

НАЦІОНАЛЬНА АКАДЕМІЯ НАУК УКРАЇНИ • ІНСТИТУТ АРХЕОЛОГІЇ НАН УКРАЇНИ



АРХЕОЛОГІЯ

НАУКОВИЙ ЖУРНАЛ – ЗАСНОВАНИЙ У 1947 Р.
ВИДАЄТЬСЯ ЩОКВАРТАЛЬНО

КИЇВ • 1•2025

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ARHEOLOGIA

SCIENTIFIC JOURNAL – FOUNDED IN 1947
FREQUENCY: QUARTERLY

KYIV • 1•2025

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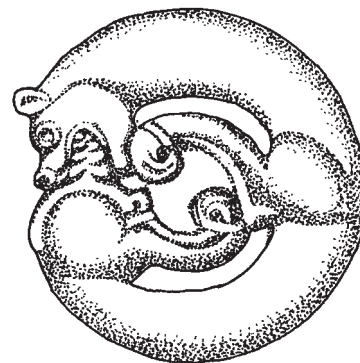
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BARROWS NEAR KALYNIVKA VILLAGE (BASED ON MATERIALS OF THE MARIUPOL ARCHAEOLOGICAL EXPEDITION)



In memory of Volodymyr Kulbaka (1954–2009) — Ukrainian archaeologist, Head of the Mariupol Archaeological Expedition, teacher, colleague and friend.

In the article, the results of research of the Bronze — Early Iron Ages barrows near Kalynivka village in the Azov Sea northern region conducted by the Mariupol Archaeological Expedition in 1985 and 1989 and led by V. K. Kulbaka, are presented. The ritual and inventory assemblages of burials are examined. The issues of cultural and chronological interpretation of the obtained materials are considered.

Keywords: Azov Sea northern region, Mariupol, Bronze Age, Early Iron Age, barrow, burial.

The Azov Sea northern terrains within the Donetsk Oblast in the east of Ukraine are considered to be one of the most archaeologically rich regions. As of the beginning of 2022, according to the regional electronic database of archaeological sites, there were more than 9,800 archaeological heritage objects in the Donetsk Oblast at the state register. Among the sites, barrows occupy a prominent place (over 90 % of the total number of archaeological sites recorded). To this data should also be included the estimated abundance of undiscovered objects (Zabavin, Bulyk, Nebrat 2022, p. 16). Research interest in the burial mounds of the North-

ern Azov region has a long tradition. As a result, over a century and a half of research, a significant source base has been accumulated.

According to our estimates, from the excavations in the late 19th century to the present, about 930 mounds have been fully investigated by excavations in the Donetsk Oblast. Thus, in the field seasons of 1985 and 1989, the Mariupol (Zhdanov) Archaeological Expedition (MAE) led by V. Kulbaka there were investigated four barrows on the eastern outskirts of Mariupol in the Northern Azov region (fig. 1, 2). The barrows were part of a large group located in the floodplain of the Kalmius River left bank on the area of the Lebedynske village council of the Novozovsk district, Donetsk Oblast (today the territory of the Sartana community of the Mariupol district).

These are the burial mounds concentrated mainly on watershed ridges and plateaus, which are primarily affected by hostilities. Given the dominant topographical location on the ground and the shape of the ancient barrows themselves as an artificial high elevations, they were often used to provide defensive posts or lines. Therefore, the mounds perhaps suffered the most from battles among other archaeological objects. However, the war has not spared other types of archaeological sites, as there are numerous cases of destruction or damage of archaeological settlements, burial grounds, stone sculptures, etc. (Литвиненко 2023, с. 32; Zabavin, Bulyk 2023, p. 115). Recently, new factors of archaeological sites devastation and new threats have emerged, which have been exacerbated by armed conflicts. Unfortunately, nowadays, it can be stated that not only archaeological sites are being destroyed. Museums, including the archaeological collections of the Northern Azov region, are being destroyed and stolen.

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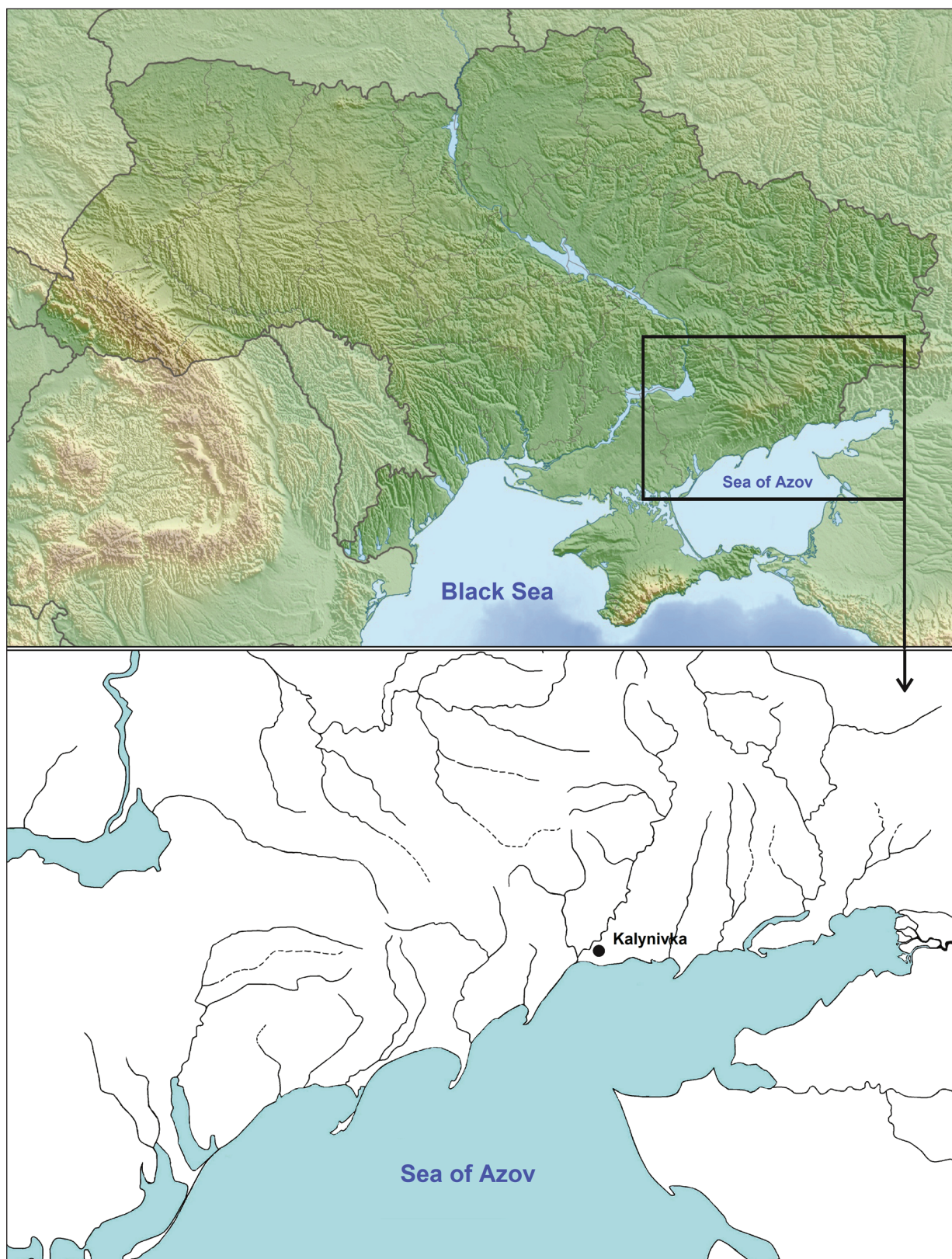


Fig. 1. Location map of the studied barrows near Kalynivka village in the Northern Azov Area

The collection of sources on the history of the ancient population of the Azov steppes accumulated by many researchers at the beginning of the war was kept in various institutions and museum collections

in different cities. At the beginning of 2022, the Mariupol Museum of Local History was the most significant museum institution in the Northern Azov region, with expeditions' archaeological collections and field

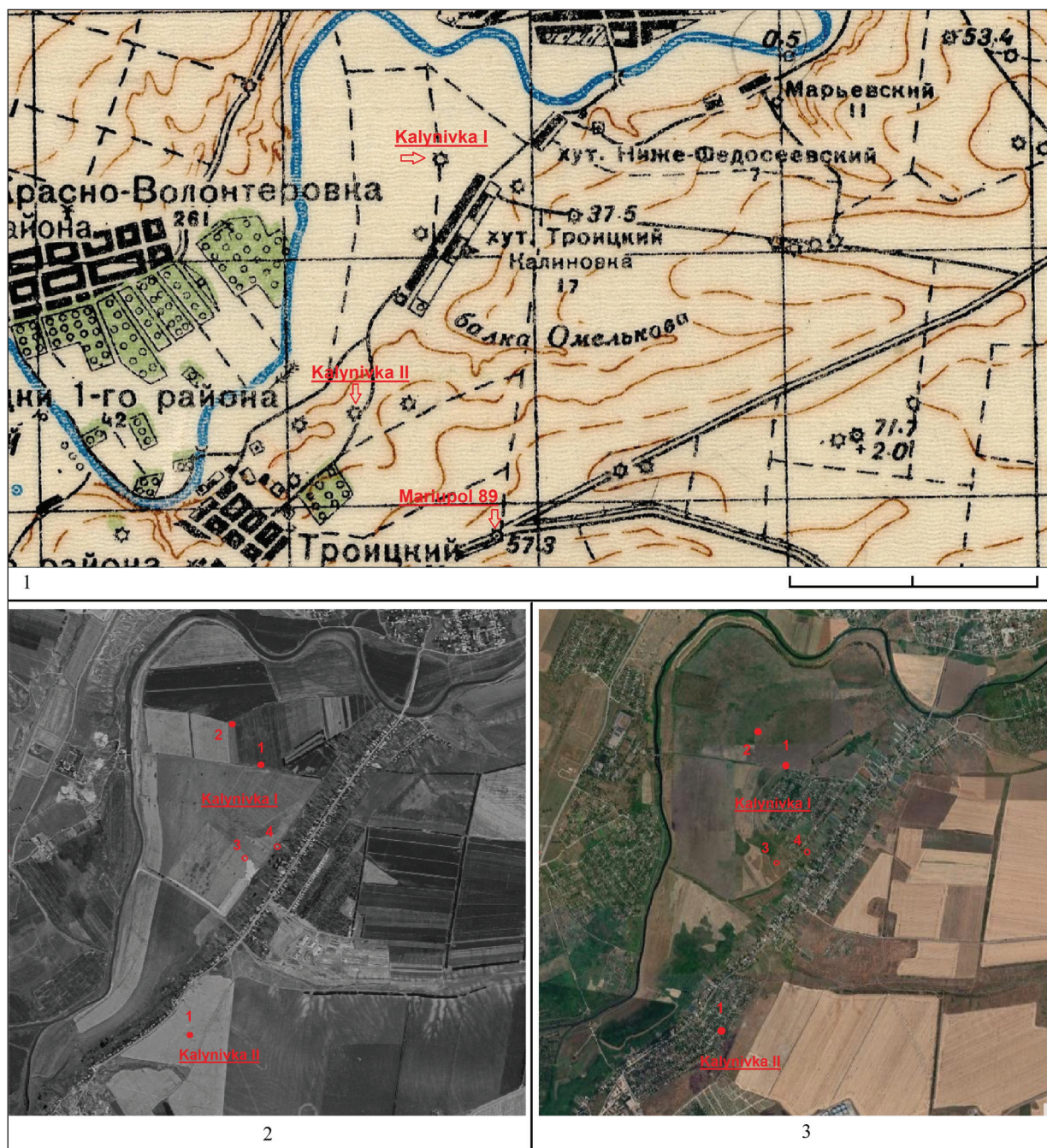


Fig. 2. Kalynivka barrows: 1 — a map fragment of the General Staff of the Red Army of 1941, L-37-28, M: 100 000; 2 — a space survey of 1975; 3 — a Google Earth map of 2021

reports. Its archaeological assemblage comprised approximately 2,700 museum objects of the main storage fund and 670 items of scientific and auxiliary funds. The museum's assortment also contained materials from the excavations of the MAE (607 items) and the Archaeological Expedition of the Mariupol State University (AE MSU) (Кучугура 2001). Another museum institution that stored archaeological collections from the Northern Azov region is the Museum of History and Archaeology of the MSU, which was established in 2016. The repository was based on

a small archaeological assemblage and anthropological materials obtained during the MAE research and the university's expedition.

The University Museum does not exist physically: the exhibition space was destroyed and the remains of the collection and repository were looted. The collection stored in the city museum also suffered, unfortunately, as a result of the destruction and devastation of the Mariupol Museum of Local History. The fate of the most of the exhibits and reporting documentation is currently un-

known. Thus, the existing threats and the state of the archaeological heritage during the war, the facts of the complete desolation of reports, archaeological and anthropological collections significantly actualise the need in the publication of materials obtained during the research by Mariupol archaeologists in the Northern Azov region.

Archaeological Setting and Research History

According to the regional electronic database of the Department of Culture of the Donetsk Regional State Administration, as of the beginning of 2022, 43 archaeological sites (including 40 barrows) were registered on the territory of the Lebedynske village council of the Novoazovsk district in Donetsk Oblast. According to field scientific surveys, archival materials, satellite images, and cartographic data, 27 sites, including 26 barrows and one nomadic settlement of the Middle Ages, were recorded in the vicinity of Kalynivka village. Five barrows were investigated by excavations at different times. Among the 21 unexplored barrows, five were completely ruined during their construction, and nine are being ploughed or were ploughed in the past (fig. 2, 3).

This micro-district has been attracting attention of researchers for almost a century. In 1928, P. M. Pinevych, Head of the group of history and the club of amateurs of history and antiquities in Mariupol, examined the valley of the Kalmius River in the area from Mariupol to Talakivka village. During the exploration, a number of separate barrows and several mound groups were discovered (Пиневи́ч 1928).

In 1985, the MAE excavated two barrows in the neighbourhood of Kalynivka village in a group of four Bronze — Early Iron Ages mounds (Кульбака 1985). In 1989, the excavations were continued near the opposite edge of the village. A single Bronze — Early Iron Ages mound located on the left bank of the Omelkova gully (left tributary of the Kalmius River) was investigated. In the same year, a Bronze Age barrow that was also located on the left bank of the Omelkova gully (on the eastern outskirts of Mariupol), had been studied (Кульбака, Гнатко 1989). Some of the materials of the Kalynivka mounds were published by the authors in various editions at different times. However, these publications contained only part of the complexes, and sometimes were taken out of contexts, without general plans of the mounds and stratigraphic profiles (Кульбака, Качур 1998, 2000, 2002; Кульбака, Небрат 2010; Забавин, Небрат 2021).

In 1990, the MAE investigated another Bronze Age barrow of a mound group consisting of three barrows. The group was located in a watershed at the source of two gullies descending to the Sea of Azov on the eastern outskirts of Mariupol (Кульбака, Гнатко 1990). Over time, the excavations were continued by the AE MSU. In 1998, barrows 2 and 3 of this mound group, containing eight burials of the Zrubna culture were investigated. In the same year, excavations of a cemetery of the Golden Horde period, located 1.5 km to the south-east of the above-mentioned mound group, were continued. The main part of this cemetery was investigated by the MAE in 1987 (Кульбака 1998; Евглевский, Кульбака 2003; Забавин 2011).

Downstream of one of the gullies, which begins near the outskirts of Kalynivka, 1.5 km from its confluence with the sea, the multi-layered settlement Liapynska Balka was excavated. Conservation research of the settlement was carried out by an expedition of the Donetsk Regional Museum of Local History in 1992. Cultural remains belonging to two epochs were discovered here — the Late Bronze Age (the late stage of the Zrubna culture) and the Middle Ages (Saltiv-Maiak culture and the Golden Horde period) (Горбов 1993; Герасименко 1997; Кравченко 2003).

In 2012, the AE MSU conducted a survey of the eastern outskirts of Mariupol — from the northern outskirts of Kalynivka village to the Sea of Azov coastline. During the reconnaissance, the situation was clarified at the already excavated two-layer settlement Liapynska Balka, where layers of the Late Bronze Age and the Middle Ages were investigated (Забавин, Небрат 2013). The following year, on the territory of the Lebedynske community, the AE MSU discovered a barrow in a group of two mounds. Two cult pits of the Inhul Catacomb culture, seven burials of the Zrubna culture and one medieval burial were uncovered there (Забавин, Небрат 2018).

Excavation Methods and Their Results

Excavations of the mounds were carried out using heavy earthmoving equipment (bulldozer) using the method of parallel trenches with stratigraphic profiles between them. Prior to the start of excavations, tools surveys of the mounds and marking of the central stratigraphic profile were carried out. The profiles were cleaned and drawn during the research in order to analyse the stratigraphy of the burials and the process of mound con-

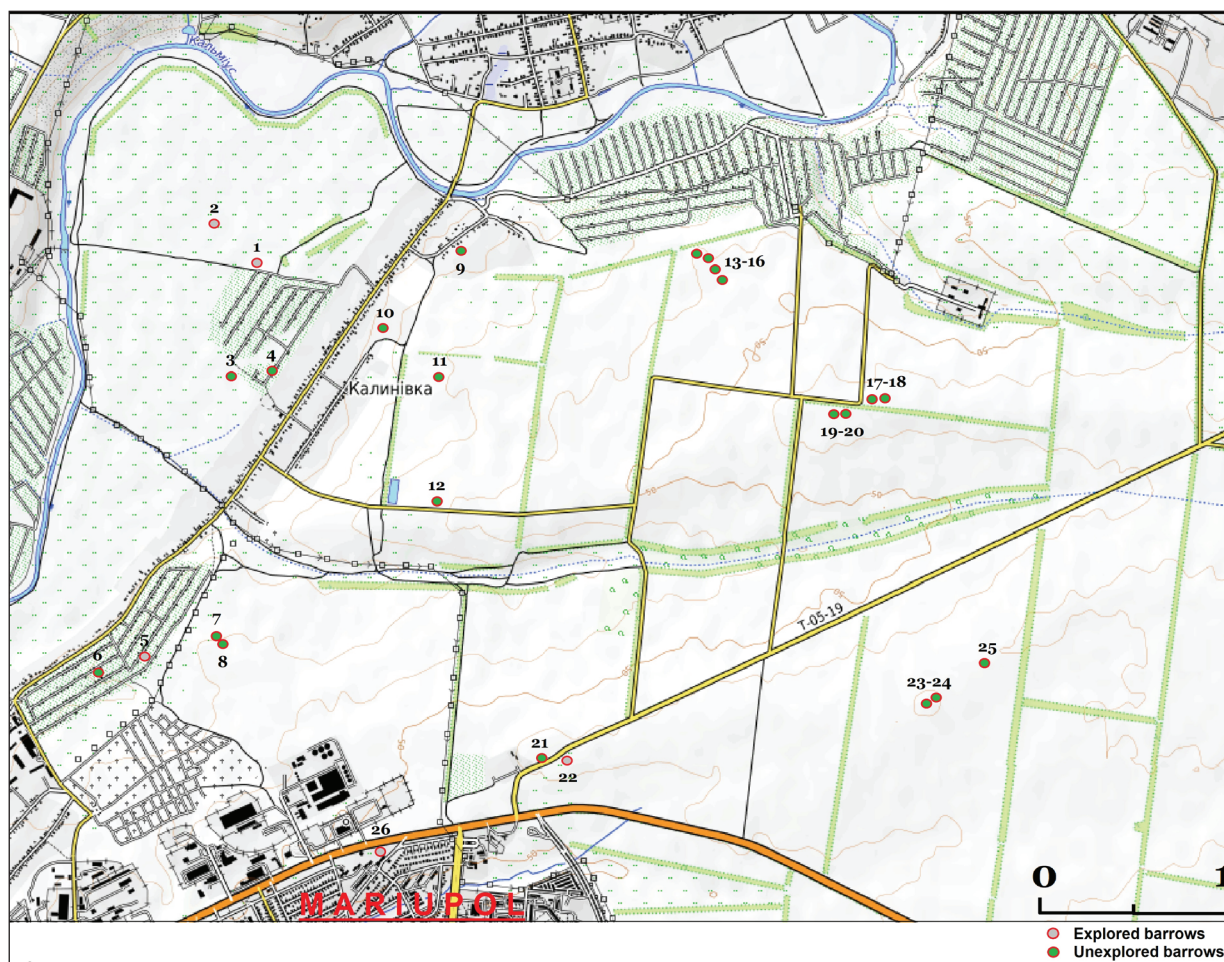


Fig. 3. Barrows near Kalynivka village on the Interactive Topographic Map of Ukraine

struction. Burial depths were measured from the centre of the mound (R), the level of the ancient horizon (AH) or from the modern surface (MS), as the mounds were heavily planned. On the general plan, the burial was marked by the method of perpendicular to the main reference line. The location of the burial in the mound was given in degrees, and the distance from the centre in metres. The centre was taken to be the top of the mound — the field marker. The soil was removed in horizontal layers using machinery. Anthropological definitions were made by V. K. Kulbaka.

Kalynivka I (1985)

The barrow group of four mounds is located near the western and north-western outskirts of Kalynivka village, in the floodplain of the Kalmius River left bank. The group is known from cartographic data (Map of the General Staff of the Red Army from 1941), discovered during 1984 by the MAE reconnaissance, led by V. K. Kulbaka. Mounds 1 and 2 were investigated by the MAE in

1985. The barrows of the group (except mound 3) were previously levelled almost to the level of the AH during reclamation works.

Barrow 1, the second largest in the investigated cemetery after the unploughed mound, was located 0.4 km north from the north-western edge of Kalynivka village. The initial height of the mound before its destruction was about 3.0 m (at the time of the research — about 0.5 m); its diameter was 40 m. Coordinates of the mound on Google Maps are the following: 47°15'66.26" N, 37°66'59.75" E.

Barrow 2, the third largest in this mound group, was located 0.2 km north-west from the barrow 1, and 0.6 km north of the north-western edge of Kalynivka village. At the time of research, the mound was heavily ploughed, approximately 1.15 m high and 25 m in diameter. Coordinates of the mound on Google Maps are the following: 47°15'82.91" N, 37°66'49.32" E.

Barrow 3, the smallest in this mound group, was located 0.185 km south-west from the barrow 4, near the western edge of Kalynivka village, to the north from the school. Its height and diame-

ter are unknown (according to 1984 report). Today the mound is completely destroyed, the site has a hidden nature.

Barrow 4, the largest in this mound group, was located 0.65 km south-east from the barrow 1, near the western edge of Kalynivka village, to the north from the school. Its height and diameter are unknown (according to 1984 report). Today the mound is almost completely destroyed, it is located under a building.

Barrow 1.

It was investigated with the help of nine trenches; stratigraphic profiles were made across the top, slopes and floors of the barrow in a north-south direction. The analysis of the stratigraphic profiles allowed making the following observations: only buried soil and loam emissions from the main burials 3, 5 and 6, which laid at the level of the AH, were traced in the stratigraphic sections. The level of the mound after the planning was preserved only to a height of 0.5–0.7 m from the AH. In the barrow, ten burials were investigated: three belonged to the Yamna culture (Pit Grave culture), five to the Catacomb cultures, one to the Zrubna culture, and one to the Iron Age (fig. 4).

Burial 1 (Cimmerian, Novocherkassk type) — 8.4 m (180°) from the centre, at the level of 0.97 m from the AH, was inserted into the Bronze Age mound. It was traced from the level of 0.7 m above the buried soil by the stones found above it, which were exposed after the mound was destroyed by the builders. The funerary structure was a rectangular pit measuring 1.90×0.65 m. The bottom of the grave was buried in clay by 0.25 m deep. The long axis of the pit was oriented along the west-northwest — east-southeast line. The northern part of the pit was filled with stones. At the bottom of the pit, on a brownish tan ground, was a skeleton of an adult, lying flat on its back, with straight legs and arms, head facing west-northwest. The skull, bones of the right arm and right chest were missing. The pit was filled with the skeleton remains that were moved by rodents (fig. 7: 9).

Burial 2 (the Catacomb culture) — 12.5 m (10°) from the centre, at the level of 1.15 m from the AH. An oval entrance shaft measuring 1.65×0.95 m was found in the loamy layer. Under the southern long wall of the shaft was the entrance to the chamber, blocked by stones placed at the edge. A small hole 0.35 m long and 0.65 m wide led into the chamber. At the end of the hole was a 0.55 m high step that served as the entrance to the chamber. The latter was rectangular in plan

with rounded corners. The long axis of the whole catacomb was directed along the north-northwest — south-southeast line; the entrance to the chamber was towards the centre of the mound.

Near the southern wall of the chamber was a skeleton of a teenager, crouched, on his right side, with his head to the north-east. The right leg was bent at the knee at an angle of 35°, the left — 60°. The angle of flexion in the hip joint was 80–85°. The right arm was extended along the body, the left arm was bent at the elbow, with the hand on the pelvic bone. The skull was placed on the right side. The legs, right arm and a skull were covered with ochre (fig. 5: 7).

Burial 3 — the earliest in the mound (the Yamna culture) — 5.5 m (16°) from the centre, at the level of 1.72 m from the AH. The eastern and western parts of the grave were traced in the Central Stratigraphic Profile. To the north and south of the pit, a loam outcrop of up to 0.5 m was recorded in the buried soil. The pit was rectangular in shape, filled with humus, measuring 1.95×1.40 m, with a long axis aligned with the west-southwest — east-northeast line. At the bottom of the pit, on a brown substrate, there was a sprinkling of ochre and two fragments of decayed bones. Rodent burrows heavily damaged the western part and the bottom of the pit (fig. 5: 1).

Burial 4 (the Zrubna culture ?) — 3.5 m (300°) from the centre, at the level of the preserved mound. The burial was destroyed during the mound's planning. Several stones, human bones and a fragment of pottery with fresh breaks were examined in a disorderly state. The position of the buried could not be established (fig. 5: 5).

A fragment of a moulded pot with thick walls and a light surface without ornamentation was found in the burial. It was covered with black soot on the inside; a dark leakage mark was revealed on the outside. The fracture was of black clay with an admixture of sand. The wall thickness was 1.4 cm (fig. 5: 6).

Burial 5 — the earliest in the mound (the Yamna culture) — in the centre of the mound, at the level of 2.1 m from the AH. The burial structure was a large rectangular pit, measuring 2.9×2.1 m. The long axis of the pit was orientated along the west-southwest — east-northeast line. The pit was covered with thick boards lying across the top. At the bottom of the pit, the skeleton of an adult of poor preservation was uncovered lying on its right side, with its head in the east-northeast direction. The right arm was extended along the body, with the hand near the

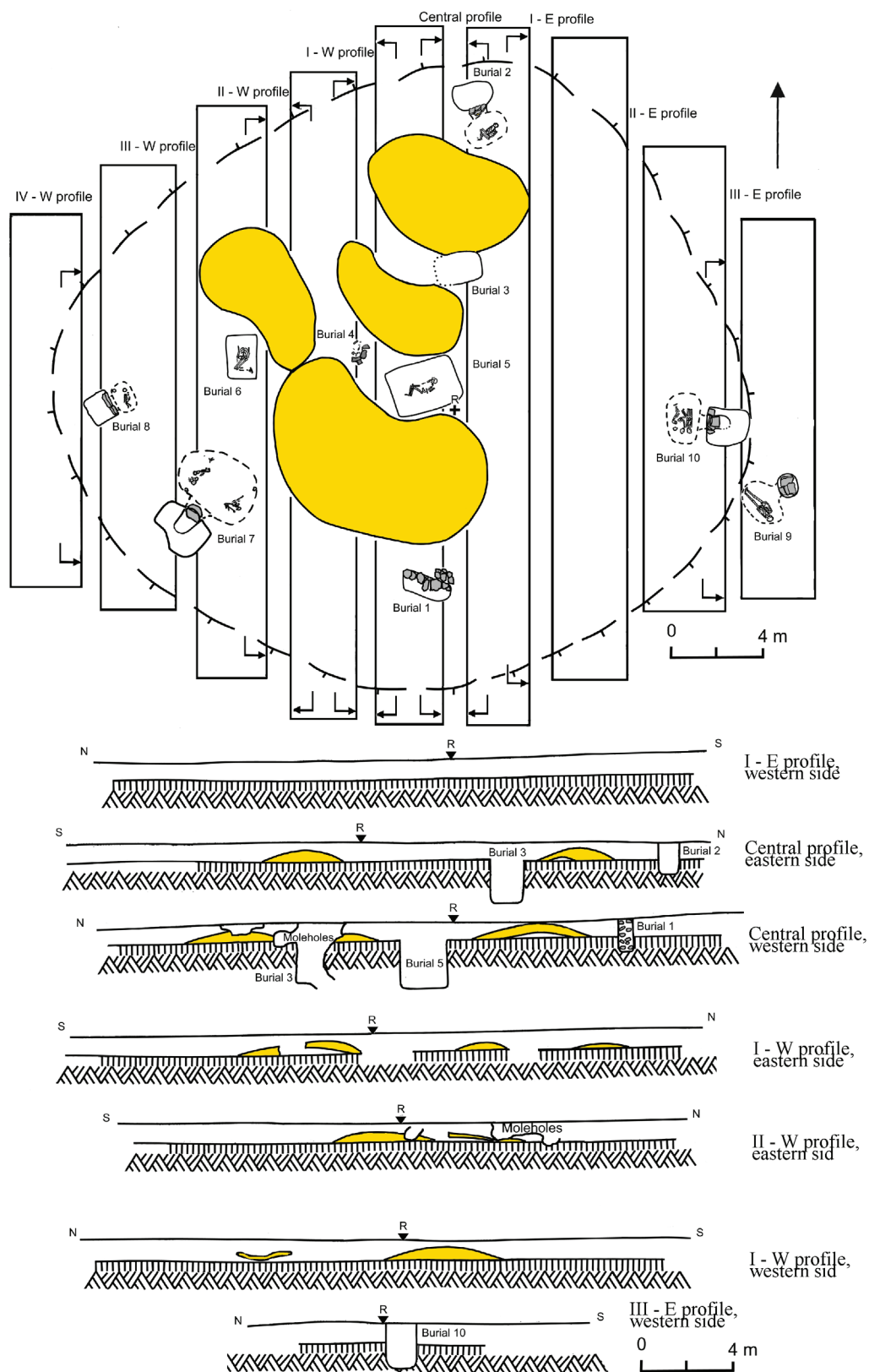


Fig. 4. Kalynivka I. General plan and stratigraphic profiles of the barrow 1

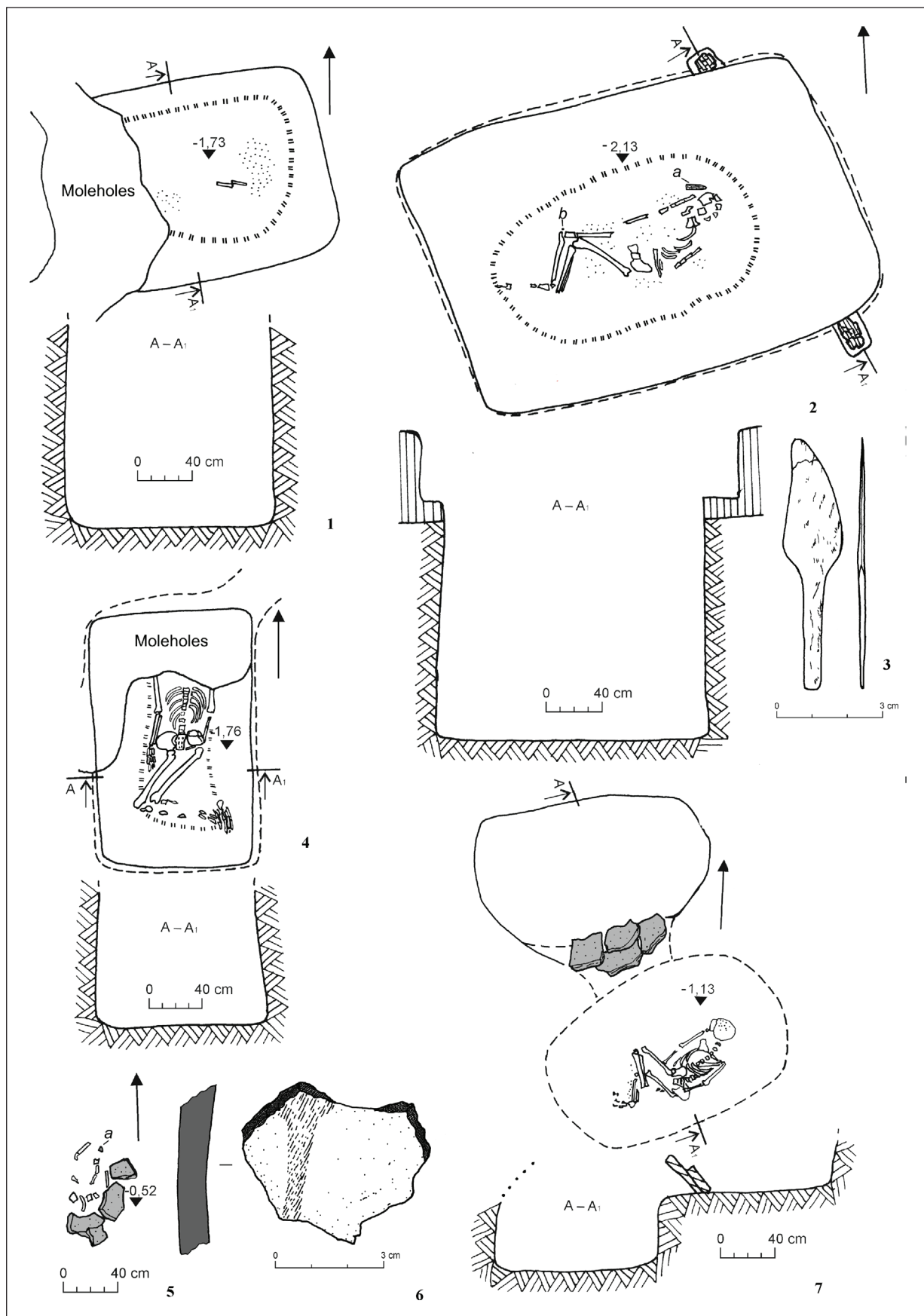


Fig. 5. Kalynivka I. Barrow 1: 1 — burial 3; 2, 3 — burial 5 (on the plan: a — a knife; b — a piece of resin); 4 — burial 6; 5, 6 — burial 4 (on the plan: a — a fragment of ceramics); 7 — burial 2

right thigh; the left arm was bent at the elbow at an angle of 60°. The skull was placed on the right side. A bronze knife in a wooden sheath was discovered in front of the face of the skull, near the right shoulder. The skeleton was covered with ochre. A piece of resin on the right knee was traced (fig. 5: 2).

A bronze knife in a wooden sheath was found in the burial. The sheath was rectangular, 12.0 cm long and 4.0 cm wide. The item had a long, slightly flattened stem. The blade was asymmetrical, with a concave back and a convex working side; the end of the blade was rounded and curved upwards. The knife itself was 10.3 cm long and 2.5 cm wide at the base. The stem was 4.8 cm long and 0.5 cm wide (fig. 5: 3).

Burial 6 — level of 1.76 m from the AH. To the north and east of the burial, a loam deposit up to 0.5 m thick was located on the AH. The pit was rectangular in shape, measuring 1.90×1.15 m, with a long axis aligned north–south. The northern part of the pit was completely destroyed by rodents. At the bottom of the pit there were bones of an adult, twisted on the right side, with his head facing north. The skull and humerus were missing. The angle of flexion at the knees was 60–70°, and at the hip joint — 140–150°. The right arm was extended along the body, as well as the left arm, with the hand on the left wing of the pelvis. There were traces of brownish decay under the skeleton (fig. 5: 4).

Burial 7 (the Catacomb culture) — 12.25 m (240°) from the centre, at the level of 1.8 m from the AH. The entrance shaft was sub-square in shape, filled with humus, measuring 2.15×1.7 m. The corners of the shaft were directed to the cardinal points. In the western corner, near the south-western wall, there was a step up to 0.4 m wide. Near the north-eastern wall of the shaft, the entrance to the chamber was recorded as blocking: two vertical stones, the third stone laid horizontally. The bottom of the shaft was flat, sloping down to the north-eastern wall. In front of the entrance to the chamber, there was a small pit up to 0.2 m deep, which passed into the chamber's entrance. The length of the hole was 0.4 m and the width — 0.9 m (fig. 6: 2).

The entrance to the camera was directed towards the centre of the mound. The camera was located below the level of the shaft, with a 0.7 m high step leading to it. The long axis of the catacomb was aligned along the south-west — north-east line.

In plan, the camera was oval in shape with rounded corners, measuring 3.3×2.3 m. Two human skeletons were found in the burial. The skeleton 1 was located near the south-eastern wall, and the skeleton 2 — near the north-western

wall of the catacomb's chamber. Rodents heavily damaged the burial.

Skeleton 1 was located to the right of the camera entrance. The skeleton of an adult, crouched on the right side, with the head facing north-east. The legs were bent at the knees at an angle of 50–60°, at the hip joint of 110–120°. The right arm was extended along the body, the left hand was on the right wing of the pelvis. The skull was displaced, located against the wall to the north-east of the skeleton.

Skeleton 2 was located to the left of the entrance to the camera. The buried was lying crouched on his right side, with his head to the south-west. Rodents displaced the skull. Near the foot of the skeleton 2 there was a flint chip and animal bones.

Burial 8 (the Catacomb culture) — 14.25 m (265°) from the centre, at the level of 0.66 m from the AH. The burial was constructed in the loamy layer. The entrance shaft was square in shape, measuring 1.1×0.95 m. Near the north-eastern wall, two stones standing on an edge blocked the entrance to the chamber, which was accessed by a small hole. The entire catacomb was oriented by a long axis along the south-west — north-east line. The chamber was oval in plan, located 0.5 m below the level of the shaft. In the centre of the chamber, there was a child's skeleton crouched on the right side, with the head facing north. The legs were bent at the knees at an angle of 70–90°. The right arm was extended along the body; the left arm was bent at the elbow, with the hand on the left thigh. A round-bottomed pot was near the head of the deceased. There was a temporal pendant on the skull, and bone beads on the chest and pelvis. The skull was covered with ochre (fig. 7: 1). The following finds were uncovered:

1. A pot was round-bottomed with high convex sides, a short neck and a narrow bottom. The rims were pointed. The sides were decorated with a herringbone ornament made with a caterpillar stamp. The shoulders had vertical scalloped combing ridges. The bottom part of the pot had a pattern made with a comb stamp in the shape of a multi-beam star. The outer surface of the pot was light brown with black soot in the lower part. The inner surface was completely covered with combing. The height of the pot was 13.2 cm; the height of the neck was 1.0 cm; the diameter of the rim was 9.5 cm (fig. 7: 7; 15: 1).

2. Beads made of thin tubular bone with a smooth, polished surface. Length: 3.6–3.9 cm; diameter: 0.5 cm; hole diameter: 0.2–0.3 cm. Quantity: 2 whole, and 16 fragments (fig. 7: 5).

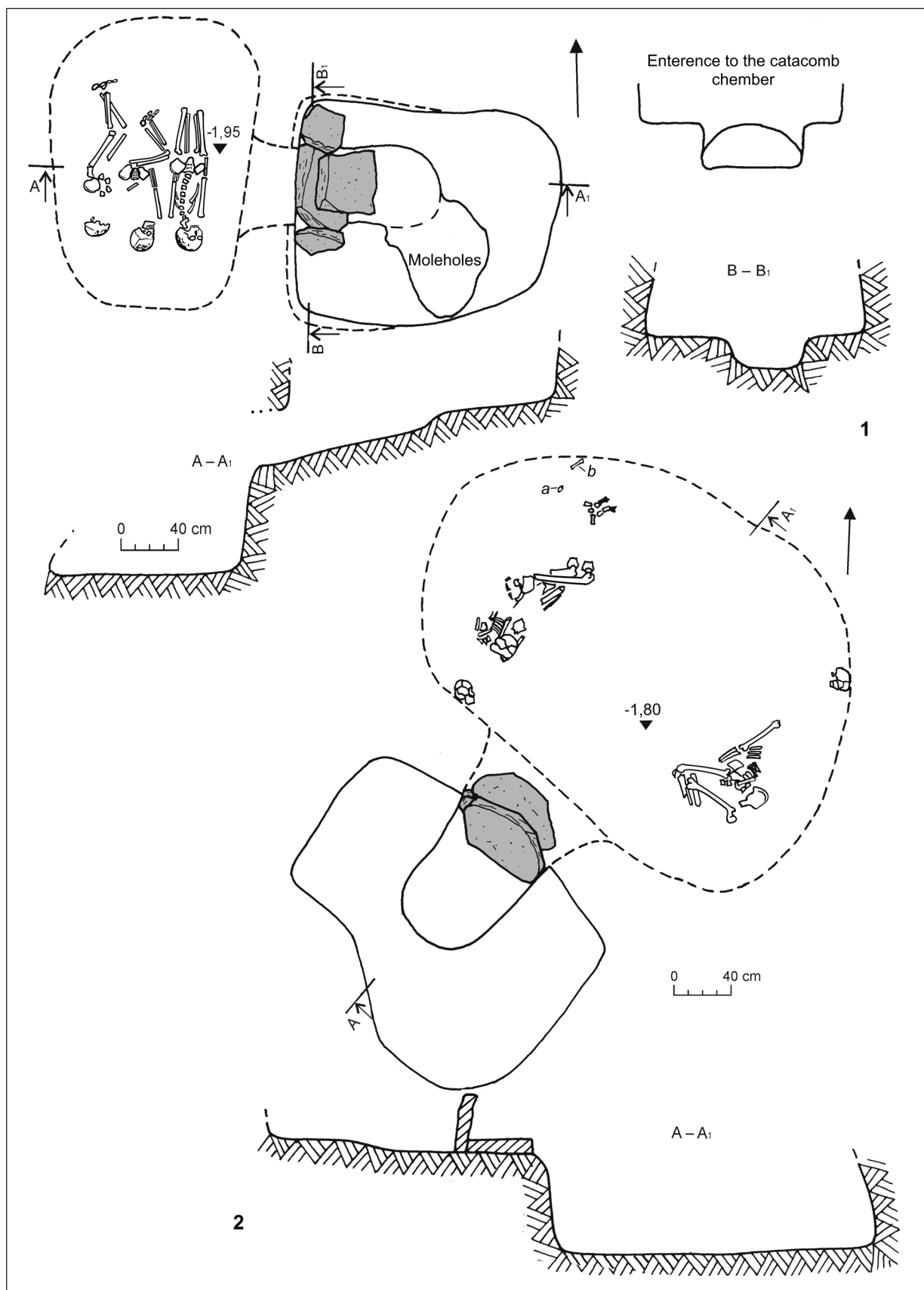


Fig. 6. Kalynivka I. Barrow 1: 1 — burial 10; 2 — burial 7 (on the plan: a — a flint sherd)

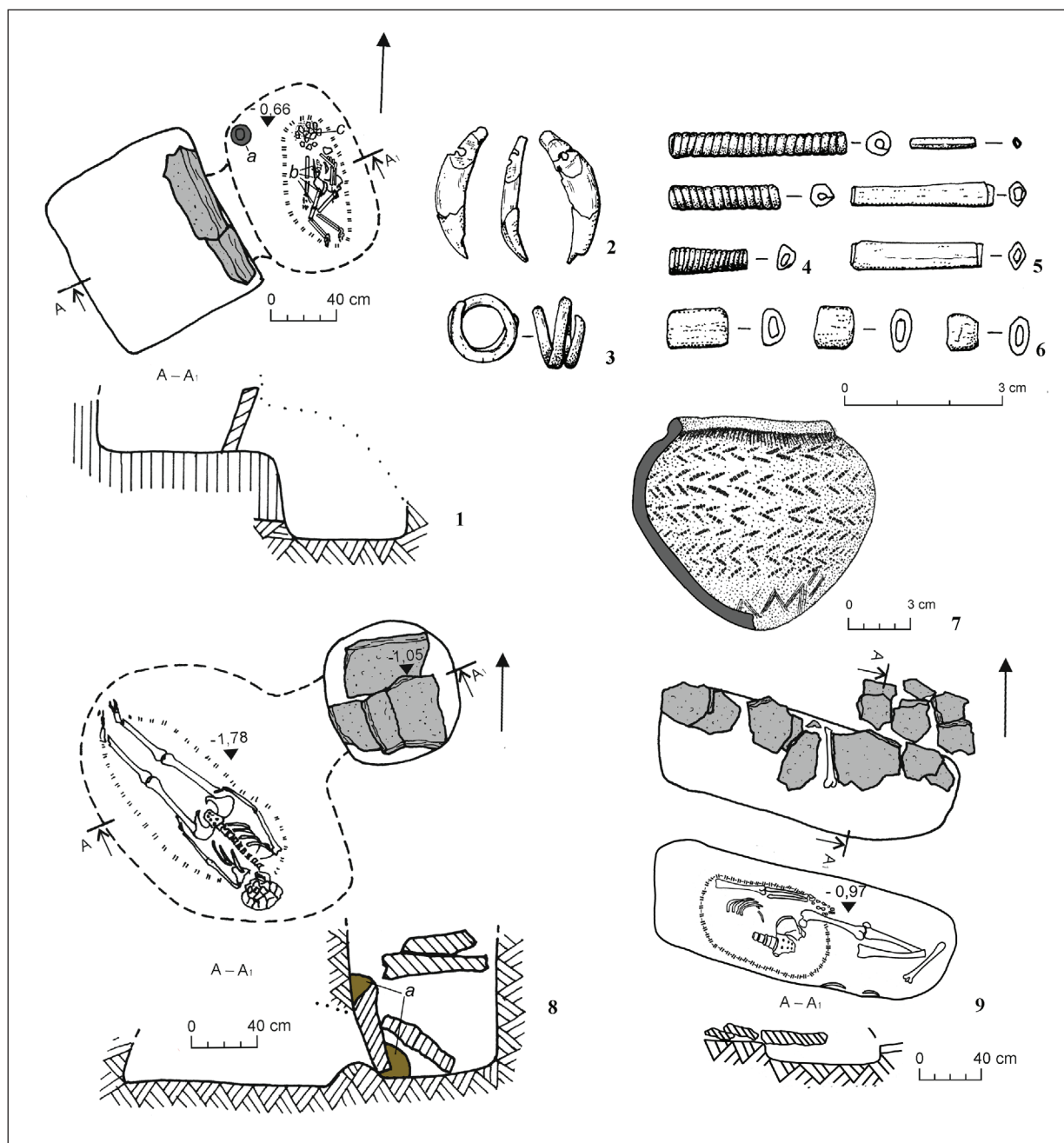


Fig. 7. Kalynivka I. Barrow 1: 1–7 — burial 8 (on the plan: *a* — a ceramic vessel; *b* — bone beads; *c* — a temple pendant); 8 — burial 9; 9 — burial 1

3. Beads made of massive tubular bones with a smooth, slightly polished surface. Circular transverse incisions at the ends. Length: 4.3 cm; diameter: 0.6 cm; hole diameter: 0.4 cm. Quantity: two whole, and three fragments.

4. Beads made of tubular bones with a screw thread over the entire surface. There were two types of cuts: frequent and less frequent. Length: 2.2–5.3 cm; diameter: 0.3–0.8 cm; hole diameter: 0.2–0.4 cm. Total amount: 27 items. Some were broken in ancient times (fig. 7: 4).

5. Beads of tubular bone of cylindrical shape, oval in cross-section. The surface was smooth, polished. One of the beads had two transverse cuts. The holes were oval. Length: 0.7–1.7 cm; diameter: 0.6–1.0 cm; hole diameter: 0.3–0.7 cm. The amount of beads: three intact, and two fragmented (fig. 7: 6).

6. Canine tooth (fangs) pendants with holes for hanging. There were cuts on both sides of the holes. Length: 4.2 cm; width: 1.1 cm; thickness: 0.7 cm. Three items in total (glued together) (fig. 7: 2).

7. A temporal pendant was made of grey metal (lead ?) in one and a half turns. Quadrangular in cross-section. Diameter: 1.8 cm; cross-section: 0.4 cm (fig. 7: 3).

Burial 9 (the Catacomb culture) — 16.5 m (105°) from the centre, at the level of 1.78 m from the AH. The burial was traced in the loamy layer. The entrance shaft, round in plan, was filled with clay and stones. Its dimensions were 0.80 × 0.85 m. In the south-western wall, the entrance to the chamber was covered with stone slabs and lined with grey humus. The entrance was 0.3 m high and 0.5 m wide. The bottom of the entrance was slightly raised in the form of a threshold up to 0.2 m wide. Further, a 0.3 m long hole led to the chamber. The long axis of the catacomb was oriented along the line south-west — north-east. The chamber was oval in plan, measuring 1.25 × 1.90 m. Its bottom was at the level of the shaft. In the chamber there was a skeleton of an adult, lying straight on his back, with his head facing south-east. The arms were stretched along the body. There was an ochre stain near the right shoulder, and traces of brown decay under the skeleton (fig. 7: 8).

Burial 10 (the Catacomb culture) — 13.5 m (100°) from the centre, at the level of 1.95 m from the AH. The burial was traced in the loamy layer and in the western side of the III-Eastern stratigraphic profile. The entrance shaft was rectangular in shape, measuring 1.75 × 1.35 m. In the south-eastern corner, there were steps to the catacomb. From the centre of the shaft to the western wall at the bottom of the depression, a 0.95 m long, 0.5 m wide hole turned into a hole into the chamber. The entrance to the latter was closed by a stone placed on an edge. Further there was a 0.35 m long, and 0.5 m wide hole. The hole ended with a 0.65 m high step. The entire catacomb was oriented by a long axis along the west-east line, with the chamber towards the centre of the mound. The chamber was sub-rectangular in plan with rounded corners. At the bottom of the chamber, there were three skeletons of adolescents, all facing south. On all three skulls, there were plates of resin (coating) (fig. 6: 1).

Skeleton 1 (the furthest from the entrance) — only the pelvis and legs had been preserved. The upper part of the skull laid on the right side, displaced and in place of the chest. The buried was lying crouched on his right side, facing the entrance. The angle of the knees bent was 110–140°, at the hip — 120°.

Skeleton 2 (the middle one) — in a crouched position on the right side, facing the entrance. The

chest bones were absent; the legs were bent at the knees at an angle of 70–80°, at the hip joint of 100°. The right arm was extended along the body, the bones of the left forearm laid above the pelvis perpendicular to the right arm.

Skeleton 3 (the closest to the entrance) — on the back, arms extended, hands under the wings of the pelvis. The legs were straight, strongly bent at the knees or raised at the knees, with the feet under the pelvis.

Three simultaneous burials 3, 5 and 6 of the Yamna culture were primary in the mound. The loam excavated from these pits laid on top of the buried soil and was a single system.

Barrow 2.

The barrow was investigated with two trenches, stratigraphic profiles were made across the top, and slopes and floors of the barrow in a north-south direction. The analysis of the stratigraphic profiles allowed making the following observations: only the release of loam from the main burial 5 and the level of AH beneath it were observed. In the mound, nine burials were investigated: one of the Yamna culture, four of the Catacomb cultures, three of the Zrubna culture, and one of the Iron Age (fig. 8: 1).

Burial 1 (the Catacomb culture) — 6.25 m (60°) from the centre, at the level of 2.15 m from the MS. The burial was found in a loamy layer. The entrance shaft was filled with stone; its shape could not be traced. The bottom of the chamber was 0.45 m below the bottom of the shaft. The long axis of the catacomb was oriented along the north-west — south-east line, with the chamber towards the centre of the mound. The chamber was oval in plan and measured 1.75 × 1.2 m. At the bottom of the chamber, with his back to the entrance, was placed a skeleton of an adolescent, crouched on his right side with the head facing north-west. The right arm was stretched along the body; the left arm was bent at the elbow, with the hand on the right wing of the pelvis. The legs were bent at the knees at an angle of 70–75°, at the hip joint of 105–125° (fig. 8: 8).

Burial 2 (the Zrubna culture) — 5.5 m (195°) from the centre, at the level of 0.37 m from the MS, in the mound. The buried was lying crouched on his left side with the head to the north-east. The bones were poorly preserved. Arms bent at the elbows, hands in front of the face; legs bent at the knees at an angle of 30–40°, at the hip joint of 70–85°. A broken ceramic vessel was in front of the face of the deceased (fig. 8: 2).

It was large fragment of a moulded ceramic vessel in the form of a jar, without ornamentation

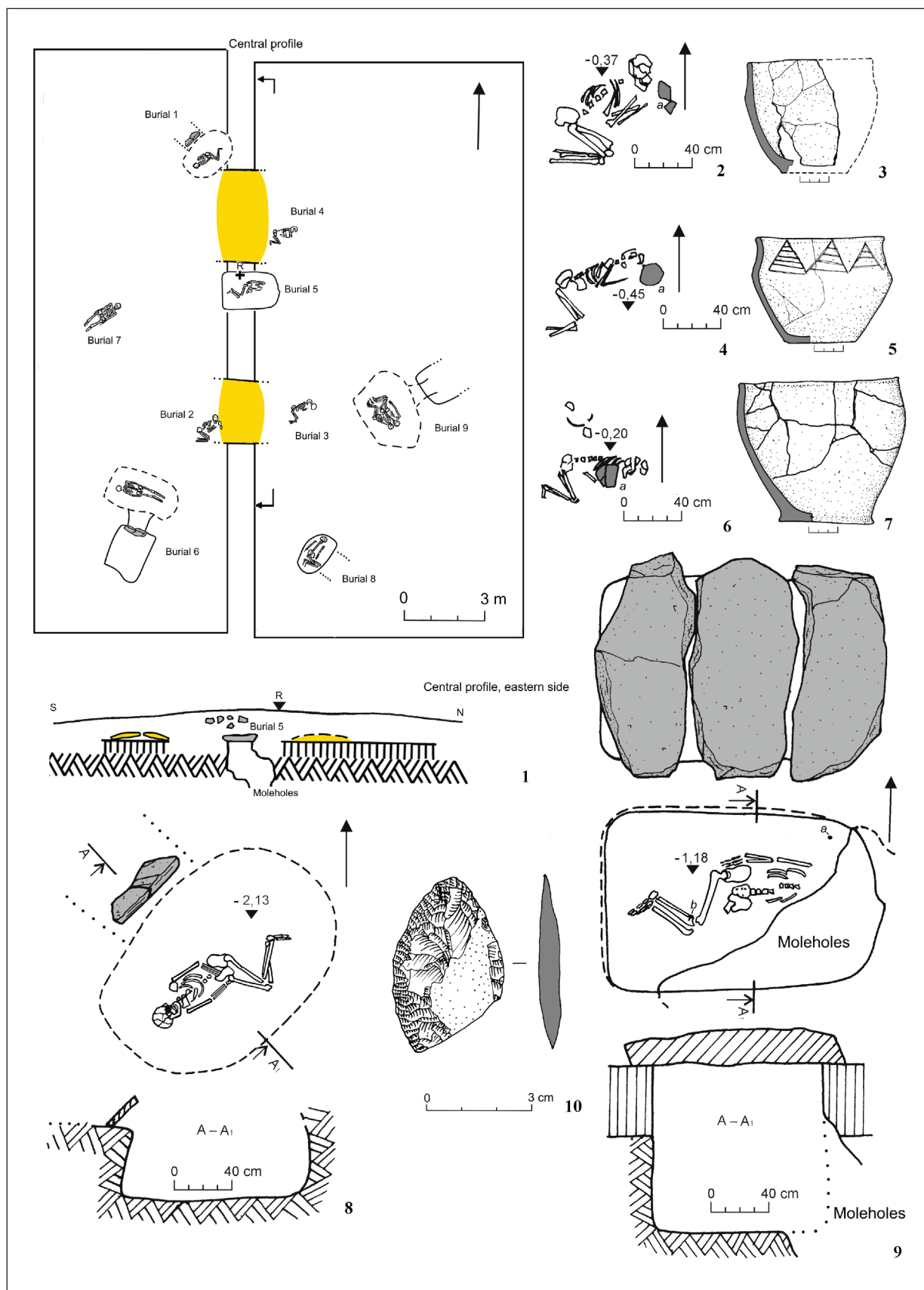


Fig. 8. Kalynivka I. Barrow 2: 1 — a general plan and stratigraphic profiles; 2, 3 — burial 2 (on the plan: *a* — a ceramic vessel); 4, 5 — burial 3 (on the plan: *a* — a ceramic vessel); 6, 7 — burial 4 (on the plan: *a* — a ceramic vessel); 8 — burial 1; 9, 10 — burial 5

(a wall with a bottom). The surface was light with black soot, uneven, with traces of smoothing. Reconstructed dimensions: height: 13.5 cm; diameter of the rim: 15.0 cm; diameter of the body: 15.5 cm; diameter of the bottom: 7.5 cm (fig. 8: 3).

Burial 3 (the Zrubna culture) — 4.75 m (155°) from the centre, at the level of 0.45 m from the MS, in the mound. The deceased was lying crouched on his left side with the head to the north-east. The bones were poorly preserved. Arms bent at the elbows, hands in front of the face; legs bent at the knees at an angle of 50–65°, at the hip joint of 70°. A broken ceramic vessel was placed in front of the face of the buried (fig. 8: 4).

It was ceramic moulded pot with a wide rim and a marked edge. The bottom had a border. The surface was blackened with soot; the inside part was combed. The vessel was decorated with triangles on the shoulders, which were shaded with dashed horizontal lines. Dimensions: height: 12.0 cm; diameter of the rim: 15.5 cm; diameter of the body: 17.0 cm; diameter of the bottom: 8.5 cm (fig. 8: 5).

Burial 4 (the Zrubna culture) — 2.5 m (25°) from the centre, at the level of 0.20 m from the MS, in the mound. The buried was lying crouched on his left side with a head to the east. The bones were poorly preserved. Arms bent at the elbows, hands in front of the chest. The legs were bent at the knees at an angle of 25–30°, at the hip joint of 50–70°. A ceramic vessel was placed in front of the chest (fig. 8: 6).

It was ceramic moulded high jar-shaped vessel with a wide rim and a border at the bottom. There was no ornamentation. The firing was uneven, with orange and dark spots. The inner surface was light brown with combing decoration. The clay mass had an admixture of sand. Dimensions: height: 15.3 cm; diameter of the rim: 16.5 cm; diameter of the body: 17.3 cm; diameter of the bottom: 10.1 cm (fig. 8: 7).

Burial 5 — the earliest in the mound (the Yamna culture) — in the centre of the mound, at the level of 1.18 m from the MS. The eastern part of the pit was traced in the central profile. To the north and south of the burial at the MS there was a 0.25 m thick loam deposit. At the level of the MS, the burial was covered by three thick stone slabs 0.6–0.7 m wide and up to 0.25 m thick. The pit was rectangular in shape, measuring 1.80 × 1.20 m, with long sides directed in the west-east direction. At the bottom of the pit, there was a skeleton of an adult of poor preservation, laying on his back; legs bent at the knees, fallen to the left. The angle of bent knees was 70°, in the hip joint of 110°. The right arm was extend-

ed along the body, with the hand near the right wing of the pelvis. The left arm, left thigh, a skull and a humerus are missing. The entire south-eastern part of the burial was destroyed by rodents. A lump of ochre and a broken dart tip were found near the right shoulder. A piece of resin was uncovered near the right knee (fig. 8: 9).

A dart tip was made of grey, opaque flint in the shape of a bay leaf. The surface was chipped, and the edges were jet retouched. The patina was preserved on one side. The lower end was obliquely broken off. Reconstructed dimensions: length: 9.5 cm, maximum width: 4.7 cm (fig. 8: 10).

Burial 6 (the Catacomb culture) — 10.75 m (205°) from the centre, at the level of 2.10 m from the MS. The shaft was rectangular in shape with well-defined corners and was traced in a loamy layer, measuring 1.85 × 1.30 m. There was a 0.2 m wide step in the southern wall, near the western corner. The bottom of the shaft was flat, slightly lowering in the northern part to the entrance of the chamber. A flat stone was standing on the edge blocks at the entrance. A 0.6 m long and 0.6 m wide hole led to the chamber, which ended with a 0.3 m high step down into the latter. The chamber was sub-rectangular in plan; with three distinct corners, the fourth corner was rounded. The dimensions: 2.40 × 1.40 m (fig. 9: 2).

At the bottom of the chamber was a skeleton of an adult, stretched out on his back with a head facing east. The arms were stretched along the body, with the hands on the hip joints. The skull laid on its right side. Two temporal pendants were found on and under the skull bones. There was a bronze plate bracelet on the right hand, and a small awl near the left shoulder:

1. A bronze bracelet consisted of four rectangular plates (two of them were badly broken in ancient times) with curved edges, which were used to fasten a leather (?) strip. On some fragments, the elements of the ornament were made with a punch in the form of horizontal lines in several rows. The plates were 2.5 cm long and 1.8 cm wide (fig. 9: 5).

2. A bronze oval awl. One end was sharp, the other — blunt. Length: 2.6 m, thickness: 0.2 cm (fig. 9: 3).

3. Bronze spiral temple pendants (two items). The rings were made of thick round wire. Diameter: 1.9 cm, cross-section: 0.2 cm. The first ring was twisted in 3.5 turns, one end was strongly riveted, the other — slightly flattened. The second ring was twisted in 2.5 turns; the ends were unclipped (fig. 9: 4).

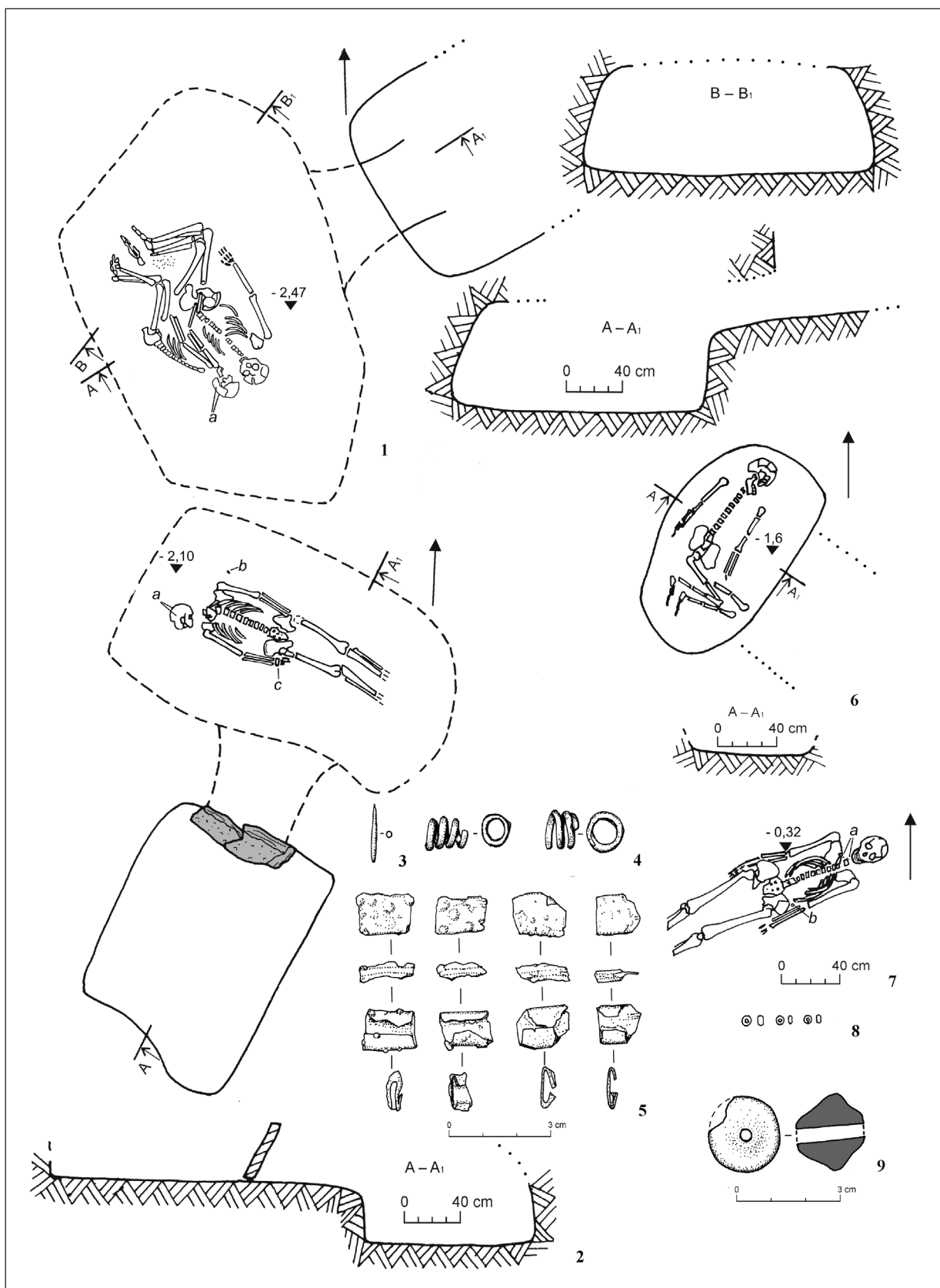


Fig. 9. Kalynivka I. Barrow 2: 1 — burial 9 (on the plan: a — temple pendants); 2–5 — burial 6 (on the plan: a — temple rings; b — an awl; c — a bracelet); 6 — burial 8; 7–9 — burial 7 (on the plan: a — beads; b — a spindle whorl)

Burial 7 (Iron Age, Sarmatian) — 5.75 m (260°) from the centre, in the mound at the level of 0.32 m from the MS. The skeleton of an adult, stretched out on the back with the head to the east — north-east. Arms stretched along the body, legs straight. The feet and lower part of the tibia were cut off during excavations. A spindle whorl was found between the left wing of the pelvis and the forearm of the left hand, and a number of small beads on the cervical vertebrae (fig. 9: 7). Following is a description of the finds:

1. A biconical ceramic spindle whorl with a through hole. The surface was light brown, black at the break. Height: 3.0 cm, diameter 3.5 cm (fig. 9: 9).

2. Small beads made of vitreous transparent earthenware in the form of flattened balls (38 pieces in total). Cylinders of the same material were inserted into the holes. The cylinders and the beads themselves were covered with mother-of-pearl. Bead diameter: 0.4 cm, hole diameter: 0.2 cm, height: 0.2 cm (fig. 9: 8).

Burial 8 (the Catacomb culture) — 10.7 m (165°) from the centre, at the level of 1.6 m from the MS. The shape of the shaft could not be traced. The catacomb was oriented by a long axis along the north-west — south-east line, with the chamber towards the centre of the mound. The chamber was oval in plan, measuring 1.45×0.9 m. At the bottom, there was a skeleton of an adult, crouched on the left side, facing the entrance. The bones were of poor preservation. The legs were bent at the knees at an angle of 20–25°, at the hip of 90–100°. Arms extended along the body with a skull on the left side (fig. 9: 6).

Burial 9 (the Catacomb culture) — 8.0 m (115°) from the centre, at the level of 2.47 m from the MS. The entrance shaft was rectangular in shape, measuring 1.3×1.4 m. The north-eastern part of the shaft had been ruined by a bulldozer. The entire catacomb had a long axis oriented along the south-west — north-east line. Under the south-western wall of the shaft there was a concave descent into a chamber with a small hole leading to it. The hole was 0.4 m long and 0.6 m wide. The latter ended with a step into the chamber, 0.55 m high (fig. 9: 1).

The chamber was trapezoidal in plan, with clearly defined corners. Its largest dimensions: 2.9×1.8 m. The walls of the chamber were almost vertical, 0.7 m high. The ceiling was flattened and straight. On the walls and corners, traces of a narrow tool up to 2.0 cm wide and 0.3 m long were clearly visible. In the middle of the chamber, at the bottom, there were two skeletons lying close to each other. The heads of both were oriented to the south-east.

Skeleton 1 (the furthest from the entrance). The skeleton of an adolescent crouched on the right side, facing the entrance and the second skeleton. The legs were bent at the knees at an angle of 90–110°, at the hip joint of 120°. Both arms were lying in front, slightly bent at the elbows, extended to the second skeleton. On and under the skull were the remains of bronze temporal pendants that collapsed. The sides of the skull were painted in green.

Skeleton 2 (the closest to the entrance). The skeleton of an adult, crouched on the right side, with the back turned. The skull was placed face up. The legs were bent at the knees at an angle of 40–60°, at the hip joint of 110–130°. The right arm was stretched along the body; the left arm was bent at the elbow, with the hand on the right wing of the pelvis. The skull, right shoulder, and legs were covered with ochre.

Kalynivka II (1989)

During the 1989 field season, the MAE investigated twelve mounds in construction zones in the Donetsk Oblast. These included two mounds located in the left watershed of the Omelkova gully on the lands of the Lebedynske village council of the Novoazovsk district in Donetsk Oblast and the lands of the Mariupol city council.

A single barrow 1 was part of a barrow ridge of four mounds located on the left bank of the Omelkova gully. The group is known from cartographic data (Map of the General Staff of the Red Army, 1941). It was situated near the south-western edge of Kalynivka village. At the time of the research, the mound was heavily ploughed; about 1.1 m high, its diameter was 20 m. Coordinates of the mound on Google Maps are the following: 47°13'84.17" N, 37°65'94.84" E.

A single barrow 2 was located in the watershed between the Omelkova and Korotka gullies. The barrow was known from cartographic data (Map of the General Staff of the Red Army, 1941). It was situated in the eastern part of Mariupol in the construction zone of the heating main, 20 m south from the Mariupol — Novoazovsk road, 1.85 km south-east of the south-western edge of Kalynivka village, 1.5 km south-east from the barrow 1. At the time of the survey, the mound was 1.17 m high, up to 15 m in diameter, and the surface of the mound was sodden. The southern half of the barrow was destroyed earlier during the laying of communications. A bypass dirt road ran along the northern half of the mound. Coordinates of the mound on Google Maps are the following: 47°12'90.61" N, 37°67'35.56" E.

Barrow 1.

It was investigated by five trenches, stratigraphic profiles were made across the top, slopes and floors of the barrow in a west-northwest — east-southeast direction. For convenience, the location of the trenches was conventionally marked east — west in the report.

The analysis of the stratigraphic profiles allowed making the following observations: loamy layer from the level of 1.45 m; buried soil 0.35 m thick with a visible line of the AH about 18.0 m long; loamy deposit from the burial 7 at the AH level up to 0.4 m thick. In the mound, ten burials were investigated: five of the Yamna culture, three of the Catacomb cultures, two of the Zrubna culture (fig. 10).

Two shapeless pits (one with a stone) up to 1.0 m in diameter and up to 1.6 m deep from the R were found in the western part of the mound (fig. 11: 11). Possibly late diggings. During the cleaning of the northern side of the first northern stratigraphic profile, two bronze pendants or earrings (?) were found in the molehill in the area 2.0 m to the west from the R. They had a hook shape, the ends were pointed, and the bend was wider. There was a thin wire soldered on the upper tips. Length: 1.8 and 1.9 cm; width at the bend: 0.6 cm (fig. 13: 6).

Burial 1 (the Zrubna culture) — 3.5 m (87°) from the centre, at the level of 0.37 m from the R, in the mound. The bones of a child were in poor condition. Only the bones of the legs and forearms were preserved. The buried was lying crouched on his left side, with his head to the east. There was a ceramic vessel in the area of the skull (fig. 13: 3).

It was a moulded jar-shaped vessel without ornamentation. The rims were slightly bent inwards. The mouth was wide; the bottom was narrow. The vessel was well fired, in some places up to orange colour; the item was light brown, and the surface was rough. The ceramic mass had an admixture of sand. Dimensions: height: 12.5 cm; diameter of the rim: 15.4 cm; diameter of the body: 16.0 cm; diameter of the bottom: 8.3 cm (fig. 13: 4).

Burial 2 (the Catacomb culture) — 5.0 m (82°) from the centre, at the level of 0.5 m from the R. A stone foundation of the shaft, consisting of stones $0.35 \times 0.4 \times 0.2$ m and smaller stones, was traced. Below the stones were large burrows to the full depth of the loam layer. The catacomb chamber and the lower part of the shaft were completely destroyed by molehills. At a distance of 0.5 m to the south-west of the stone structure, a ceramic vessel was found in a hole (fig. 13: 1).

It was a moulded vessel of squat shape. The neck was high, straight; the rims were straight; the sides were convex. The line of transition from the neck to the shoulder was smooth. The vessel was dark brown with black spots. The ceramic mass was homogeneous, without large impurities. The vessel had wide vertical flutes inside, and horizontal flutes on the neck. The fracture was black. The item was ornamented with braid prints. Three horizontal parallel lines encircle the neck. The shoulders and sides were richly decorated with festoons — concentric semicircles. There were five of them in total. In the centre of each festoon, there were round finger indentations. The bottom part had no decoration; it was smoothed with weak combing and glossing. Dimensions: height: 14.0 cm; neck height: 3.0 cm; mouth diameter: 15.5 cm; diameter of the sides: 19.0 cm; diameter of the bottom: 9.7 cm (fig. 13: 2; 15: 4).

Burial 3 (the Zrubna culture) — 3.6 m (42°) from the centre, at the level of 0.45 m from the R, in the mound. The bones of an adult were of poor condition. The buried was lying crouched on his left side, with his head to the east (fig. 13: 5).

Burial 4 (the Yamna culture) — 8.5 m (18°) from the centre, at the level of 1.78 m from the R. The rectangular pit measures 1.25×0.8 m, with a long axis oriented along the east-northeast — west-southwest line. At the bottom of the pit, on a white decay, two skeletons were found: an adult and a child (fig. 11: 4–6).

Skeleton 1 (an adult). The skeleton was under the southern wall of the pit, with his head to the north-east, the bones were not in anatomical order (reburial?). The skull was turned to the right. The bones were covered with ochre. Two colours of ochre were traced on the skull: red ochre on the jaw and scarlet ochre on the frontal part of the skull.

Skeleton 2 (a child). In the centre of the pit was the skeleton of a child, crouched on its left side, with its head to the north-east. The bones were covered with ochre. There was a purple ochre behind the skull.

A stone revealed in the burial was a hard limestone of a sub-rectangular shape and rounded corners. There were traces of rough processing — wide chips. It could have been used as a pestle or a grinder. Dimensions: 8.1×5.0 cm (fig. 11: 6).

Burial 5 (the Catacomb culture) — 15.0 m (85°) from the centre, at the level of 2.4 m from the R. The entrance shaft was round in plan, 1.35 m in diameter, with a flat bottom. In the north-eastern part

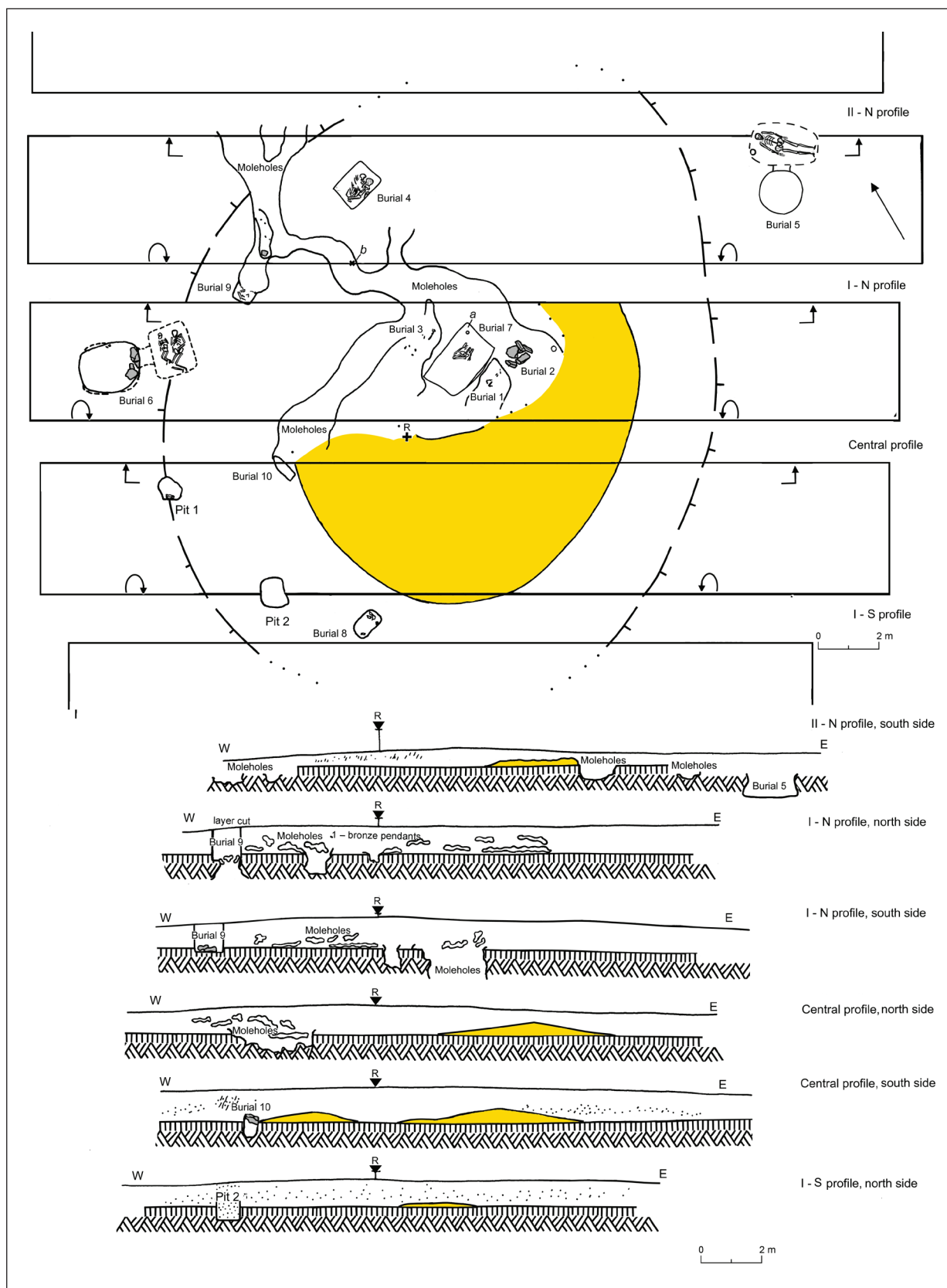


Fig. 10. Kalynivka II. General plan and stratigraphic profiles of the barrow 1

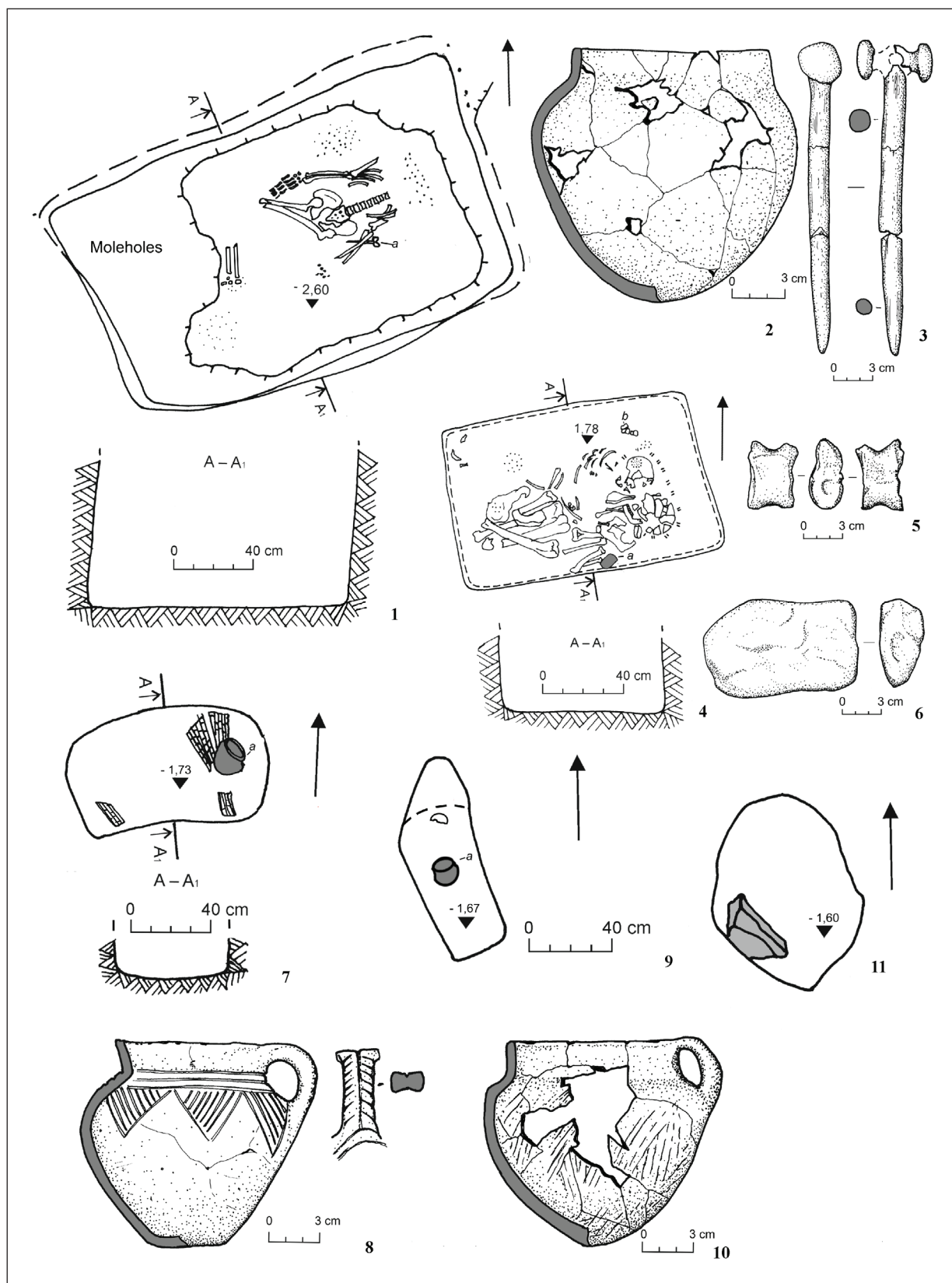


Fig. 11. Kalynivka II. Barrow 1: 1–3 — burial 7 (on the plan: *a* — a horn pin); 4–6 — burial 4 (on the plan: *a* — a stone; *b* — an astragalus); 7–8 — burial 8 (on the plan: *a* — a ceramic vessel); 9–10 — burial 10 (on the plan: *a* — a ceramic vessel); 11 — pit 1 in the mound filling

of the shaft, a small threshold up to 0.1 m high and a small 0.2 m long and 0.5 m wide hole leading to the chamber were observed. The bottom of the chamber was 0.25 m below the shaft level. The chamber was sub-rectangular in shape with rounded corners and sides, measuring 2.10×1.25 m. The long axis of the chamber was oriented north-west — south-east. At the bottom of the chamber was the skeleton of an adult, lying on his back, with his head to the north-west. The arms were stretched along the body, the legs were straight. The feet of the deceased and the bottom of the chamber between the femurs and near the pot were sprinkled with ochre (fig. 12: 4).

There was a pot in the western corner of the chamber. It was a ceramic moulded squat pot with a short neck, high raised convex sides and narrow bottom. The edge of the rim was slightly bent outwards. The upper part of the pot was decorated with three parallel impressions of a thick twisted cord. Below, along the entire diameter, the pot was ornamented with prints of a cord bent in a loop. The rest of the vessel was covered with thick combing straight to the bottom. The pot was light brown with large black spots. The firing was weak. The bottom part of the item had traces of smoothing. Dimensions: height of the pot: 10.2 cm; height of the neck: 0.8 cm; diameter of the rim: 12.8 cm; diameter of the sides: 16.5 cm; diameter of the bottom: 7.5 cm (fig. 12: 5; 15: 5).

Burial 6 (the Catacomb culture) — 9.0 m (320°) from the centre, at the level of 2.35 m from the R. An oval shaft with a straight northern wall, measuring 2.0×1.6 m. The long axis of the shaft was oriented along the north-west — south-east line. Along the north-western wall of the shaft, there was a 0.2 m high step. Under the south-eastern wall of the shaft there was a depression up to 0.15 m. Stones rested against this depression, blocking the entrance to the chamber. The flat stones measured about 0.5×0.5 m. There was a hole leading into the chamber, 0.5 m in diameter and 0.5 m long. At the end of the hole was a step up to 0.4 m high, leading directly into the chamber. A rectangular chamber had rounded corners and vertical walls, measuring 1.70×1.35 m. The long axis of the chamber was oriented along the north-east — south-west line. At the bottom, on a white and brown decay, there were two skeletons: an adult and a child (adolescent) (fig. 12: 1–3).

Skeleton 1 (an adult) is in the centre of the chamber, crouched on the right side, with the back turned and a head placed to the north-east. The skull was turned to the right; the right arm was

stretched along the body; the left arm was bent at the elbow at a right angle in such a way that the bone rested against the pelvic bones; the legs are bent at the knees at an angle of 80° , at the hip joint of 120° . Near the skull there was a hoof of a sheep (?); on the right wing of the pelvis and forearm — a horn pin.

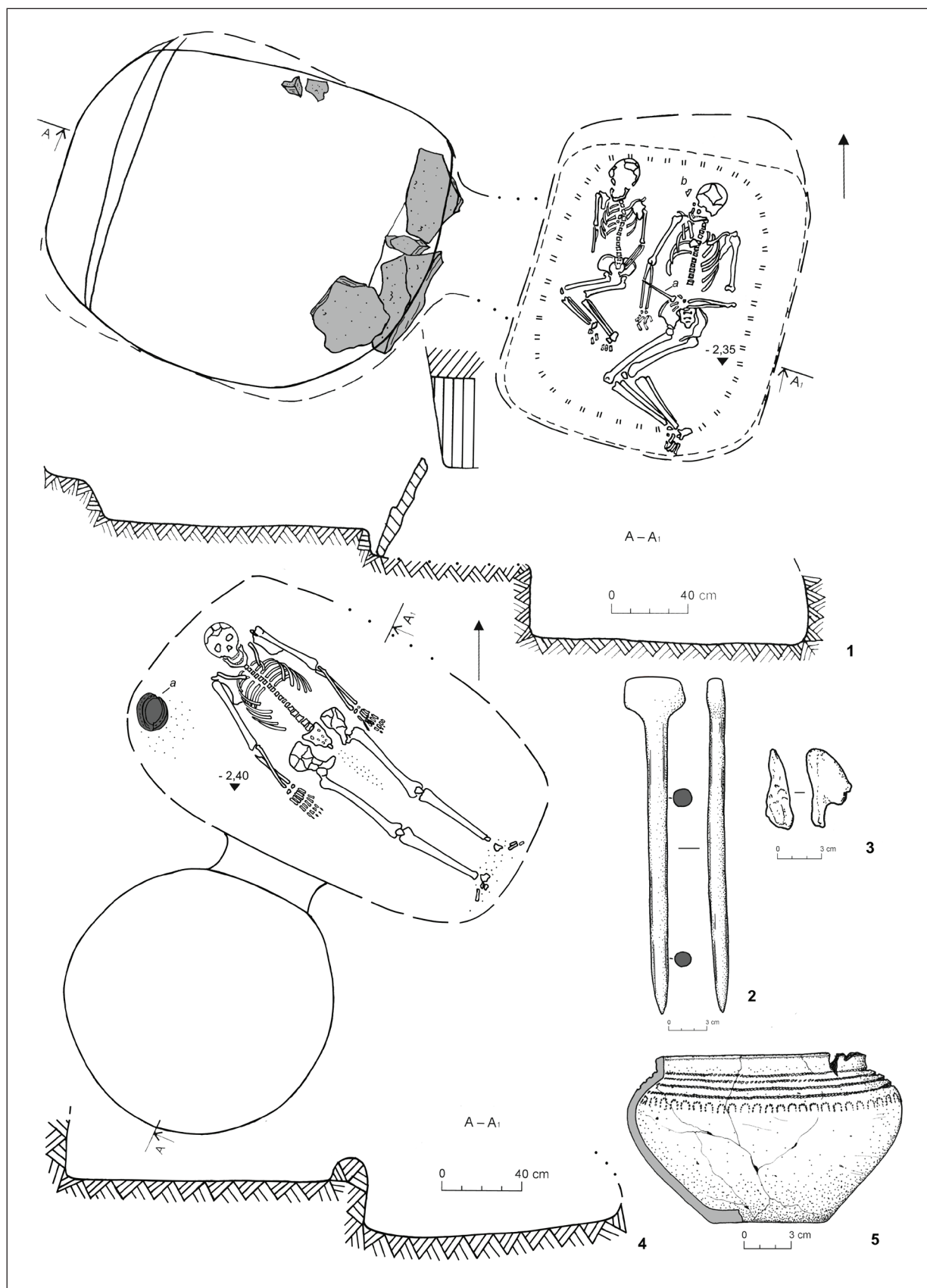
Skeleton 2 (an adolescent) was bent over on the right side, with a turn on the back, and a head placed to the north-east. The right arm was stretched along the body; the left arm was bent at the elbow, resting on the pelvic bones. The legs were bent at the knees at an angle of 60° , at the hip joint of 110° . The feet were covered with ochre.

1. A horn hammer-shaped pin's head was small, flat, without disc-shaped protrusions. The transition between the shaft and the head was smooth. The upper part of the head had a wavy shape. The lower part of the shaft was polished to a high gloss, the head was not polished. Length of the pin: 17.0 cm; diameter of the shaft in the middle part: 0.9 cm; width of the head: 3.0 cm; height: 1.5 cm (fig. 12: 2).

Burial 7 — the earliest in the mound (the Yamna culture) — 3.0 m (65°) from the centre, at the level of 2.6 m from the R (1.5 m from the AH). A rectangular pit with clearly defined corners, measuring 2.0×1.3 m. The pit had a long axis oriented along the north-east — south-west line. Rodent burrows heavily damaged the bottom of the pit and the lower part of the walls. The bottom was covered with chalk and ochre of red and lilac colours. At the bottom there was a skeleton of an adult, crouched on its back, and a head placed to the north-east. The legs, bent at the knees, were on the right side. The skull and shoulder part of the skeleton were missing. The arms were stretched along the body. A horn hammer-shaped pin was found under the forearm of the left hand. A ceramic pot was found in the filling of the pit in the molehill (fig. 11: 1).

It was a ceramic moulded pot with a straight neck and an oval body. The bottom of the pot was round and the neck tapered slightly upwards. The edges of the rim were straight. The vessel was unornamented. The surface of the walls was covered with wide combing on the outside and inside. The colour of the pot was black with small brown specks. Dimensions: height: 13.2 cm, diameter of the rim: 10.5 cm, diameter of the sides: 4.5 cm (fig. 11: 2; 15: 2).

A horn hammer-shaped pin had the large head with clearly defined disc-shaped projections. There was a rounded tubercle on the wide bar. In



the middle of the head, there was a round hole with a diameter of 0.5 cm. The pin was carefully polished to a high gloss, the head was not polished. The length of the pin was 16.7 cm, the width of the head was 4.0 cm, the height was 2.0 cm, and the diameter of the shaft was 1.2 cm (fig. 11: 3).

Burial 8 (the Yamna culture) — 6.25 m (223°) from the centre, at the level of 1.73 m from the R. An oval pit with a concave southern wall, measuring 1.0×0.6 m. The pit was oriented along the long axis in the west — east line. At the bottom of the pit, wooden dies from the roof overlap were traced. A ceramic vessel stood under the eastern wall, with fish vertebrae underneath and in it. No bones of the deceased were found (fig. 11: 7; 15: 3).

A moulded ceramic vessel was a jug with a handle in the form of a loop. The neck extended to the mouth. The handle was attached to the shoulders under the rim. The bottom was flattened, very narrow, unstable. The handle, shoulders and sides of the vessel were decorated with imprints of a twisted cord. The handle had a herringbone ornament with a vertical stripe in the middle. The ornamentation on the shoulders consisted of three horizontal parallel rows along the entire diameter; on the sides, there were shaded triangles with the tops facing down. The rest of the jug was covered with frequent combing. The vessel was black with brown spots. Inside the vessel there were also combing and traces of ochre. Dimensions: jug height: 12.5 cm; neck height: 2.0 cm; rim diameter: 10.5 cm; sides diameter: 13.5 cm; bottom diameter: 4.0 cm (fig. 11: 8).

Burial 9 (the Yamna culture) — 7.25 m (342°) from the centre, at the level of 1.95 m from the R. The rectangular pit was 0.7 m wide, with a long axis oriented to the south-west — north-east. The pit was covered with stones. It was destroyed by burrows on the north-east by two-thirds, and only the leg bones of the buried remained. Probably, the deceased was lying crouched on his right side, with his head to the north-east (fig. 13: 7).

Burial 10 (the Yamna culture) — 4.25 m (286°) from the centre, at the level of 1.67 m from the R. The burial was covered with stones and destroyed by burrows. A fragment of a human skull and a ceramic vessel were found on the preserved part of the bottom (fig. 11: 9).

It was a half of a moulded ceramic vessel (a jug) with a rounded bottom and a looped handle. The jug was not decorated, had a short straight neck and shoulders in the form of a ledge. The entire outer and inner surface was covered with small combing marks. The vessel had the colour of raw clay; there

were black soot spots; the ceramic mass was homogeneous, and the fracture was black. Dimensions: height: 12.5 cm; mouth diameter: 10.5 cm; diameter of the sides: 14.0 cm (fig. 11: 10).

Barrow 2.

This barrow was investigated by two trenches, stratigraphic profiles were made across the top, slopes and floors of the barrow in the west — east direction. The analysis of the stratigraphic profiles allowed making the following observations: loamy layer from the level of 1.63 m; buried soil 0.46 m thick with a visible line of the AH about 22.0 m long; loamy deposit from the main burial 2 at the AH level up to 0.25 m thick. In the central part of the mound, to the east of the R, a late pit measuring 4.8×2.0 m was found, which cut the main burial 2. In the mound, two burials were investigated: one of the Yamna culture and one of the Zrubna culture (fig. 14: 1).

Burial 1 (the Zrubna culture) — 9.75 m (265°) from the centre, at the level of 0.98 m from the R, in the mound. The contours of the burial pit could not be traced. The child's skeleton laid crouched on the left side, with the head placed to the north-east. The right arm was bent at the elbow, and only the bone of the forearm remained from the left arm. The legs were severely bent at the knees, with the heels brought to the pelvis. There was no inventory (fig. 14: 2).

Burial 2 — the earliest in the mound (the Yamna culture ?) — in the centre of the mound, at the level of 1.95 m from the R. The rectangular pit with rounded corners was excavated from the AH level. The pit was oriented by a long axis along the north-east — south-west line. Later digging and burrows destroyed the main part of the burial. A small section of the bottom was preserved in the southern part of the pit. White decay and brown ochre were observed; the thickness of the bedding was up to 1.0 cm. In the pit filling, 0.5 m from its bottom, a slab of shell rock measuring $0.90 \times 0.75 \times 0.17$ m was found. Fragments of human bones stained with ochre were also discovered in the pit filling (fig. 14: 3).

Some finds in the mound:

1. In the I-North trench at a depth of 0.8 m from the R, a triangular flint tool on a light grey flake was uncovered. The two sides of the tool were decorated with chips and small retouching. Dimensions: $2.3 \times 2.0 \times 1.6$ cm.

2. In the I-South trench at a depth of 0.44 m from the R, a small fragment of the wall of a moulded ceramic vessel without ornament, grey in colour, was found.

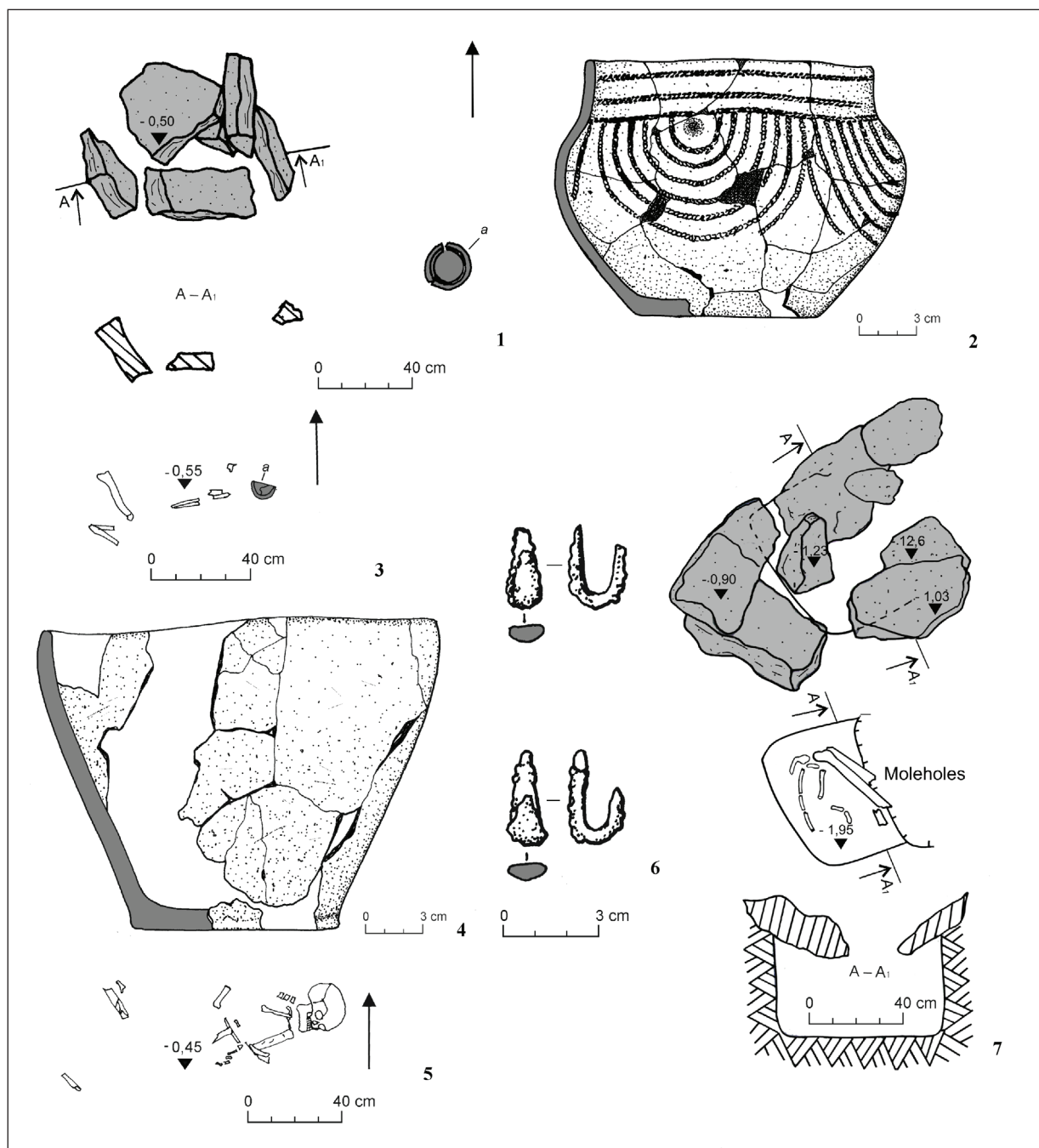


Fig. 13. Kalynivka II. Barrow 1: 1, 2 — burial 2 (on the plan: *a* — a ceramic vessel); 3, 4 — burial 1 (on the plan: *a* — a ceramic vessel); 5 — burial 3; 6 — bronze pendants from the mound; 7 — burial 9

3. A bird bone and a single stone were revealed in the I-South trench.

Cultural and Chronological Interpretation

The Yamna culture.

At least nine burials were found in three mounds, which can be attributed to the Yamna culture according to ritual and inventory features. In the barrow 1 of the Kalynivka I group, three simultaneous burials were discovered — 3, 5 and 6. All three bur-

ials were the earliest in the mound of the Yamna culture. The loam excavated from these pits laid on top of the buried soil and was a single system. In the barrow 2 of the Kalynivka I group, the loam from the main burial 5 was also at the level of the AH.

In the barrow 1 of the Kalynivka II group, five burials of the Yamna culture were investigated. The earliest in the mound was the central burial 7 in a deep pit, the loam from which was at the level of the ancient horizon. It is likely that the burial 10 can also be considered the main one in the mound, as a small

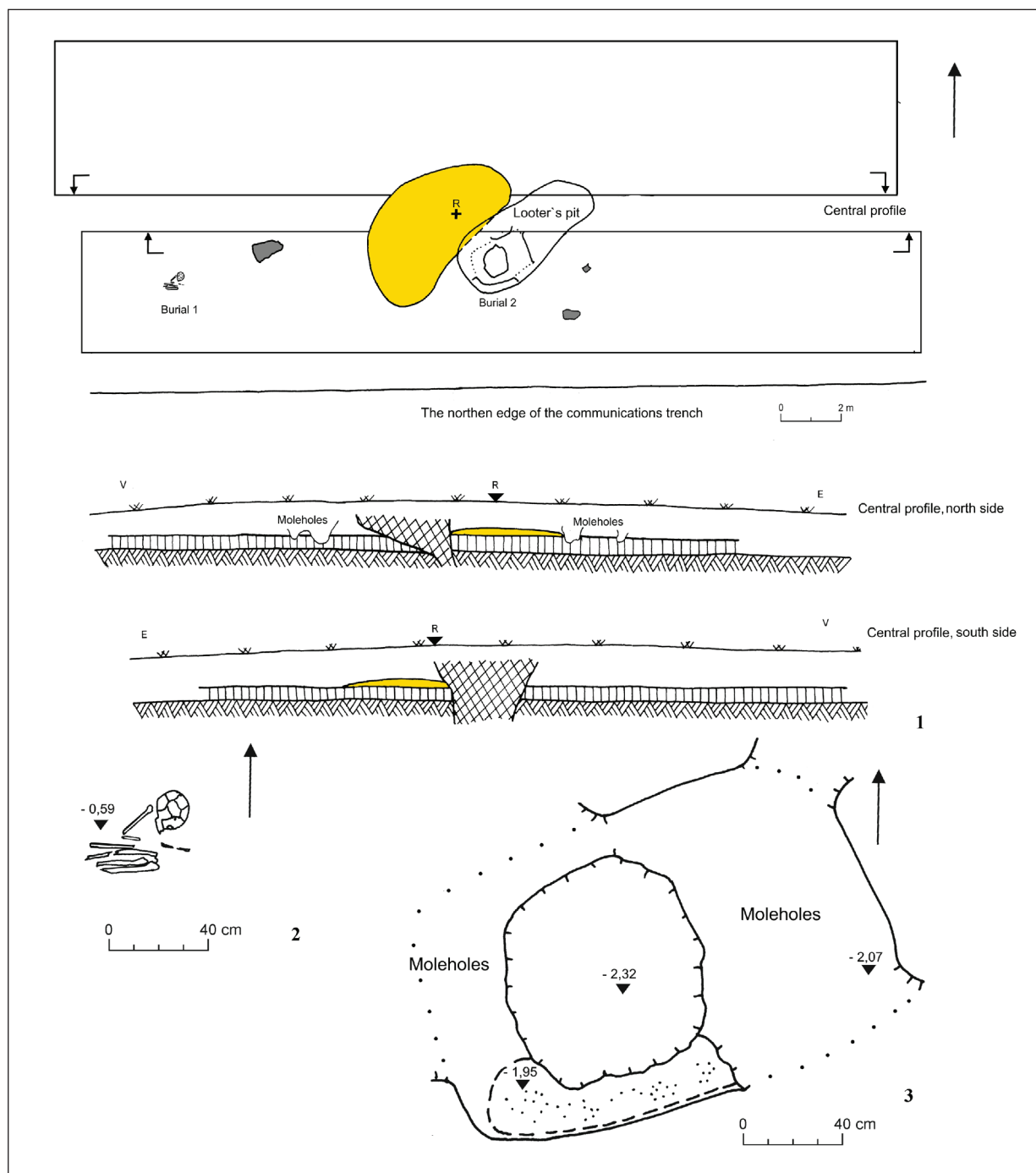


Fig. 14. Kalynivka II. Barrow 2: 1 — a general plan and stratigraphic profiles; 2 — burial 1; 3 — burial 2

layer of loam from the pit at the level of the AH was also observed in the central stratigraphic profile. The remaining burials of the Yamna culture (4, 8 and 9) were later incorporated into the existing mound.

The absence of reliable markers in the ritual and inventory set complicates the cultural attribution of the burial 2 of the barrow 2 of the Kalynivka II group. However, the main position in the centre of the mound, the depth of the burial structure, the presence of bedding and human bones painted

with brown ochre, with a certain degree of probability, suggest that this assemblage belongs to the Yamna culture. This statement is also not contradicted by the shape and orientation of the grave: in all the studied mounds, the main burials of the Yamna culture were in rectangular pits with rounded corners, oriented by a long axis along the east-west or northeast-southwest line.

Several burials were partially or completely destroyed by molehills. This fact complicates the re-



Fig. 15. Kalynivka I and II. Ceramic pottery from the burials: 1 — I/1/8; 2 — II/1/7; 3 — II/1/8; 4 — II/1/2; 5 — II/1/5 (photo by V. K. Kulbaka)

search analysis. Geographically, the materials of the Kalynivka mounds belong to the Azov variant of the Yamna cultural and historical area as defined by M. Ya. Merpert (Мерперт 1974, с. 15) or to the Azov-Crimean group identified by O. H. Shaposhnikova (Шапошникова 1985, с. 349). In the burials, both main and inlet graves, the deceased were placed on their backs, with their legs bent at the knees, falling (or laid) to the right or left. The ceremonial and ritual features of these burials allow attributing them to the late stage (possibly to the end of the developed and late stages) of this culture existence in the Azov steppes (Кравец, Посредников 1989, с. 26-29).

The ceramic collection is represented by three pots. Two of the vessels had handles. Such ceramic forms are typical for the late phase burials of the Yamna culture of the North Azov region (Шапошникова 1985, с. 349; Санжаров 2001, с. 30-32). Fragments of similar pottery come from the upper layer of the Mykhailivka settlement, which is synchronised with the late phase of the Yamna culture (Коробкова, Шапошникова 2005, с. 78). According to S. M. Sanzharov's classification, the Kalynivka's pots with handles can be attributed to the Group 6, and the pot from the burial 7 of the barrow 1 of the Kalynivka I group — to the Group 2 ceramic vessels

of the Yamna culture late phase of the North-Eastern Azov region (Санжаров 2001, с. 27, 30).

The hammer-shaped pins find's a wide range of analogies among the antiquities of the late phase of the Yamna culture of both the Northern Azov and other regions of the Black Sea steppe (Шапошникова 1985, с. 347, 348; Санжаров 2001, с. 40). A bronze knife in a wooden sheath was a very expressive find (Kalynivka I, barrow 1, burial 5). The asymmetrical blade with a concave back and a convex working side is a distinctive feature of the item. The rounded end of the blade was curved upwards. A similar knife was revealed in the burial of the late phase of the Yamna culture in Eastern part of the Northern Azov region (Кульбака, Качур 2002, с. 15).

The Catacomb cultures.

Twelve burials were discovered in three mounds, which can be attributed to the Catacomb cultures based on ritual and inventory features. Five burials (2, 7, 8, 9 and 10) were discovered in the Kalynivka I group in the barrow 1, four burials (1, 6, 8 and 9) in the barrow 2, and three burials (2, 5 and 6) in the barrow 1 of the Kalynivka II group. In all cases, the catacomb burials were placed on the outskirts of ancient mounds built by the carriers of the Yamna culture. It

can be assumed that the absence of catacomb complexes in the barrow 2 of the Kalynivka II group is explained by the partial study of only its central part, due to the nature of modern urban development.

Burials 2, 7, 8 and 10 of the barrow 1, and burials 1, 6, 8 (with a certain degree of probability) and 9 of the barrow 2 of the Kalynivka I group, as well as the burial 6 of the barrow 1 of the Kalynivka II group, are dated to the early Catacomb period. Both barrows of the Kalynivka I group showed a radial arrangement of burials in the sub-mound space. The cameras were directed towards the centre of the mound. The catacombs of this time had a T-shaped and H-shaped configuration. The shafts were connected to the chamber by a short, narrow passage. The chambers and shafts were subrectangular in plan. The entrance to the catacombs was covered with stone slabs, rarely with organic coverings, which were not preserved.

The absence of funerary equipment and the poor preservation of the catacomb complicate the accurate cultural and chronological interpretation of the burial 8 of the barrow 2 of the Kalynivka I group. In addition, the deceased was laid in an atypical burial position for early catacomb burials in the North-Eastern Azov region. The tribes of the early phase of the Catacomb culture of the eastern part of the Northern Azov region preferred to place the buried on the right side (Санжаров 2001, с. 53). The position of the bodies of the deceased on the left side of the Early Catacomb culture is quite common in the western part of the Northern Azov region, but the position of the hands varies (Болтрик, Левченко, Фиалко 1991, с. 69, 71).

In general, the tradition of placing the body of the buried on its back with a turn to the right side or completely on the right side was typical for the early phase of the Catacomb culture of the Northern Azov region. The materials of the Kalynivka mounds demonstrate this trend, albeit with some extraordinary cases. The straightened position of the legs and, possibly, the absence of the feet of the deceased from the burial 6, the barrow 2 of the Kalynivka I group, are noteworthy. In the burial 10 of the barrow 1 of the Kalynivka I group, the leg bones of one of the buried may indicate that the body position could be defined as kneeling. The postures of the deceased in the burial 7 of the barrow 1 of the Kalynivka I group demonstrate a ritual dichotomy. In our opinion, this case demonstrates an echo of the old funerary paradigm, as a similar posture is known in the burials of the Yamna culture of the Budzhak Steppe and Transnistria (Чеботаренко, Яровой, Тельнов 1989, с. 114, 152),

in the Inhul River region (Николова 2012, с. 20), in the mounds of the Dnipro region (Попандопуло 1995, с. 140, 141), the Crimea (Колтухов, Кислый, Тощев 1994, с. 34) and of the Northern Azov region (Вязьмитина та ін. 1960, с. 48). The placement of the bodies across the catacomb chamber may be related to the process of adaptation to the new norms of funerary rites.

The funerary equipment of these graves demonstrates archaic features of the previous time of the Yamna culture. A striking example is a round-bottomed vessel from the burial 8 of the barrow 1 of the Kalynivka I group. There is a continuation of the ritual tradition of the Yamna culture tribes: the pottery accompanies the child's burial. Bone ornaments (primarily with screw threads), drilled dog's canines. All of these decorations find analogies in early catacomb burials of the Northern Azov region (Вязьмитина та ін. 1960, с. 125; Посредников, Зарайская 1993, с. 144), the Crimea (Тощев 2007, с. 122, 138) and the Dnipro region (Гаврилюк, Черных 1990, с. 96). Identical sets have their genetic roots in the antiquities of the Yamna culture and come from the mounds of the Northern Azov region (Посредников, Зарайская 1993, с. 125), the Crimea (Копьева 1990, с. 130), the Dnipro region (Тощев, Самар 1990, с. 34, 35) and other areas.

Canine tooth (fangs) in the Early Bronze Age graves of the late phase of the Yamna and the early phase of the Catacomb cultures often accompany children. This suggests a special role for these objects, which can be identified with children's amulets. Probably, in the minds of people whose everyday life was connected with cattle breeding, the dog could be identified as a protector. According to ethnographic data, children are considered the most vulnerable and in need of protection from the evil eye and black magic. Namely children wore amulets as a protective item (Успенская 1988, с. 167). Bone or horn pins are well known from the materials of the late phase of the Yamna and the early phase of the Catacomb cultures. As a rule, they have a hammer-shaped head and a hole. The authors were unable to find a complete analogy to the pin from the burial 6 of the barrow 1 of the Kalynivka II group among the Early Bronze Age antiquities of the Northern Azov region. Temporal spiral pendants are also a typical category of material culture of the Yamna and the early phase of the Catacomb cultures of the North-Eastern Azov region (Санжаров 2001, с. 33, 59).

Bronze plates, most likely attached to a leather base, were part of a bracelet (burial 6 of the barrow 2 of the Kalynivka I group). Typologically sim-

ilar specimens, but without punch ornamentation, were uncovered in the burial of the early phase of the Catacomb cultures in the Dnipro region (Buzivka III, burial 16 of the barrow 2). The researchers of this complex believe that these plates were used to decorate a leather belt (Марина, Костенко, Никитин 1981, с. 7). In another burial from the Dnipro region (Katerynivka, burial 12 of the barrow 1), traces of copper oxides from a bronze plate bracelet were revealed on the right leg of the deceased (Ромашко, Марина 2018, с. 18). In the burials of the early phase of the Catacomb culture in the Crimea (Bolutne, burial 28 of the barrow 14 and Frunze, burial 4 of the barrow 1), larger plates were found, which were also attached to a leather base and ornamented with a punch. They were apparently used as fetish breast ornaments (Копьева-Колотухина 2008, с. 253, 257).

In addition, while the appearance of ornamented breastplates among the carriers of the catacomb burial tradition can be seen as an influence from the Caucasus, bracelets decorated with metal plates are most likely the legacy of the Yamna culture tribes. The fashion for jewellery in the form of leather straps decorated with copper and bronze plates (bracelets or belts) dates back to the Eneolithic period. In the burial of the Post-Mariupol culture from the island of Khortytsia on the Dnipro River, similar finds were discovered, although morphologically somewhat different from their Early Bronze Age counterparts (Гаврилюк *на ін.* 2006, с. 18). A series of direct analogies can be found in the materials of the Yamna culture (Ольговський 1988, с. 136).

One detail that has been traced in the burial 10 of the barrow 1 of the Kalynivka I group can be considered quite interesting. There, a resinous coating was traced on the heads of the deceased. This case is not unique. For the first time, a similar detail of a funerary rite was recorded in the Northern Azov region in a burial of the Early Catacomb culture — burial 7 of the barrow 14 of the group Akkermen I (Вязьмітіна *та ін.* 1960, с. 62). According to L. Klein, such manipulations with the body of the buried are associated with scalping (Клейн 1961, с. 106). Unfortunately, the absence of anthropological definitions does not allow confirming or refuting this assumption in relation to the dead from the investigated barrow near Kalynivka village.

One destroyed burial of the Donetsk (Donetsk-Don) Catacomb culture was discovered in the barrow 1 of the Kalynivka II group. The diagnostic find was a pot with ornaments typical for the Donetsk Catacomb culture. According to S. N. Bratchen-

ko's typology, this pot belonged to the Division III, Group A, Type 1 (Братченко 1976, с. 27), and according to S. Pustovalov's typology, to the Type 12 (Пустовалов 2009, с. 110). It is worth noting that the graves of the bearers of this culture are quite rare in the Azov steppes (Санжаров 2001, с. 99). The ceramics of the "Donetsk" type is also found in the burials of the Inhul Catacomb culture. Such cases are known not only on the eastern periphery of the area of the Inhul Catacomb culture, but also very far beyond the distribution of the Donetsk Catacomb culture (Іванов 2020, с. 65).

The Inhul Catacomb culture is represented by two burials: Kalynivka I, burial 9 of the barrow 1 and Kalynivka II, burial 5 of the barrow 1. Both complexes have a distinct number of features inherent in the sites of the Inhul Catacomb culture of the North-Eastern Azov region: the inlet position in the barrow, mainly in the eastern part of the mound, the shape of the catacombs (rounded entrance shafts and oval chambers), and the upright position of the deceased (Санжаров 2001, с. 70-99). The ceramic pot from the burial 5 can be attributed to the Type 18 according to the classification of S. Zh. Pustovalov (Пустовалов 2009, с. 114). The relatively small number of burials in this region can be explained by the fact that the lower Kalmius River is the eastern periphery of the Inhul Catacomb culture.

The Zrubna culture.

In total, at least six burials were found in the four investigated barrows, which can be confidently attributed to the Zrubna culture based on a number of features of the ritual and inventory set. The barrow 2 of the Kalynivka I group contained three burials (2, 3 and 4). Barrows 1 and 2 of the Kalynivka II group contained two (1 and 3) and one (1) burials respectively. In all cases, the burials of the Zrubna culture here were inlet ones, using already existing primary mounds, built by the bearers of cultures of previous epochs. Thus, the location of the inlet burials of the Zrubna culture was entirely dependent on the layout of the ancient mounds. However, certain principles of layout cannot be traced for the burial complexes of the Zrubna culture itself due to a small number of burials studied. In all cases, the graves occupied central parts or south-western sectors of the mounds.

All burials were carried out in the mound at a depth of 0.20 to 0.59 m from the modern surface. In all cases, the contours of the grave structure were not recorded. It would be logical to assume that a simple pit was used as a grave structure in these cases. The analysis of the depths of

the grave pits of the Zrubna culture of the Northern Azov region and adjacent territories shows that the pits with depths of up to 1.0 m predominate, both in the array of inlet burials in the mound and in the array of burials investigated in the mainland pits (Забавин 2013, с. 60). The average depths of the investigated burials of the Zrubna culture near Kalynivka village do not contradict this statement, which is due to the destruction (reduction) of the mounds by many years of systematic ploughing. Thus, the depth of the burial 4 in the mound filling of the barrow 1 of the Kalynivka I group suggests that this complex belongs to the Zrubna culture.

The analysis of the ritual and inventory set of the studied burials reflects the general funerary traditions characteristic of the entire Zrubna entity. The most widespread form of the studied graves — an individual burial (an inhumation) in a regular pit, in a bent position on the left side, with arms bent at the elbows and placed near the face or in front of the chest of the deceased with the head facing the eastern sector — is widespread throughout the area of the Zrubna culture and is recognised as a “standard” or “ritual norm”. There is also a certain uniformity in the placement of ceramic vessels in the space of the studied burials. In all cases where it was possible to determine the location of the vessels, they were placed in front of the head (face) of the buried or in front of the chest. Namely such an area proved to be the most typical for the placement of ceramic vessels in the burials of the Zrubna culture of the Northern Azov region — 84.3 % of cases (Забавин 2019, с. 91).

In general, according to V. V. Otroshchenko's concept of two funerary traditions or lines of development of the Zrubna cultural entity, the investigated sites belong to the zone of absolute predominance of the Berezhnivka-Maivka Zrubna culture in terms of their territorial and cultural-chronological features (e.g. Отощенко 1994; 2003). Thus, based on the typological analysis of the ritual and inventory complex and mound comparative stratigraphy, all the studied burials of the Kalynivka barrows can be confidently attributed to one chronological horizon, which features to the characteristics of the third (late) stage of the development of the Zrubna culture of the Northern Azov region.

The Early Iron Age.

The burial 1, investigated in the barrow 1 of the Kalynivka I group, belongs to the Early Iron Age and precedes the Scythian sites. Some researchers interpret these burials as the Cimmerian culture (O. I. Terenozhkin, S. V. Makhortykh, S. A. Sko-

ryi), while others attribute them to the Chornohorivka culture (O. R. Dubovska, M. M. Darahan). In his publications of the 1960s, and later in his fundamental work on the Cimmerians, O. I. Terenozhkin divided all the pre-Scythian sites of the Early Iron Age of the Northern Black Sea region into two chronological horizons (stages): the Chornohorivka and Novochoerkassk periods. The author identified the inhabitants of these two cultural groups with the historical Cimmerians, known from Greek and Eastern written sources (Тереножкин 1976). The researchers attributed to the Chornohorivka group those burials described by the deceased's posture bent on the left side and oriented in an eastern direction. The chronological boundary of the Chornohorivka stage was defined within 950–750 BC. The second, Novochoerkassk stage, was characterised by burials with the body in a straightened position and a predominantly western orientation, which were dated to 750–650 BC (Тереножкин 1976, с. 93–98; Дубовская 1997; Махортых, Скорый 2004; Черных, Дараган 2014, с. 345–348).

Thus, the burial discovered near Kalynivka is interpreted by the authors as a Cimmerian burial of the Novochoerkassk type (according to O. I. Terenozhkin and S. V. Makhortykh) or as a burial of the late stage of the Chornohorivka culture (according to O. R. Dubovska and M. M. Darahan).

The burial 7, investigated in the barrow 2 of the Kalynivka I group, can also be attributed to the Early Iron Age by a set of features. The use of an existing mound for a burial, the supine position of the deceased and the orientation to the northern sector (with a deviation to the east), a shallow depth of the burial (including in the mound) are the main distinctive features of early Sarmatian burials in the Northern Black Sea region (2nd — 1st centuries BC), to which the published complex should be attributed. The absence of reliable markers in the ritual and inventory set makes it difficult to narrow the date of this burial. Small glass beads are a fairly common category of finds. As a rule, they are dated broadly (one and a half to two centuries). The ceramic spindle whorls represented in the early Sarmatian burials of the Northern Black Sea region are also chronologically neutral (Симоненко 1994, с. 35–38, 44).

Thus, on the basis of the barrow comparative stratigraphy and typological analysis of the ritual and inventory complex, all burials investigated in four barrows near Kalynivka village were culturally attributed and distributed by chronological horizons (tabl. 1).

Conclusions

In the field seasons of 1985 and 1989, the Mariupol Archaeological Expedition led by V. K. Kulbaka explored four mounds in the Northern Azov region on the eastern outskirts of Mariupol. The barrow group was located on the left watershed of the Omelkova gully (left tributary of the Kalmius River). The mounds were part of a large barrow field located in the floodplain of the Kalmius River left bank. In 1985, two barrows in a group of four mounds were excavated near Kalynivka village (Kalynivka I). Ten burials were discovered in the barrow 1: three of the Yamna culture, five of the Catacomb cultures, one of the Zrubna culture, and one of the Iron Age (Cimmerian, Novocherkassk type). Nine burials were discovered in the barrow 2: one of the Yamna culture, four of the Catacomb cultures, three of the Zrubna culture, and one of the Iron Age (Sarmatian). In 1989, two barrows were also studied in the neighbourhood of Kalynivka village (Kalynivka II). Ten burials were discovered in the barrow 1: five of the Yamna culture, three of the Catacomb cultures, and two of the Zrubna culture. Two burials were researched in the barrow 2: one of the Yamna culture, and one of the Zrubna culture.

A total of 31 burials were investigated in four mounds near Kalynivka village. According to their cultural and chronological features, the studied complexes belong to different archaeological cultures from the Early Bronze to the Early Iron Ages: the Yamna culture — 10; the Catacomb cultures — 12; the Zrubna culture — 7; the Early Iron Age — 2.

The ritual and inventory features of the Yamna culture burials allow attributing them to the late (possibly to the end of the developed and late) stage of the existence of this culture in the Azov steppes. In geographical terms, these materials belong to the Azov variant of the Yamna cultural area or to the Azov-Crimean group.

Twelve burials were discovered in three mounds, which can be attributed to the Catacomb cultures of the Northern Azov region based on ritual and inventory features. In particular, nine of the Catacomb culture early phase, one of the Donetsk Catacomb culture and two of the Inhul Catacomb culture.

All the studied burials of the Zrubna culture belong to the same horizon, which corresponds to the characteristics of the third (late) chronological horizon of the development of the Zrubna culture of the Northern Azov region. In general, the studied sites belong to the zone of absolute predominance of the Berezhnivka-Maivka Zrubna culture in terms of their geographical location and cultural and chronological features.

One burial, based on a set of features, belongs to the Early Iron Age and predates the Scythian sites. The authors interpret the burial as the Cimmerian site of the Novocherkassk type or as the burial of the late stage of the Chornohorivka culture. The second burial can also be dated to the Early Iron Age. According to a number of features of the ritual and inventory complex, the burial belongs to the circle of early Sarmatian sites of the Northern Black Sea region.

Table 1. Cultural identity of the burials of the Kalynivka barrows

Archaeological cultures (chronological horizons)	Kalynivka I, barrow 1/	Kalynivka I, barrow 2/	Kalynivka II, barrow 1	Kalynivka II, barrow 2
	Burial number			
Sarmatian	—	7	—	—
Cimmerian	1	—	—	—
Zrubna culture	4	2, 3, 4	1, 3	1
Catacomb cultures	2, 7, 8, 9, 10	1, 6, 8, 9	2, 5, 6	—
Yamna culture	3, 5, 6	5	4, 7, 8, 9, 10	2

Болтрик, Ю. В., Левченко, В. Н., Фиалко, Е. Е. 1991. О позднемных чертах в катакомбном погребальном обряде низовья реки Молочная. В: Братченко, С. Н. (ред.). *Катакомбные культуры Северного Причерноморья*. Киев: ИА НАН УССР, с. 57-84.

Братченко, С. Н. 1976. *Нижнее Подонье в эпоху средней бронзы*. Киев: Наукова думка.

Вязьмитина, М. И., Іллінська, В. А., Покровська, С. Ф., Тереножкін, О. І., Ковпаненко, Г. Т. 1960. Кургани біля с. Ново-Пилипівка і радгоспу «Аккермень». В: Бібіков, С. М.

(відп. ред.). *Археологічні пам'ятки УРСР*, VIII. Київ: Видавництво Академії наук Української РСР, с. 22-135.

Герасименко, Н. П. 1997. Природная среда обитания человека на юго-востоке Украины в позднеледниковье и голоцене (по материалам палеогеографического изучения археологических памятников). В: Колесник, А. В. (відп. ред.). *Археологический альманах*, 6. Донецьк: Донбас, с. 3-64.

Гаврилюк, Н. О., Рассамакін, Ю. Я., Разумов, С. М., Остапенко, М. А., Дараган, М. М. Ковальов, М. В., Мінаєва, Н. І. 2006. Розкопки та музеєфікація курганів на

о. Хортиця. В: Гаврилюк, Н. О. (упор.). *Археологічні пам'ятки Хортиці та їх музеєфікація*, 1. Запоріжжя: Дике Поле, с. 13-29.

Гаврилюк, Н. А., Черных, Л. А. 1990. Курган у г. Васильевка Запорожской области. В: Тошев, Г. Н., Шахров, Г. И., Шаповалов, Г. И. (ред.). *Древности Степного Причерноморья и Крыма*, 1. Запорожье (б. и.), с. 91-101.

Горбов, В. Н. 1993. Поселенческие комплексы Приазовья в системе синхронизации западного и восточного кругов культур валиковой керамики. В: Бочкарев, В. С. (ред.). *Новые открытия и методологические основы археологической хронологии*. Санкт-Петербург (б. и.), с. 90-93.

Дубовская, О. Р. 1997. Об этнокультурной атрибуции «новочеркасских» погребений Северного Причерноморья. В: Колесник, А. В. (відп. ред.). *Археологический альманах*, 6. Донецьк: Донбас, с. 181-218.

Евглевский, А. В., Кульбака, В. К. 2003. Грунтовой могильник золотоордынского времени Ляпинская балка из Северо-Восточного Приазовья. В: Евглевский, А. В. (ред.). *Степи Европы в эпоху средневековья*, 3. Донецк: ДонНУ, с. 363-404.

Забавин, В. О. 2011. Курганный могильник срубной культуры у восточной окраины г. Мариуполя. *Донецкий археологический збірник*, 15, с. 161-170.

Забавин, В. О. 2013. Характеристика погребальных сооружений срубной культуры Северного Приазовья. *Донецкий археологический збірник*, 17, с. 56-78.

Забавин, В. О. 2019. Керамичний комплекс зрубної культури Північного Приазов'я. *Донецкий археологический збірник*, 22, с. 90-101. <https://doi.org/10.31558/2218-2284.2019.22.5>

Забавин, В. О., Небрат, С. Г. 2013. Розвідки в Новоазовському р-ні Донецької обл. В: Болтрик, Ю. В. (відп. ред.). *Археологічні дослідження в Україні 2012 р.* Київ: ІА НАН України, с. 145-147.

Забавин, В. О., Небрат, С. Г. 2018. Розкопки кургану Седоркін на півдні Донецької області. *Донецкий археологический збірник*, 21, с. 175-191. <https://doi.org/10.31558/2218-2284.2018.21.8>

Забавин, В. О., Небрат, С. Г. 2021. Нові поховання передскіфського часу з Північно-Східного Приазов'я. *Археологія*, 1, с. 72-85. <https://doi.org/10.15407/archaeologyua2021.01.072>

Іванов, М. С. 2020. Поширення донецьких кубків серед поховань інгульської катакомбної культури. *Археологія*, 4, с. 65-72. <https://doi.org/10.15407/archaeologyua2020.04.065>

Клейн, Л. С. 1961. Черепа, покрытые смолой, в погребениях эпохи бронзы. *Советская этнография*, 2, с. 105-109.

Колтухов, С. Г., Кислий, А. Е., Тошев, Г. Н. 1994. *Курганные древности Крыма (по материалам раскопок Северо-Крымской экспедиции в 1991-1992 гг.)*. Запорожье: Издательство ЗГУ.

Копьева, Т. А. 1990. Курган у села Акимовка в Крыму. В: Тошев, Г. Н., Шахров, Г. И., Шаповалов, Г. И. (ред.). *Древности Степного Причерноморья и Крыма*, 1. Запорожье (б. и.), с. 128-136.

Копьева-Колотухина, Т. А. 2008. Катакомбные погребения с бронзовой пластиной в кургане у села Фрунзе в Крыму. В: Петрова, Э. Б. (ред.). *Херсонский колокол*. Симферополь: Сонат, с. 251-266.

Коробкова, Г. Ф., Шапошникова, О. Г. 2005. *Поселение Михайловка — эталонный памятник древнейшей культуры (экология, жилища, орудия труда, системы жизнеобеспечения, производственная структура)*. Санкт-Петербург: Европейский Дом.

Кравец, Д. П., Посредников, В. А. 1989. Памятники эпохи ранней бронзы Донеччины. В: *Проблемы охраны и исследования памятников археологи в Донбассе*. Донецк (б. и.), с. 23-26.

Кравченко, Э. Е. 2003. Средневековый комплекс поселения Ляпинская балка в Северо-Восточном Приазовье. В: Евглевский, А. В. (ред.). *Степи Европы в эпоху средневековья*, 3. Донецк: ДонНУ, с. 345-362.

Кульбака, В. К. 1985. *Отчет об исследовании курганов у с. Калиновка Новоазовского р-на Донецкой обл. в 1985 г.* Науковий архів ІА НАН України, ф. 64, 1985/103.

Кульбака, В. К. 1998. *Звіт про дослідження курганів та ґрунтового могильника на території м. Мариуполя в 1998 р.* Науковий архів ІА НАН України, ф. 64, 1998/26.

Кульбака, В. К., Гнатко, И. И. 1990. *Отчет об исследованиях курганов в зонах новостроек: у с. Калиновка Новоазовского р-на, у с. Раздольное Старобешевского р-на, у с. Камышеватое Першотравневого р-на, у с. Кондратьевка Константиновского р-на и г. Мариуполя Донецкой обл. в 1989 г.* Науковий архів ІА НАН України, ф. 64, 1989/87.

Кульбака, В. К., Гнатко, И. И. 1990. *Отчет об исследованиях курганов у с. Коминтерново Новоазовского р-на, с. Октябрьское Добропольского р-на, с. Красногоровка и с. Сокол Ясиноватского р-на и г. Мариуполь Донецкой обл. в 1990 г.* Науковий архів ІА НАН України, ф. 64, 1990/147.

Кульбака, В., Качур, В. 1998. *Соматичні культури бронзового віку півдня Східної Європи*. Мариуполь: Видавничо-поліграфічний центр ПДТУ.

Кульбака, В., Качур, В. 2000. *Індоевропейські племена України епохи палеометалу*. Мариуполь: Рената.

Кульбака, В., Качур, В. 2002. *Давні індоевропейці України в світлі новітніх археологічних досліджень*. Мариуполь (б. в.).

Кульбака, В. К., Небрат, С. Г. 2010. Катакомбные погребения бронзового века у села Калиновка. В: Ільяшенко, Т. В. (відп. ред.). *Літопис Донбасу*, 18. Донецьк: Донбас, с. 22-36.

Кучугура, Л. И. 2001. *Научная справка на тему: История археологической коллекции Мариупольского краеведческого музея. Собиратели. Исследователи (с дополнениями 2006 г. и 2013 г.)*. Науковий архів Мариупольського краєзнавчого музею, ф. І-15/2001.

Литвиненко, Р. О. 2023. Повоєнна археологія Донеччини: завдання й перспективи рятувальних досліджень. В: Коваль, Ю. Г. (відп. ред.). *Краєзнавчий рух на Донеччині. Матеріали Всеукраїнської науково-практичної онлайн-конференції*. Краматорськ: ДОКМ, с. 31-36.

Марина, З. П., Костенко, В. И., Никитин, С. В. 1981. Курганный могильник у с. Бузовка. В: Ковалева, И. Ф. (ред.). *Степное Поднепровье в бронзовом и раннем железном веках*. Днепропетровск: Издательство ДГУ, с. 4-18.

Махортых, С. В., Скорый, С. А. 2004. О киммерийской (новочеркасской) группе памятников юга Восточной Европы. В: Chochorowski, J. (ed.). *Kimmerowie, Scytowie, Sarmaci*. Kraków: Instytut Archeologii Uniwersytetu Jagiellońskiego, p. 231-258.

Мерперт, Н. Я. 1974. *Древнейшие скотоводы Волжско-Уральского междуречья*. Москва: Наука.

Ніколова, А. В. 2012. Абсолютна хронологія ямної культури Північного Надчорномор'я в світі дендродат. *Археологія*, 4, с. 14-31.

Ольговский, С. Я. 1988. О цветной металлообработке у племен ямной культуры. В: Шапошникова, О. Г. (ред.). *Новые памятники ямной культуры степной зоны Украины*. Киев: Наукова думка, с. 135-140.

Отрошенко, В. В. 1994. О двух линиях развития культур племен срубной общности. В: Тошев, Г. Н. (ред.). *Проблемы скифо-сарматской археологии Северного Причерноморья*, 2. Запорожье: Запорожский гос. университет, с. 150-153.

Отрошенко, В. В. 2003. К истории племен срубной общности. В: Пряхин, А. Д. (ред.). *Археология восточноевропейской лесостепи*, 17: Доно-Донецкий регион в эпоху

бронзи. Воронеж: Издательство Воронежского университета, с. 68-96.

Пиневич, П. М. 1928. *Археологические обследования на Мариупольщине и археологические раскопки 1928 г.* Науковий архів ІА НАН України, фонд Всеукраїнської археологічної комісії, 202/26.

Попандопуло, З. Х. 1995. Курганный могильник у с. Бельное. В: Тоцев, Г. Н. (отв. ред.). *Древности степного Причерноморья и Крыма*, 5. Запорожье (б. и.), с. 126-142.

Посредников, В. А., Зарайская, Н. П. 1993. Материалы курганов у с. Огородное (Северное Приазовье). *Донецкий археологический сборник*, 4, с. 82-178.

Пустовалов, С. Ж. 2009. Классификация катакомбной керамики. *Vita Antiqua*, 7-8, с. 101-123.

Ромашко, О. В., Маріна, З. П. 2018. Дослідження кургану біля с. Катеринівка у Присамар'ї. В: Болтрик, Ю. В. (відп. ред.). *Археологічні дослідження в Україні 2016*. Київ: ІА НАН України, с. 17-18.

Санжаров, С. Н. 2001. *Катакомбные культуры Северо-Восточного Приазовья*. Луганск: Издательство ВНУ.

Симоненко, О. В. 1994. Ранньосарматський період у Північному Причорномор'ї. *Археологія*, 1, с. 32-48.

Тереножкин, А. И. 1976. *Киммерийцы*. Киев: Наукова думка.

Тоцев, Г. Н. 2007. *Крым в эпоху бронзы*. Запорожье: Издательство ЗНУ.

Тоцев, Г. Н., Самар, В. А. 1990. Исследование курганного могильника эпохи бронзы на Херсонщине. В: Тоцев, Г. Н., Шахров, Г. И., Шаповалов, Г. И. (ред.). *Древности Степного Причерноморья и Крыма*, 1. Запорожье (б. и.), с. 31-66.

Успенская, Е. Н. 1988. Раннее детство у пахари пригималайских регионов Северной Индии. В: Кон, И. С., Решетов, А. М. (ред.). *Этнография детства. Традиционные формы воспитания детей и подростков у народов Южной и Юго-Восточной Азии*. Москва: Наука, с. 159-173.

Чеботаренко, Г. Ф., Яровой, Е. В., Тельнов, Н. П. 1989. *Курганы буджакской степи*. Кишинев: Штиинца.

Черных, Л. А., Дараган, М. Н. 2014. *Курганы эпохи неолита-бронзы междуречья Базавлука, Соленой, Чертомлыка*. Киев: Издатель Олег Филук.

Шапошникова, О. Г. 1985. Ямная культурно-историческая общность. В: Артеменко, И. И. (ред.). *Археология Украинской ССР*, 1. Київ: Наукова думка, с. 336-352.

Zabavin, V., Bulyk, M. 2023. Post-War Archaeology of the North Azov Region: Problem Statement. В: Трофименко, М. В. (ред.). *Проблеми і перспективи поствоєнної розбудови України. Матеріали Всеукраїнської науково-практичної конференції*. Київ: МДУ, с. 114-116.

Zabavin, V., Bulyk, M., Nebrat, S. 2022. To the Archaeological Map of the Northern Azov Sea Region (Based on Materials of MSU Expedition in 2021). *Bulletin of Mariupol State University. Series: History. Political Studies*, 33-34, p. 16-30. <https://doi.org/10.34079/2226-2830-2022-12-33-34-16-30>

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КУРГАНИ БІЛЯ С. КАЛІНІВКА (ЗА МАТЕРІАЛАМИ МАРІУПОЛЬСЬКОЇ АРХЕОЛОГІЧНОЇ ЕКСПЕДИЦІЇ)

У статті наголошено на нових чинниках знищення пам'яток археології та загрозах, які в кілька разів посилюються під час воєнних дій. Наявні загрози та стан археологічної спадщини в умовах війни значною мірою актуалізують потребу та вимагають публікації матеріалів, отриманих під час досліджень у Північному Приазов'ї. У роботі відбито результати досліджень Маріупольської археологічної експедиції під керівництвом В. К. Кульбаки чотирьох курганів доби бронзи — раннього залізного віку поблизу с. Калинівка в заплаві лівого берега р. Кальміус (околиці м. Маріуполь) у 1985 та 1989 рр.

Проаналізовано обрядово-інвентарний комплекс поховань. Розглянуто питання культурно-хронологічної інтерпретації отриманих матеріалів. Усього в чотирьох курганах було відкрито 31 поховання різних археологічних культур від доби ранньої бронзи до залізного віку. Поховання ямної культури належать до пізнього (можливо, до кінця розвиненого та пізнього) етапу існування цієї культури у приазовських степах. Територіально ці матеріали належать до приазовського варіанту давньоямної культурної області або до приазовсько-кримської групи. Було виявлено 12 поховань різних катакомбних культур, зокрема 9 ранньокатакомбних, 1 донецької та 2 інгульської катакомбної культури. Усі поховання зрубної культури належать до одного стратиграфічного горизонту, який відповідає характеристикам III (пізнього) хронологічного горизонту розвитку зрубної культури Північного Приазов'я (бережнівсько-маївська зрубна культура). Два поховання за комплексом ознак належать до періоду раннього залізного віку. Одне поховання передусє пам'ятком скіфського часу та проінтерпретоване авторами як киммерійська пам'ятка новочеркаського типу або як поховання пізнього етапу чорногорівської культури. Друге поховання за низкою ознак обрядово-інвентарного комплексу належить до кола ранньосарматських пам'яток Північного Причорномор'я.

Ключові слова: Північне Приазов'я, Маріуполь, доба бронзи, ранній залізний вік, курган, поховання.

References

- Boltrik, Iu. V., Levchenko, V. N., Fialko, E. E. 1991. O pozdneiamnykh chertakh v katakombnom pogrebalnom obriade nizovia reki Molochnaia. In: Bratchenko, S. N. (ed.). *Katakombnye kultury Severnogo Prichernomoria*. Kyiv: IA NAN USSR, p. 57-84.
- Bratchenko, S. N. 1976. *Nizhnee Podone v epokhu srednei bronzy*. Kyiv: Naukova dumka.

- Viazmitina, M. I., Illinska, V. A., Pokrovska, S. F., Terenozhkin, O. I., Kovpanenko, H. T. 1960. Kurhany bilia s. Novo-Pylypivka i radhospu "Akhermen". In: Bibikov, S. M. (exec. ed.). *Arkheolohichni pamiatky URSR*, VIII. Kyiv: Vydavnytstvo Akademii nauk Ukrainoskoi RSR, p. 22-135.
- Gerasimenko, N. P. 1997. Prirodnaia sreda obitaniia cheloveka na iugo-vostoke Ukrainy v pozdnelednikove i golotsene (po materialam paleogeograficheskogo izucheniia arkheologicheskikh pamiatnikov). In: Kolesnik, A. V. (exec. ed.). *Arkheologicheskii almanakh*, 6. Donetsk: Donbas, p. 3-64.
- Havryliuk, N. O., Rassamakin, Iu. Ya., Razumov, S. M., Ostapenko, M. A., Darahan, M. M. Kovalov, M. V., Minaieva, N. I. 2006. Rozkopky ta muzeifikatsiia kurhaniv na o. Khortytsia. In: Havryliuk, N. O. (comp.). *Arkheolohichni pamiatky Khortytsi ta yikh muzeifikatsiia*, 1. Zaporizhzhia: Dyke Pole, p. 13-29.
- Gavriliuk, N. A., Chernykh, L. A. 1990. Kurgan u g. Vasilevka Zaporozhskoi oblasti. In: Toshchev, G. N., Shakhrov, G. I., Shapovalov, G. I. (eds.). *Drevnosti Stepnogo Prichernomoria i Kryma*, 1. Zaporozhe (w. ed.), p. 91-101.
- Gorbov, V. N. 1993. Poselencheskie komplekсы Приазовья в системе синхронизации западного и восточного кругов культур ва-ликовои керамики. In: Bochkarev, V. S. (ed.). *Novye otkrytiia i metodologicheskie osnovy arkheologicheskoi khronologii*. Sankt-Peterburg (w. ed.), p. 90-93.
- Dubovskaia, O. R. 1997. Ob etnokulturnoi atributsii "novocherkasskikh" pogrebenii Severnogo Prichernomoria. In: Kolesnik, A. V. (exec. ed.). *Arkheologicheskii almanakh*, 6. Donetsk: Donbas, p. 181-218.
- Evglevskii, A. V., Kulbaka, V. K. 2003. Gruntovoi mogilnik zolotoordynskogo vremeni Liapinskaia balka iz Severo-Vostochno-go Priazovia. In: Evglevskii, A. V. (ed.). *Stepi Evropy v epokhu srednevekovia*, 3. Donetsk: DonNU, p. 363-404.
- Zabavin, V. O. 2011. Kurgannyi mogilnik srubnoi kultury u vostochnoi okrainy g. Mariupolia. *Donetskyi arkheolohichniy zbirnyk*, 15, p. 161-170.
- Zabavin, V. O. 2013. Kharakteristika pogrebalnykh sooruzhenii srubnoi kultury Severnogo Priazovia. *Donetskyi arkheolohichniy zbirnyk*, 17, p. 56-78.
- Zabavin, V. O. 2019. Keramichniy kompleks srubnoi kultury Pivnichnoho Pryazovia. *Donetskyi arkheolohichniy zbirnyk*, 22, p. 90-101. <https://doi.org/10.31558/2218-2284.2019.22.5>
- Zabavin, V. O., Nebrat, S. H. 2013. Rozvidky v Novoazovskomu r-ni Donetskoi obl. In: Boltryk, Yu. V. (exec. ed.). *Arkheolohichni doslidzhennia v Ukraini 2012 r.* Kyiv: IA NAN Ukrainy, p. 145-147.
- Zabavin, V. O., Nebrat, S. H. 2018. Rozkopky kurhanu Sedorkin na pivdni Donetskoi oblasti. *Donetskyi arkheolohichniy zbirnyk*, 21, p. 175-191. <https://doi.org/10.31558/2218-2284.2018.21.8>
- Zabavin, V. O., Nebrat, S. H. 2021. New Burials of the Pre-Scythian Time From the North-Eastern Azov Area. *Arheologia*, 1, p. 72-85. <https://doi.org/10.15407/archaeologyua2021.01.072>
- Ivanov, M. S. 2020. Distribution of the Donetsk type beakers among the Ingul catacomb culture burials. *Arheologia*, 4, p. 65-72. <https://doi.org/10.15407/archaeologyua2020.04.065>
- Klein, L. S. 1961. Cherepa, pokrytye smoloi, v pogrebeniakh epokhi bronzы. *Sovetskaia etnografiia*, 2, p. 105-109.
- Koltukhov, S. G., Kislyi, A. E., Toshchev, G. N. 1994. *Kurgannye drevnosti Kryma (po materialam raskopok Severo-Krymskoi ekspeditsii v 1991–1992 gg.)*. Zaporizhzhia: Izdatelstvo ZGU.
- Kopeva, T. A. 1990. Kurgan u sela Akimovka v Krymu. In: Toshchev, G. N., Shakhrov, G. I., Shapovalov, G. I. (ed.). *Drevnosti Stepnogo Prichernomoria i Kryma*, 1. Zaporizhzhia (w. ed.), p. 128-136.
- Kopeva-Kolotukhina, T. A. 2008. Katakombnye pogrebenie s bronzovoi plastinoy v kurgane u sela Frunze v Krymu. In: Petrova, Ie. V. (ed.). *Khersonskii kolokol*. Simferopol: Sonat, p. 251-266.
- Korobkova, G. F., Shaposhnikova, O. G. 2005. *Poselenie Mikhailovka — etalonnyi pamiatnik drevneiarnoi kultury (ekologiya, zhilishcha, orudiia truda, sistemy zhizneobespecheniia, proizvodstvennaia struktura)*. Sankt-Peterburg: Evropeiskii Dom.
- Kravets, D. P., Posrednikov, V. A. 1989. Pamiatniki epokhi rannei bronzы Donechchiny. In: *Problemy okhrany i issledovaniia pamiatnikov arkheologi v Donbasse*. Donetsk (w. ed.), p. 23-26.
- Kravchenko, E. E. 2003. Srednevekovyi kompleks poseleniia Liapinskaia balka v Severo-Vostochnom Priazove. In: Evglevskii, A. V. (ed.). *Stepi Evropy v epokhu srednevekovia*, 3. Donetsk: DonNU, p. 345-362.
- Kulbaka, V. K. 1985. *Otchet ob issledovanii kurganov u s. Kalinovka Novoazovskogo r-na Donetskoi obl. v 1985 g.* Scientific Archives of the Institute of Archaeology, the NAS of Ukraine, f. 64, 1985/103.
- Kulbaka, V. K. 1998. *Zvit pro doslidzhennia kurhaniv ta gruntovoho mohylnya na terytorii m. Mariupolia v 1998 r.* Scientific Archives of the Institute of Archaeology, the NAS of Ukraine, f. 64, 1998/26.
- Kulbaka, V. K., Gnatko, I. I. 1989. *Otchet ob issledovaniakh kurganov v zonakh novostroek: u s. Kalinovka Novoazovskogo r-na, u s. Razdolnoe Starobeshevskogo r-na, u s. Kamyshvatoe Pershotravnevo r-na, u s. Kondratevka Konstantinovskogo r-na i g. Mariupolia Donetskoi obl. v 1989 g.* Scientific Archives of the Institute of Archaeology, the NAS of Ukraine, f. 64, 1989/87.
- Kulbaka, V. K., Gnatko, I. I. 1990. *Otchet ob issledovaniakh kurganov u s. Kominternovo Novoazovskogo r-na, s. Oktiabrskoe Dobropolskogo r-na, s. Krasnogorovka i s. Sokol Iasinovatskogo r-na i g. Mariupol Donetskoi obl. v 1990 g.* Scientific Archives of the Institute of Archaeology, the NAS of Ukraine, f. 64, 1990/147.
- Kulbaka, V., Kachur, V. 1998. *Somatychni kultury bronzovoho viku pivdnia Skhidnoi Yevropy*. Mariupol: Vydavnycho-polihrafichnyi tsentr PDTU.
- Kulbaka, V., Kachur, V. 2000. *Indoevropski plemena Ukrainy epokhy paleometalu*. Mariupol: Renata.
- Kulbaka, V., Kachur, V. 2002. *Davni indoevropski Ukrainy v svitli novitnikh arkheolohichnykh doslidzhen*. Mariupol (w. ed.).
- Kulbaka, V. K., Nebrat, S. G. 2010. Katakombnye pogrebeniia bronzovogo veka u sela Kalinovka. In: Iliashenko, T. V. (exec. ed.). *Litopys Donbasu*, 18. Donetsk: Donbas, p. 22-36.
- Kuchugura, L. I. 2001. *Nauchnaia spravka na temu: Istoriia arkheologicheskoi kolleksii Mariupolskogo kraevedcheskogo muzeia. Sobirатели. Issledovateli (s dopolneniiami 2006 g. i 2013 g.)*. Naukovyi arkhiv Mariupolskoho kraieznavechoho muzeiu, f. Y-15/2001.

- Lytvynenko, R. O. 2023. Povoienna arkheolohiia Donechchyny: zavdannia y perspektyvy riatuvalnykh doslidzhen. In: Koval, Yu. H. (exec. ed.). *Kraieznavchyi rukh na Donechchyni. Materialy Vseukrainskoi naukovo-praktychnoi online-konferentsii*. Kramatorsk: DOKM, p. 31-36.
- Marina, Z. P., Kostenko, V. I., Nikitin, S. V. 1981. Kurgannyi mogilnik u s. Buzovka. In: Kovaleva, I. F. (ed.). *Stepnoe Podneprove v bronzovom i rannem zheleznom vekakh*. Dnepropetrovsk: Izdatelstvo DGU, p. 4-18.
- Makhortykh, S. V., Skoryi, S. A. 2004. O kimmeriiskoi (novocherkasskoi) gruppe pamiatnikov iuga Vostochnoi Evropy. In: Chochorowski, J. (ed.). *Kimmerowie, Scytowie, Sarmaci*. Kraków: Instytut Archeologii Uniwersytetu Jagiellońskiego, p. 231-258.
- Merpert, N. Ia. 1974. *Drevneishie skotovody Volzhsko-Uralskogo mezhdurechia*. Moscow: Nauka.
- Nikolova, A. V. 2012. Absolute chronology of Yamna culture in the Black Sea North area in light of dendrochronological dates. *Arheologia*, 4, p. 14-31.
- Olgovskii, S. Ia. 1988. O tsvetnoi metalloobrabotke u plemen iamnoi kultury. In: Shaposhnikova, O. G. (ed.). *Novye pamiatniki iamnoi kultury stepnoi zony Ukrainy*. Kyiv: Naukova dumka, p. 135-140.
- Otroshchenko, V. V. 1994. O dvukh liniiah razvitiia kultur plemen srubnoi obshchnosti. In: Toshchev, G. N. (ed.). *Problemy skifo-sarmatskoi arkheologii Severnogo Prichernomoria*, 2. Zaporizhzhia: Zaporozhskii gos. universitet, p. 150-153.
- Otroshchenko, V. V. 2003. K istorii plemen srubnoi obshchnosti. In: Priakhin, A. D. (ed.). *Arkheologiia vostochnoevropeiskoi lesostepi*, 17: Dono-Donetskii region v epokhu bronzy. Voronezh: Izdatelstvo Voronezhskogo universiteta, p. 68-96.
- Pinevich, P. M. 1928. *Arkheologicheskie obsledovaniia na Mariupol'shchine i arkheologicheskie raskopki 1928 g.* Scientific Archives of the Institute of Archaeology, the NAS of Ukraine, fond Vseukrainskoi arkheolohichnoi komisii, 202/26.
- Popandopulo, Z. Kh. 1995. Kurgannyi mogilnik u s. Belenkoe. In: Toshchev, G. N. (exec. ed.). *Drevnosti stepnogo Prichernomoria i Kryma*, 5. Zaporizhzhia (w. ed.), p. 126-142.
- Posrednikov, V. A., Zarskaia, N. P. 1993. Materialy kurganov u s. Ogorodnoe (Severnoe Priazove). *Donetskii arkheologicheskii sbornik*, 4, p. 82-178.
- Pustovalov, S. Zh. 2009. Klassifikatsiia katakombnoi keramiki. *Vita Antiqua*, 7-8, p. 101-123.
- Romashko, O. V., Marina, Z. P. 2018. Doslidzhennia kurhanu bilia s. Katerynivka u Prysamarii. In: Boltryk, Yu. V. (exec. ed.). *Arkheolohichni doslidzhennia v Ukraini 2016*. Kyiv: IA NAN Ukrainy, p. 17-18.
- Sanzharov, S. N. 2001. *Katakombnye kultury Severo-Vostochnogo Priazovia*. Luhansk: Izdatelstvo VNU.
- Symonenko, O. V. 1994. The early Sarmatian period at the North Pontic Area. *Arheologia*, 1, p. 32-48.
- Terenozhkin, A. I. 1976. *Kimmeriitsy*. Kyiv: Naukova dumka.
- Toshchev, G. N. 2007. *Krym v epokhu bronzy*. Zaporizhzhia: Izdatelstvo ZNU.
- Toshchev, G. N., Samar, V. A. 1990. Issledovanie kurgannogo mogilnika epokhi bronzy na Khersonshchine. In: Toshchev, G. N., Shakhrov, G. I., Shapovalov, G. I. (eds.). *Drevnosti Stepnogo Prichernomoria i Kryma*, vol. 1. Zaporizhzhia (w. ed.), p. 31-66.
- Uspenskaia, E. N. 1988. Rannee detstvo u pakhari prigimalaiskikh regionov Severnoi Indii. In: Kon, I. S., Reshetov, A. M. (eds.). *Etnografiia detstva. Traditsionnye formy vospitaniia detei i podrostkov u narodov Iuzhnoi i Iugo-Vostochnoi Azii*. Moscow: Nauka, p. 159-173.
- Chebotarenko, G. F., Iarovoi, E. V., Telnov, N. P. 1989. *Kurgany budzhakskoi stepi*. Kishinev: Shtiintsa.
- Chernykh, L. A., Daragan, M. N. 2014. *Kurgany epokhi eneolita-bronzy mezhdurechia Bazavluka, Solenoi, Chertomlyka*. Kyiv: Izdatel Oleg Filiuk.
- Shaposhnikova, O. G. 1985. Iamnaia kulturno-istoricheskai obshchnost. In: Artemenko, I. I. (ed.). *Arkheologiia Ukrainskoi SSR*, I. Kyiv: Naukova dumka, p. 336-352.
- Zabavin, V., Bulyk, M. 2023. Post-War Archaeology of the North Azov Region: Problem Statement. In: Trofymenko, M. V. (ed.). *Problemy i perspektyvy postvoiennoi rozbudovy Ukrainy. Materialy Vseukrainskoi naukovo-praktychnoi konferentsii*. Kyiv: MDU, p. 114-116.
- Zabavin, V., Bulyk, M., Nebrat, S. 2022. To the Archaeological Map of the Northern Azov Sea Region (Based on Materials of MSU Expedition in 2021). *Bulletin of Mariupol State University. Series: History. Political Studies*, 33-34, p. 16-30. <https://doi.org/10.34079/2226-2830-2022-12-33-34-16-30>