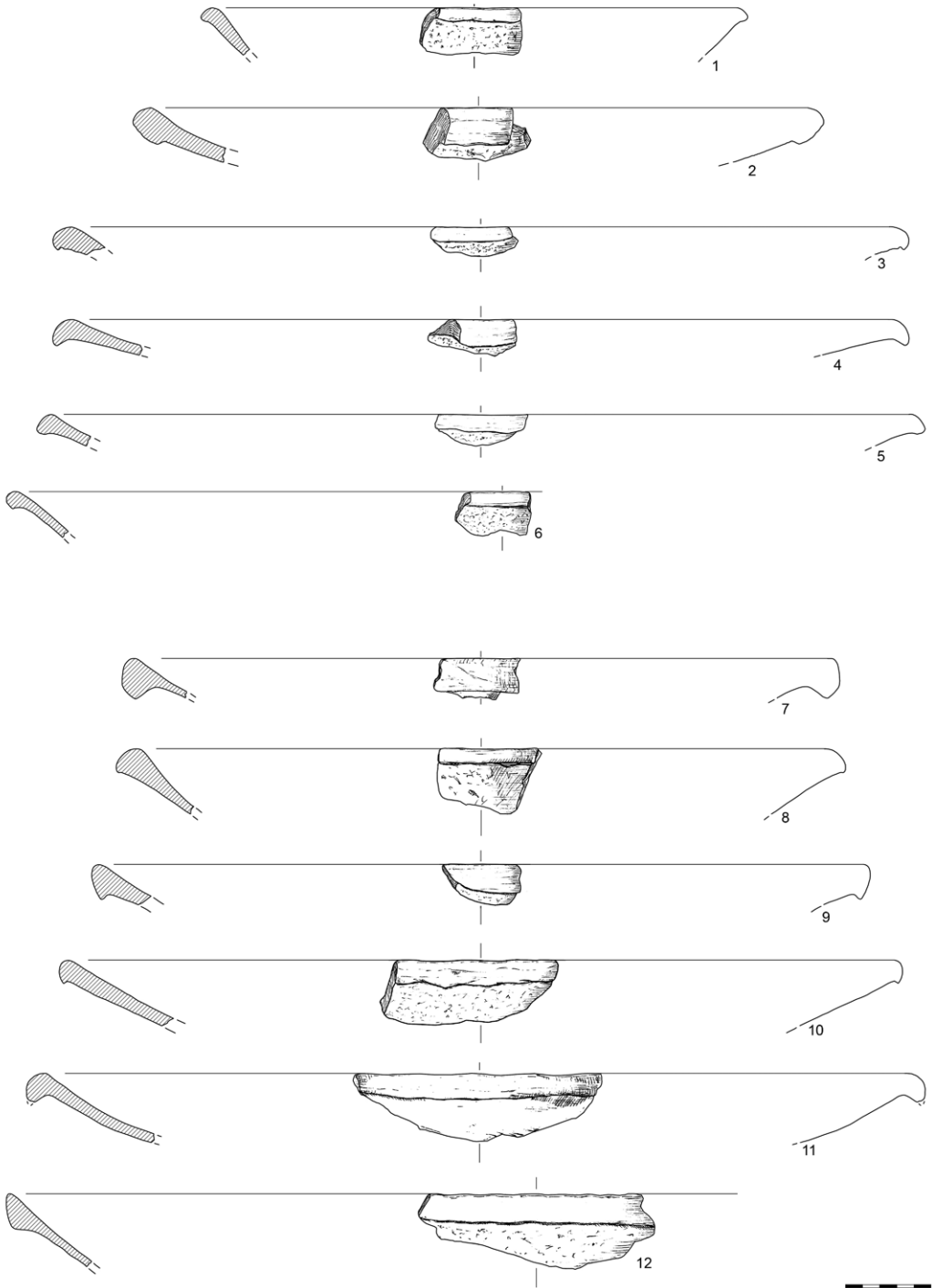


Figure 31. *Open fire cooking pans: (1–6) Moshtanets-Chukata; (7–12) Strumsko. Image Credit: G. Katsarov.*



Figure 32. Location of the sites of Moshtanets–Chukata (right) and Strumsko (left) on the opposite banks of the Struma River: panoramic view of the Kresna Gorge. Image Credit: Google Earth & G. Katsarov.

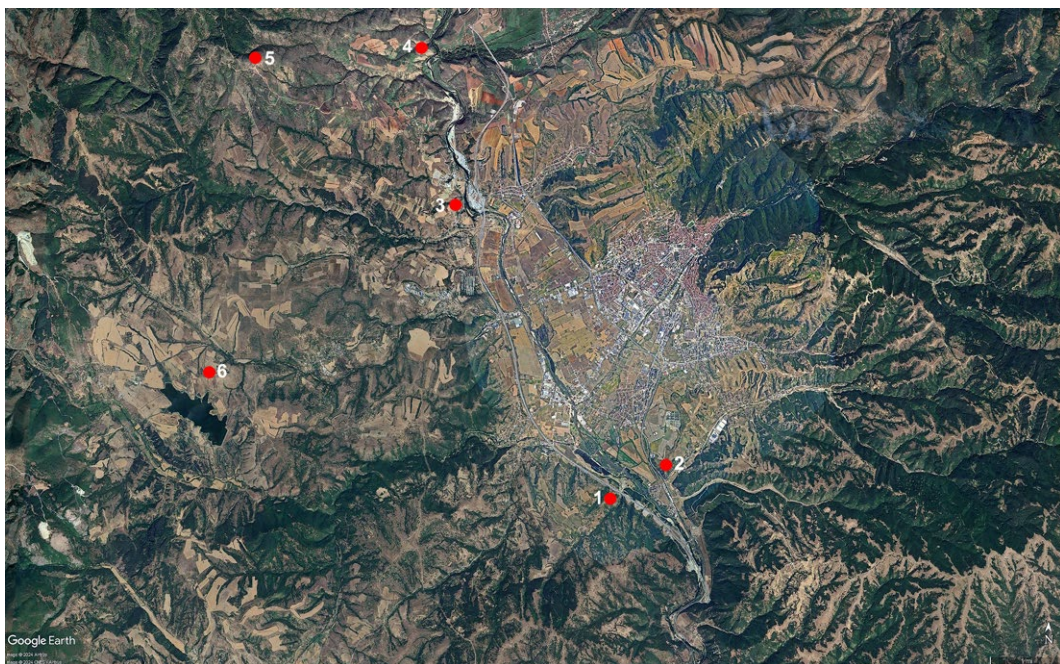


Figure 33. Map showing the location of the Early Copper Age sites of (1) Moshtanets–Chukata; (2) Strumsko; (3) Balgarchevo; (4) Buchino–Goliya rid; (5) Buchino–Lisiyska chuka; and (6) Logodazh–Berova kitka. Image Credit: Google Earth & G. Katsarov.

Upper Struma Valley to the north, and the Vardar River Valley to the west (fig. 32). The topographical characteristics of the sites are similar to those of other Early Copper Age sites in the northern part of the Middle Struma Valley, mostly investigated by field surveys (fig. 33). Usually, these elevated settlements are situated at locations with specific geomorphological features, mostly formed as the result of strong denudation processes that lead to the destruction of the sites. The evidence of the existence of similar sites on the right bank of the Struma River – e.g., Buchino–Golio rid, Buchino–Lisiyska chuka, and Logodazh–Berova kitka (Grebska-Kulova 2004, 139; Grembska-Kulova & Kulov 2007, fig. 5) – highlights the significance of the Blagoevgrad Valley for the control over the roads along the Struma River and its tributaries to the north, west, and south. To the west and north, the ceramic assemblage of the Blagoevgrad Valley finds parallels at sites like Angeltsi–Stranata (Zdravkovski & Stojanova-Kanzurova 2016; Rujak 2017a), Tsarevi Kuli (Rujak 2017b and 2020), and Slatino–Karo (Chohadviev 2006, 19f). The analogies in stratigraphic sequences, topography, and settlement layout, the similar ceramic repertoires, and the absolute chronology of Moshtanets–Chukata and Strumsko provide a basis for me to theorize that both sites not only co-existed but that they also constituted parts of a single settlement with shared organization, at least for a certain period of time.

Of course, this suggests the appearance of an elaborated social organization with vertical hierarchy, but such a theory requires further investigations. New systematic research at Moshtanets–Chukata will contribute to clarifying the processes and structural changes of the population that resulted in the shift in settlement patterns, the abandonment of large Late Neolithic settlements, and the emergence of smaller sites at naturally protected locations.

Acknowledgements

I gratefully acknowledge the help of Dr. Małgorzata Grębska-Kulow, previously of the Blagoevgrad Regional Museum of History, who granted me access to the ceramic assemblage of the site of Strumsko.

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