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TRIPOLYE (GORDINEŞTI GROUP), YAMNAYA AND CATACOMB CULTURE CEMETERIES, PRYDNISTRYANSKE, SITE 1, YAMPIL REGION, VINNITSA OBLAST: AN ARCHAEOMETRIC AND CHRONOMETRIC DESCRIPTION AND A TAXONOMIC AND TOPOGENETIC DISCUSSION

ABSTRACT

The paper presents the results of excavations and analytical studies regarding the taxonomic classification of a unique funeral site associated with the societies of early 'barrow cultures' of the north-western Black Sea Coast in the 4th-3rd millennium BC. The study discusses the ceremonial centres of the Tripolye culture–Gordineşti group, as well as Yamnaya and Catacomb cultures.

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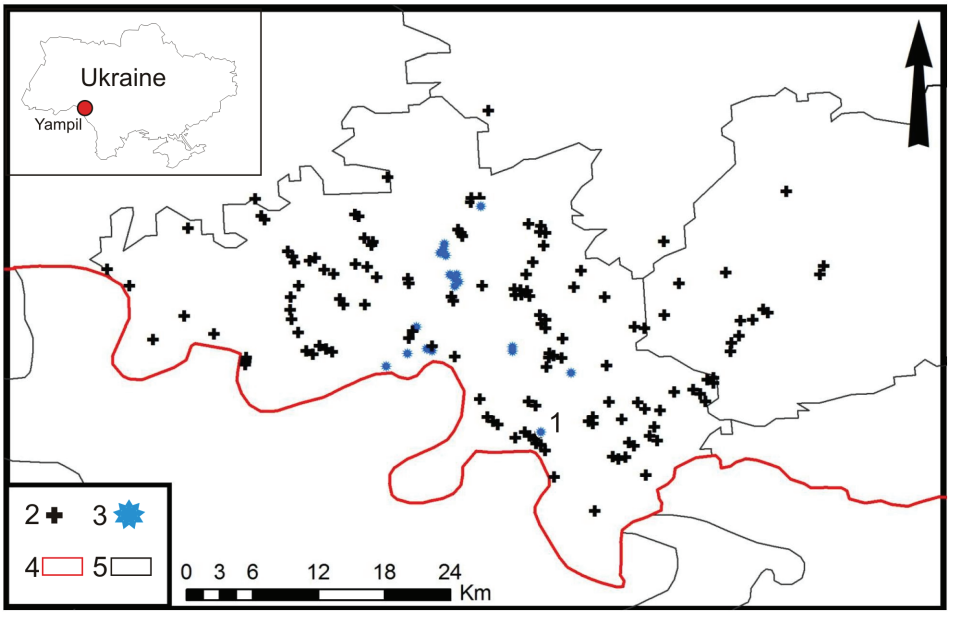

Fig. 1. Map of *Yampil Barrow Complex*, showing administrative borders: 1 – Prydnistryanske, barrows 1-4; 2 – barrows; 3 – excavated barrows; 4 – Ukrainian-Moldovan frontier; 5 – Yampil Region border. After Jachimowicz 2015, revised

Key words: 'barrow cultures', Eneolithic, Early Bronze Age, Middle Dniester Area

The investigations of site 1 in Prydnistryanske, Yampil Region, Vinnitsa *Oblast*, were carried out in 2012 (surface survey) and 2014 (excavations) as part of the Polish-Ukrainian research project (using archaeometric and chronometric methods) to investigate the north-western frontier of settlement by 'Early Bronze' culture communities in the Pontic zone, carried out by the Institute of Prehistory, Adam Mickiewicz University (AMU) in Poznań and the Institute of Archaeology, Ukrainian National Academy of Sciences (UNAS) in Kyiv. The project was headed by Prof. Aleksander Kośko, representing the AMU Institute of Prehistory, assisted by Dr. Piotr Włodarczak, representing the Institute of Archaeology and Ethnology of Polish Academy of Sciences, Centre for Mountains and Uplands Archaeology in Kraków, and by Prof. Viktor I. Klochko, Head of Archaeology Chair, National University of "Kyiv-Mohyla Academy", representing the Institute of Archaeology, UNAS [*see* Kośko *et al*. (Eds) 2014].

The investigations covered four barrows from the Eneolithic and the prologue of the Bronze Age, making up a clearly visible *ceremonial centre*. Currently, it can be connected to – taking account of the state of contemporary deformations of the

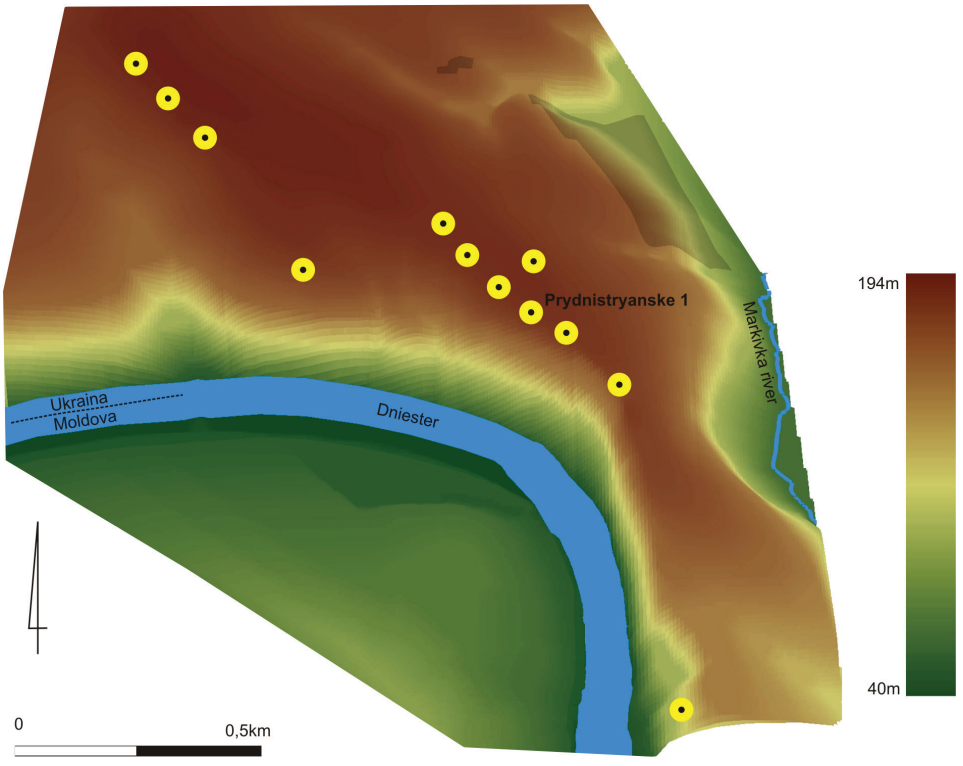

Fig. 2. Prydnistryanske, Yampil Region. Elevation model of the immediate surroundings of site 1

area – from the horizontal perspective, to a minimum of four mounds: one large and clearly standing out against the landscape (=Prydnistryanske 1-IV) and three small ones, barely identifiable on the surface (Prydnistryanske 1-I, II, III).

Further surface survey of the *ceremonial centre* is planned using the geomagnetic method and availing itself of the data from satellite prospection, suggesting a significant extension of the site. Bearing this in mind, the present authors are aware that this paper does not exhaust all potential sources from the Prydnistryanske 1 site. It is believed to be a component of a broader, only partially marked, *ceremonial centre* of 'early barrow' communities.

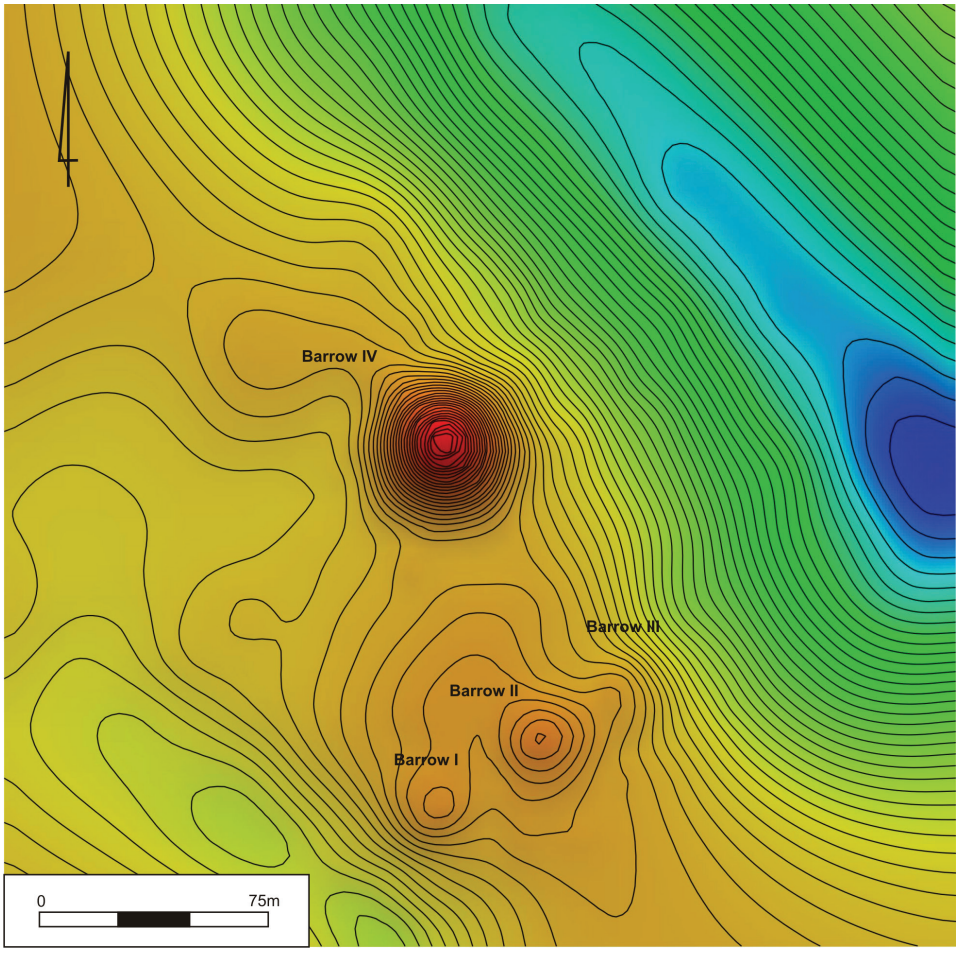

Fig. 3. Prydnistryanske, Yampil Region, Vinnitsa *Oblast*, site 1. Site elevation model

1. TOPOGRAPHY OF CEMETERIES AND FIELD INVESTIGATION METHODOLOGY

The site is located about 2.0 km south of the locality of Prydnistryanske, 12.5 km southwest of Yampil and 7.0 km west of the border with Moldova (territory of the 'Republic of Transdniestria') (Fig. 1). The cemetery was founded on the ridge of a long promontory extending NW-SE, the absolute height of which reached 191 m above sea level, in the west bounded by the Dniester valley and in the east by the valley of its tributary – the Markivka River. The highest point of the cemetery, barrow

IV, stands about 1.0 km away from the Dniester valley and about 1.5 km from the Markivka valley (Fig. 2). About 100 m south of the barrow, there were three small mounds grouped linearly (Figs. 3, 4). The features were situated on the substratum of typical chernozem, showing "characteristics typical of pedogenic conditions prevailing in the transition zone of the subboreal belt with a temperate climate displaying marked continental characteristics and supporting steppe vegetation" [Bednarek, Jankowski 2014; for a broader description see their forthcoming paper].

In terms of morphometrics, the barrows may be assigned – on the scale of chronologically comparable features (Eneolithic and those belonging to the Yamnaya culture, YC) – to two typological groups or forms resembling modules identified on the Southern Bug River: (a) "0.8 to 1.2 m high and 15 to 18 m wide" and (b) "1.5 to 2.0 m high and 18 to 22 m wide" [Shaposhnikova *et al*. 1986: 11]. The 30 years that have passed since this systematics was formulated modify the above quoted height criteria. In the Middle Dniester Area, this is particularly true for group (a), the surface field inventory of which is possible now only 'by the way' of the field survey of group (b). It was in this way that the cemetery in Prydnistryanske 1 (barrows I, II, III) was identified. A chance of expanding the inventory of 'Yampil' type (a) barrow networks (mostly Eneolithic, presumably) is offered now solely by aerial reconnaissance: by planes and satellites. The outlined division of mound preservation states is closely reflected in the relevant stratigraphy (*see* Ch. 2).

The recorded barrow mounds were badly deformed by, as it is believed, barrow flora and fauna [Sudnik-Wójcikowska *et al*. 2013].

The barrows were explored by digging trenches and keeping baulks extending E-W[1] Barrows I-III were thoroughly investigated, while barrow IV was investigated only in part. Excavating the eastern portion of the latter was prevented by the presence of a power-line pylon.

2. BARROWS DESCRIPTION: MOUND MORPHOMETRY AND STRATIGRAPHY, AND SCATTER PATTERN, STRUCTURE AND FURNISHINGS OF GRAVES

This paper has not included specialist analyses, chiefly bio-archaelogical ones, to be published in one of the next volumes of *Baltic-Pontic Studies* (forthcoming). All the anthropological and archaeozoological datas included in the descritions below come from the separate publication [Litvinova *et al.* 2015] have been used.

[1] See the description of the mechanical method of barrow exploration 'by using trenches and baulks' in Kośko, Razumov 2014.

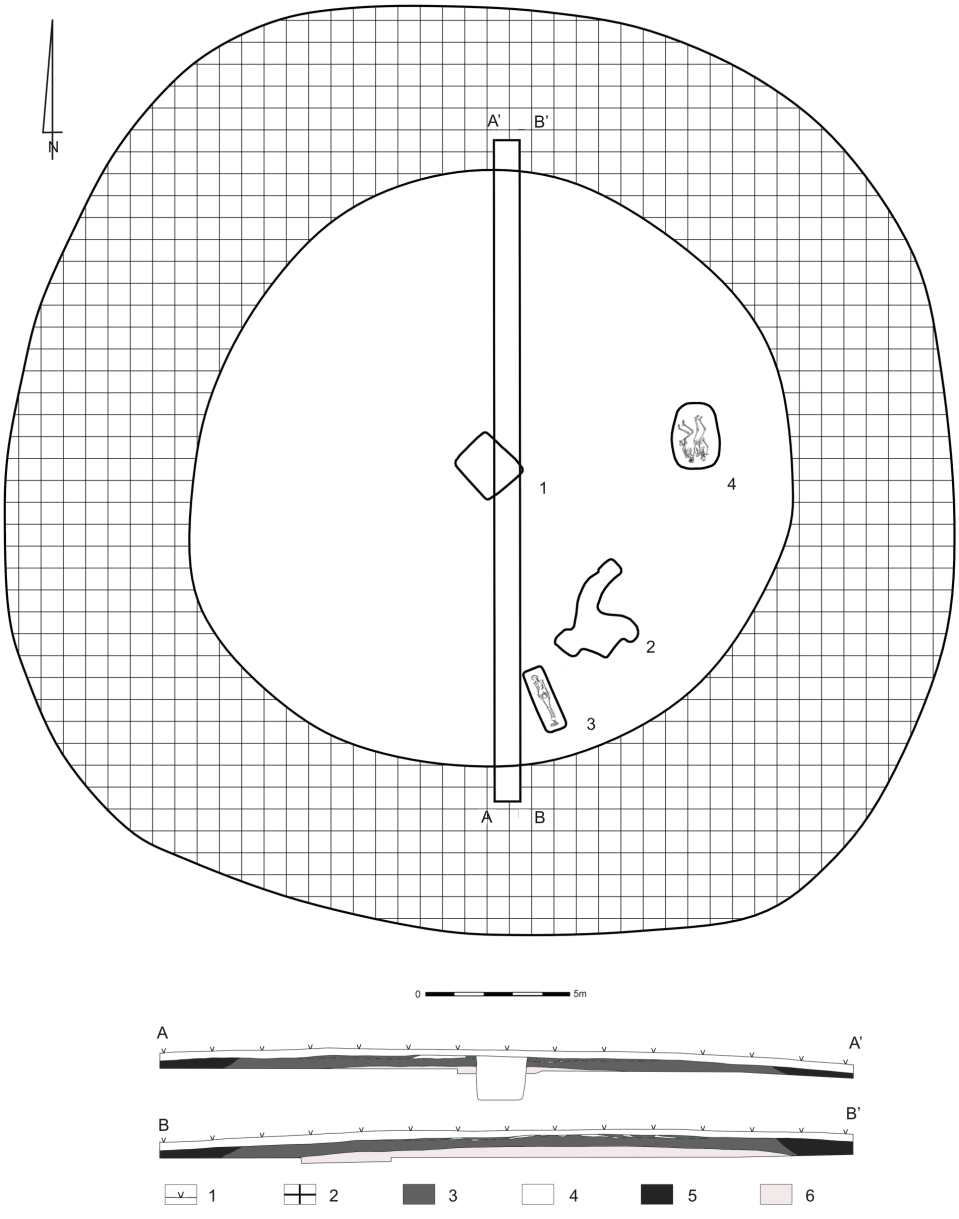

Fig. 5. Prydnistryanske, Yampil Region. Plan of barrow I. 1 – surface soil; 2 – barrow-surrounding ditch; 3 – mound remains, original humus and loess browning level; 4 – yellow loess spills; 5 – fill of barrow-surrounding ditch; 6 – yellow loess

Barrow I

The barrow mound has been almost completely levelled off due to ploughing. It was about 20 metres in diameter and about 30 cm high (Fig. 5). While excavating, a central profile baulk, 1.0 metre wide and oriented N-S, was kept. Under the mound, a single hypothetical centrally-located burial was recorded (feature/grave I/1), in the fill of which, however, no bones or their negatives were found, but Tripolye culture (TC) pottery was identified instead. These observations suggest that the feature may have been a cenotaph or – more likely – that it represents a 'post-funeral deconstruction'. Into the mound, another Catacomb culture (CC) burial was dug in – grave I/4 – and two Iron Age features, which are not covered by this paper: nos. I/2 and I/3 (dated to the Sarmatian period). The edge of the mound was marked by a circular, trough-like ditch produced by excavating earth to build the barrow. In the barrow mound and in feature fills, in the secondary context, 26 flint artefacts were discovered.

Feature I/1

Culture	Tripolye-Gordineşti
Dating	Poz-66235: 13390 ± 70 BP (wood?); Poz-66214: 4700 ± 70 BP (wood)
Structure type	Pit
Size at the level of discovery	1.9 × 1.75 m
Size at the level of the bottom	1.85 × 1.7 m
Depth	1.4 m
Pit orientation	NW-SE
Deviation	5°S
Animal bones	–
Ritual objects	Unidentified object made of bone or antler in the SW corner of the pit
Comments	The fill was found to contain small fragments of a wooden structure, two pottery shards and three flint artefacts.

The feature was identified as central and located, quite naturally, underneath the central part of the mound. It was rectangular and had regular vertical walls (Figs. 6, 7). From the N and S, it was accompanied by a spill of yellow loess 12 cm thick and up to 180 cm wide. The fill was made up of rather homogeneous dark soil, grey-brown in colour and secondarily disturbed by many rodent burrows. In the feature, at various levels, a discovery was made of pieces of wood which may have been the remains of a cover. Their orientation suggests that logs were placed along the longer axis of the grave (NW-SE). At the pit bottom, no traces of a burial were found. At the western corner, the fragments of a poorly-preserved object made of bone or antler were found (Fig. 7: 2). Close to it, at the north-western wall of the feature, an ornamented pottery shard belonging to the TC was recovered.

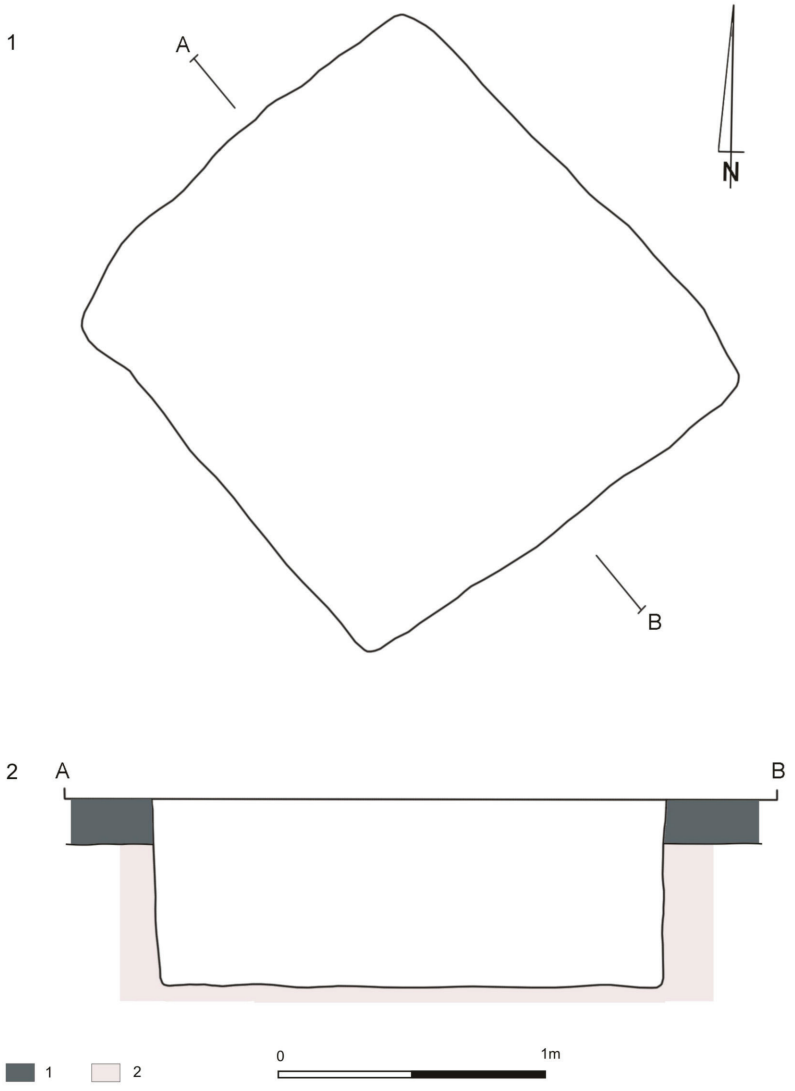

Fig. 6. Prydnistryanske, Yampil Region, barrow I. Plan and profile of feature I/1. 1 – original humus and loess browning level; 2 – yellow loess

Another smaller fragment, bearing an ornament too (coming from another vessel), was discovered in the central portion (Fig. 8: 1,2).

Artefact description

1. A fragment of a vessel belly decorated with oblique incised lines and circular pinholes. The thickness of the shard is 7.0-9.0 mm. The outer surface is light-brown/orange in colour, even and semi-mat. The inner surface is grey-brown

1

0 1m

1,2

2

Fig. 7. Prydnistryanske, Yampil Region, barrow I. Ceiling plan and profile of feature I/1

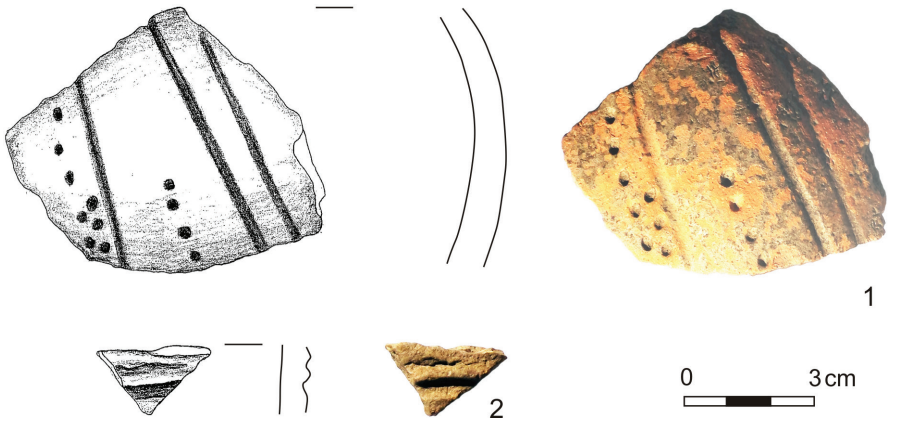

Fig. 8. Prydnistryanske, Yampil Region, barrow I, feature I/1. Ceramic shards from the feature fill. 1 – belly fragment; 2. neck fragment

in colour, even and mat. The fracture is grey and slightly laminated. It contains temper of crushed ceramics, the granulation of which varies (up to 4.0 mm), and sand (Fig. 8: 1).

2. A fragment of a vessel neck ornamented with horizontal flutes. The thickness of the shard is 7.0 mm. The outer surface is grey in colour, even and mat. The inner surface is grey-brown in colour, even and mat. The fracture is grey. The clay contains a medium amount of temper of crushed ceramics, the coarseness of which reaches 2.0 mm (Fig. 8: 2).

Feature I/4

Culture	Catacomb		
Dating	Poz-66218: 4190 ± 80 BP (wood); Poz-66219: 4070 ± 35 BP (human bone from burial no. 1); Poz-66220: 3940 ± 40 BP (human bone from burial no. 2); Poz-66732: 3940 ± 35 BP (human bone from burial no. 2)		
Grave pit		**Burial**	
Structure type	Pit	Sex	1. Female 2. Male
Number of burials	2	Age	1. 15 year 2. 35-50 years
Size at the level of discovery	2.3 × 1.55 m	Orientation	1. S-N 2. S-N
Size at the level of the bottom	2.2 × 1.5 m	Deviation	1. 17°E 2. 21°E
Depth	1.3 m	Arrangement of head	1. Face upwards 2. On the right side
Pit orientation	S-N	Trunk arrangement	1. Supine 2. On the right side
Deviation	0°	Upper limbs	1. H 2. F?

Distance from barrow centre	7.38 m	Lower limbs	1. 5 2. 7
Azimuth	81°	Ochre	–
Wooden roofing	–	Presence of a mat	–
Timber orientation		Animal bones	–
Other structural elements	–	Ritual objects	Stone mace
Comments	In the fill: 6 flint artefacts		

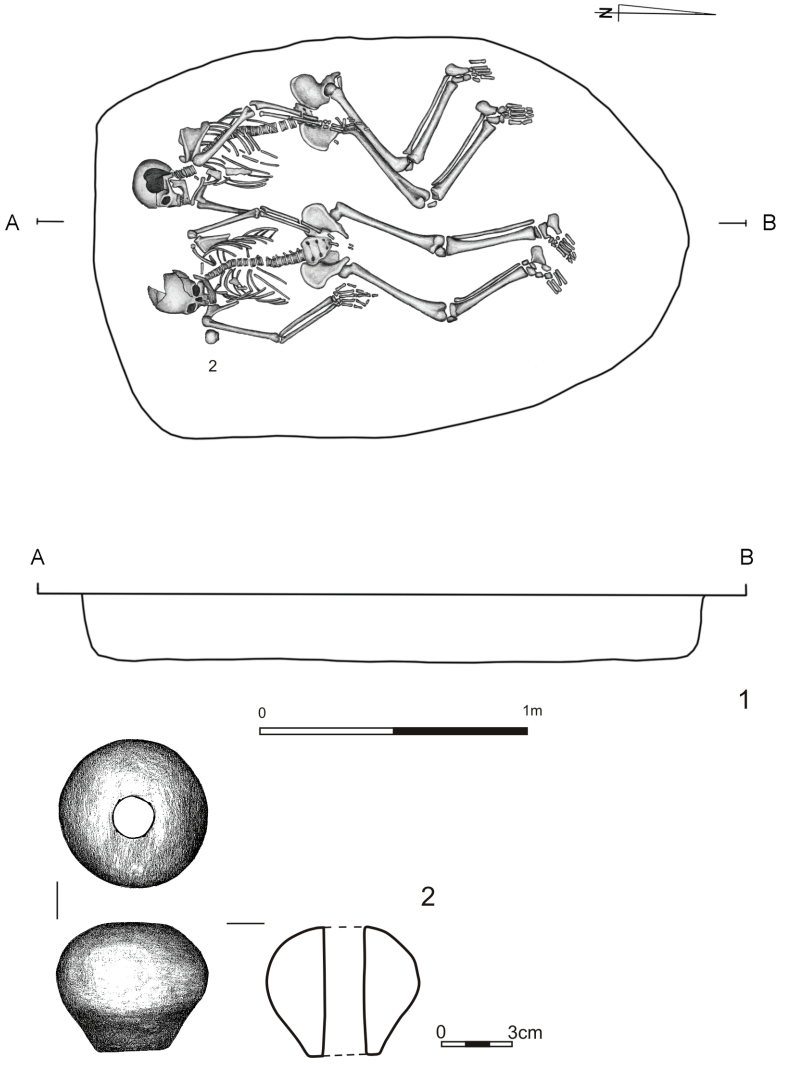

Fig. 9. Prydnistryanske, Yampil Region, barrow I, feature I/4. 1 – burial level and feature profile; 2 – stone mace

Fig. 10. Prydnistryanske, Yampil Region, barrow I, feature I/4. 1 – burial level; 2 – stone mace *in situ* with copper catches visible; 3 – remains of a wooden mace handle; 4 – stone mace

Table 1
Prydnistryanske, Yampil Region, grave I/4. Analysis of the chemical composition of a metal mace shaft catch performed by the laboratory of the UNAS Institute of Archaeology

Cu	As	Si	Cl	P	Al	S	Ti	Fe	Ca	Ag	Cr
96.64	2.115	0.355	0.285	0.173	0.117	0.093	0.072	0.049	0.048	0.033	0.022

The grave was sunk into the eastern barrow edge. Its outline was recorded about 90 cm below the current ground level. It had a regular oval shape and its longer axis was oriented N-S. Its fill was made up of grey-brown earth, which had been disturbed by many animal burrows. On the bottom, two skeletons, oriented N-S, were discovered, with their heads pointing S.

Skeleton 1 (eastern), belonging to an *adult* male (35-50 years), lay supine with the head slightly turned E. Its lower limbs were slightly bent and turned to the right side. Immediately next to its right side, a stone mace was found together with copper elements used to fasten its handle. There were no other grave goods. Skeleton 2 (western), belonging to a *juvenis* individual (about 15 years old; female?), lay on its right side with the face pointing E (at the same time towards the other corpse). Both its lower limbs were similarly bent (at a slightly obtuse angle at the hips and a slightly acute angle at the knees). The hand of the right upper limb was placed under the pelvis of skeleton 1. The left upper limb, in turn, was more strongly bent and directed, in contrast, towards its own pelvis (Fig. 9: 1; 10: 1).

Grave goods description

1. A fine-crystalline rock mace, grey with a bluish shade. The rock is macroscopically identified as basalt or, less credibly, amphibolite (assessment by Dr. V.I. Korinnij, Chair of Geography, Faculty of Natural and Geographic Sciences, Vinnitsa State Pedagogical University). Pear-shaped. Carefully polished on the top; on its bottom portion, it bears obliterated traces of stamping. The perforation is wider at the bottom. On the top, next to the perforation, traces of crushing left by a wedge are noticeable. Dimensions: height 53-54 mm, width: 65 mm, perforation diameter: 18 mm (top) and 21 mm (bottom) (Fig. 9: 2, 10: 4).

Remains of the mace handle fastening, copper catches were found irregularly arranged (roughly radial fashion) on the mace top (Fig. 10: 2, Table 1). At the metal elements, pieces of wood have survived, being the remains of a handle (Fig. 10: 3).

Barrow II

The mound has been almost completely ploughed away, reducing its height to only 10-20 cm. The barrow was slightly oval in shape and measured about 23.0 × 20.0 metres. While excavating, a central profile baulk, 1.0 metre wide and oriented N-S, was kept. Under the mound, a single hypothetical centrally-located burial was recorded (feature/grave II/2), in the fill of which, however, no bones or their negatives were found. These observations suggest that the feature may have been a cenotaph or – more likely – that it represents a ‘post-funeral deconstruction’.

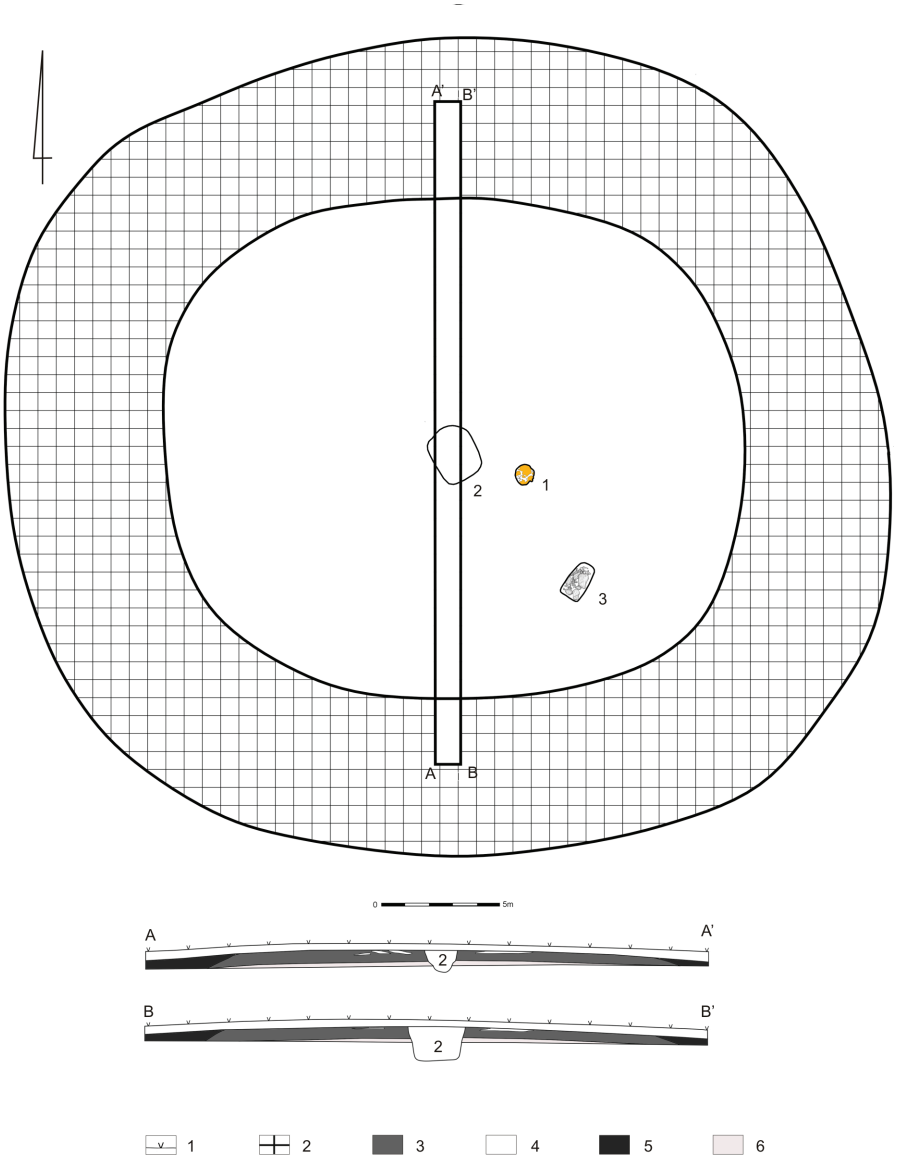

Fig. 11. Prydnistryanske, Yampil Region. Plan of barrow II. 1 – surface soil; 2 – barrow-surrounding ditch; 3 – mound remains, original humus and loess browning level; 4 – yellow loess spills; 5 – fill of barrow-surrounding ditch; 6 – yellow loess

Next to it, a circular hearth (feature II/1), and in its southern portion, a pit of indeterminate chronology (feature II/3) were exposed. The barrow edge was marked by a trough-like borrow ditch filled with dark, black-brown sediment (Fig. 11). In

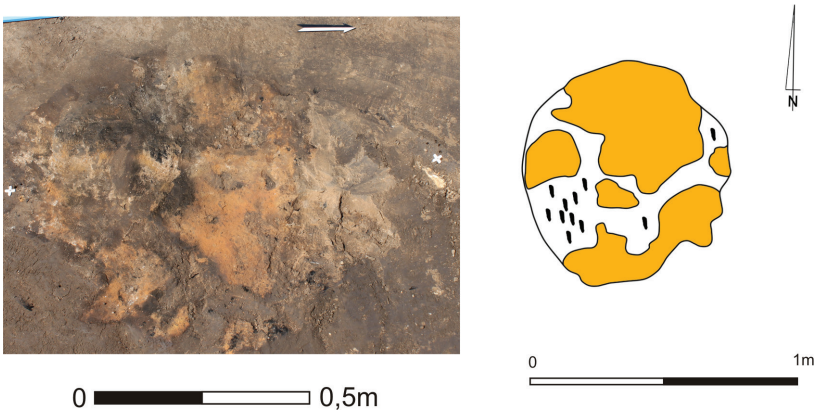

Fig. 12. Prydnistryanske, Yampil Region, barrow II. 1, 2 – horizontal projection of feature II/1

the barrow mound and in feature fills, in the secondary context, 13 flint artefacts were discovered.

Feature II/1

Culture	Tripolye-Gordineşti
Dating	Poz-66221: 4485 ± 30 BP (charcoal)
Structure type	Shallow, trough-like hollow
Size at the level of discovery	?
Size at the level of the bottom	0.8 × 0.8 m
Depth	0.45 m
Pit orientation	
Deviation	
Animal bones	–
Ritual objects	–
Comments	

A circular hearth was discovered in the barrow centre. Five to 10 cm thick, its fill was made primarily of earth lumps overheated orange, and clusters of charcoals. The feature was only slightly sunk into the original ground level and must have been covered by the mound together with feature 2 (Fig. 12).

Feature II/2

Culture	Tripolye-Gordineşti
Dating	Poz-66222: 4655 ± 35 BP (wood)
Structure type	Pit
Size at the level of discovery	2.35 × 1.9 m
Size at the level of the bottom	2.3 × 1.65 m

Depth	1.65 m
Pit orientation	NW-SE
Deviation	12°N
Animal bones	–
Ritual objects	–
Comments	Pieces of wood in the fill

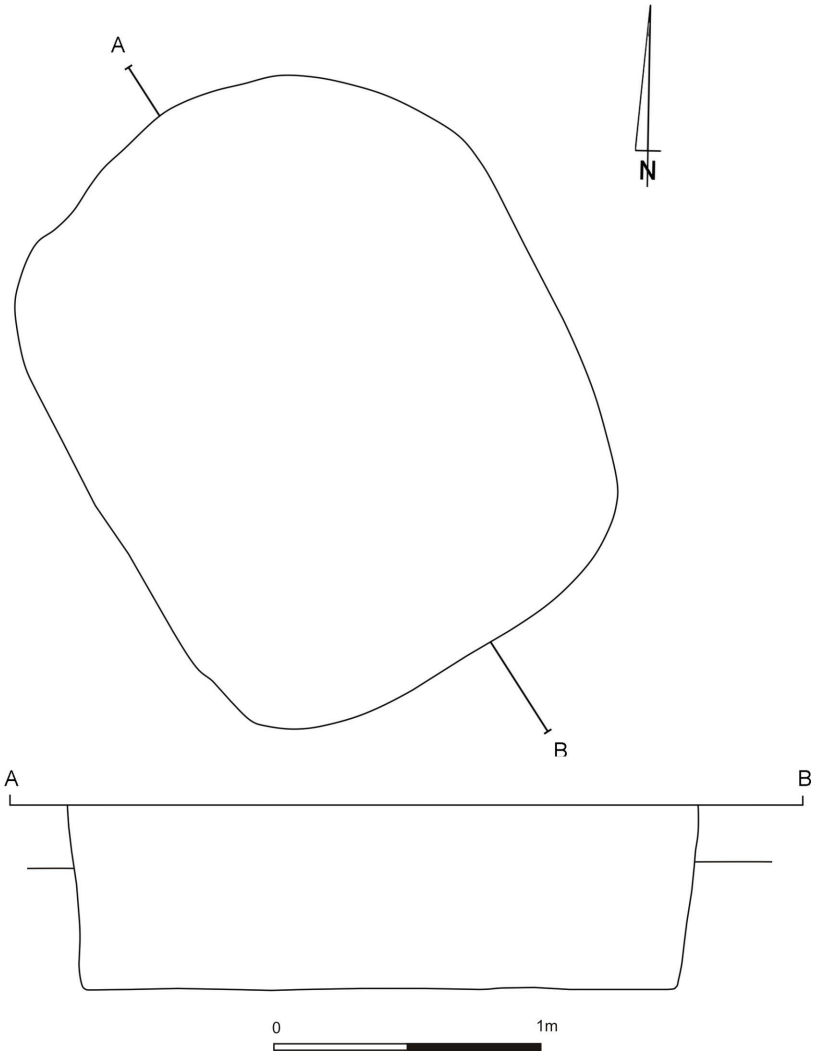

Fig. 13. Prydnistryanske, Yampil Region, barrow II. Bottom level and profile of feature II/2

1

2

Fig. 14. Prydnistryanske, Yampil Region, barrow II. Ceiling level and bottom of feature II/2

It is a central barrow feature found underneath the central part of the mound. It is rectangular in shape with rounded corners and is oriented NW-SE. Its fill is made up of dark, homogeneous, grey-brown earth. Within it, several small fragments of rotten wood were found. Its walls are straight, almost vertical, while its flat bottom extends about 1.3-1.35 m below the original surface. On the northern and southern sides of the feature, there are spills of yellow loess, left behind after the pit was dug. They are up to 0.3 m thick and 2.5 m wide. Within the feature, no artefacts have been found or traces of any burial recorded (Figs. 13, 14).

Feature II/3

Culture	?		
Dating	Poz-66223: 155 ± 30 BP (human bone)		
Grave pit		**Burial**	
Structure type	Pit with a semi-niche	Sex	?
Number of burials	1?	Age	20+ years
Size at the level of discovery	1.15 × 0.6 m	Orientation	?
Size at the level of the bottom	1.6 × 0.9 m	Deviation	?
Depth	0.9 m	Arrangement of head	?
Pit orientation	SW-NE	Trunk arrangement	?
Deviation	10°N	Upper limbs	?
Distance from barrow centre	7.57 m	Lower limbs	?
Azimuth	135°	Ochre	–
Wooden roofing	–	Presence of mat	–
Roofing element orientation		Animal bones	–
Other structural elements	Stones in the feature ceiling	Ritual objects	–
Comments	Five flint artefacts in the fill		

It is a small rectangular pit situated in the SE part of the mound and oriented NE-SW. The fill is made up of homogeneous earth dark-brown in colour. In its upper and middle parts, many lime stones were found scattered chaotically across the feature. The largest stone was over 0.7 m in diameter (Fig. 15). The feature also yielded nine human bone fragments and five flint artefacts (most likely in a secondary context). In the portion adjacent to the bottom, the feature outline is more regular and resembles a rectangle. Its longer walls clearly lean W, thus forming a kind of a semi-niche in the NW portion of the pit (Fig. 15: 3). On the bottom level, no burial or any artefacts have been found.

Barrow III

Prior to the commencement of investigations, the barrow mound was almost completely damaged by ploughing. It was circular and measured about 24.0 m in diameter. Its height stayed below 0.1-0.15 m. While excavating, a central profile baulk, 1.0 metre wide and oriented N-S, was kept. In the central part, underneath

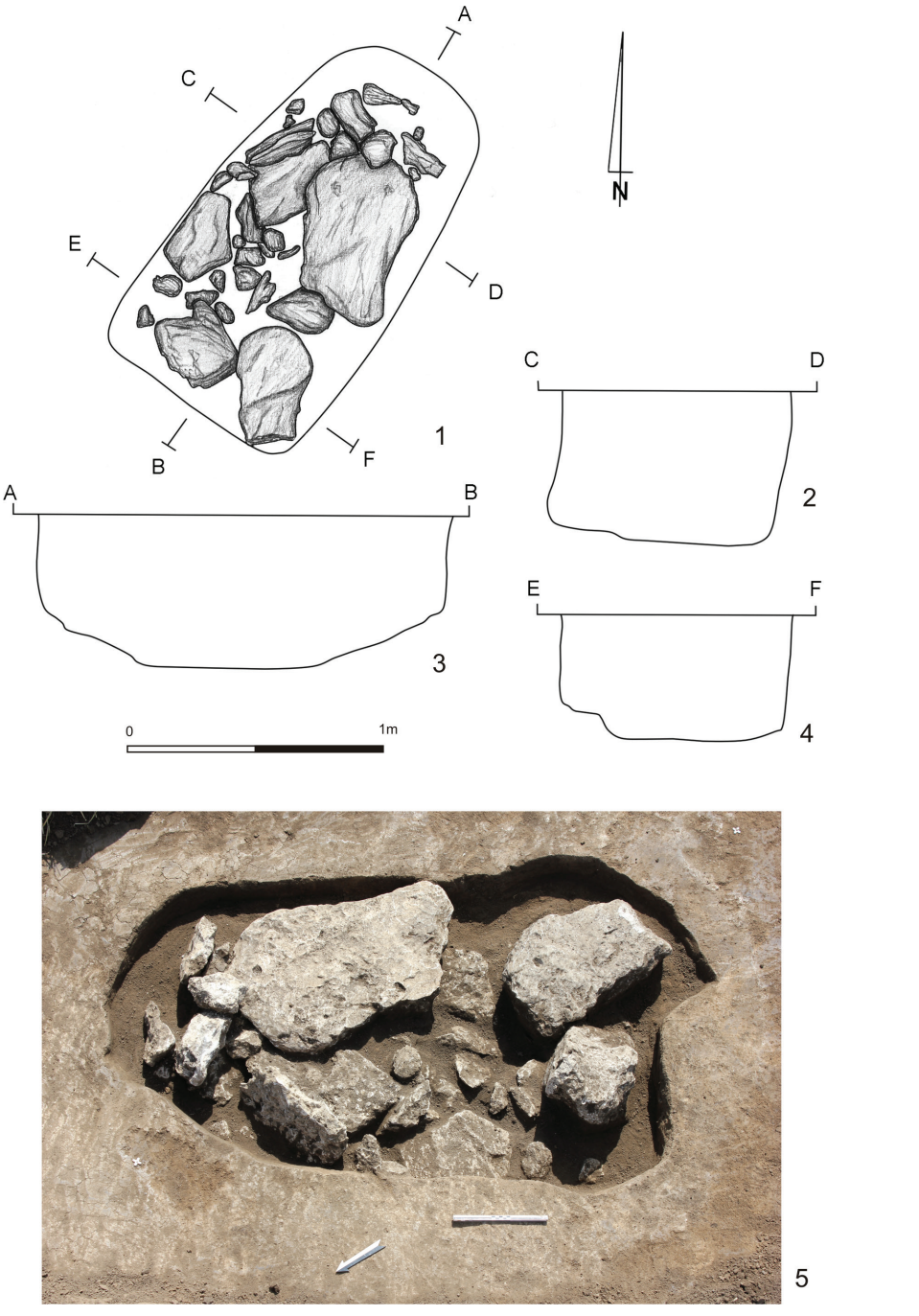

Fig. 15. Prydnistryanske, Yampil Region, barrow II, feature II/3. 1, 5 – horizontal projections of the upper and floor parts; 2 – profile A-B; 3 – profile C-D; 4 – profile E-F

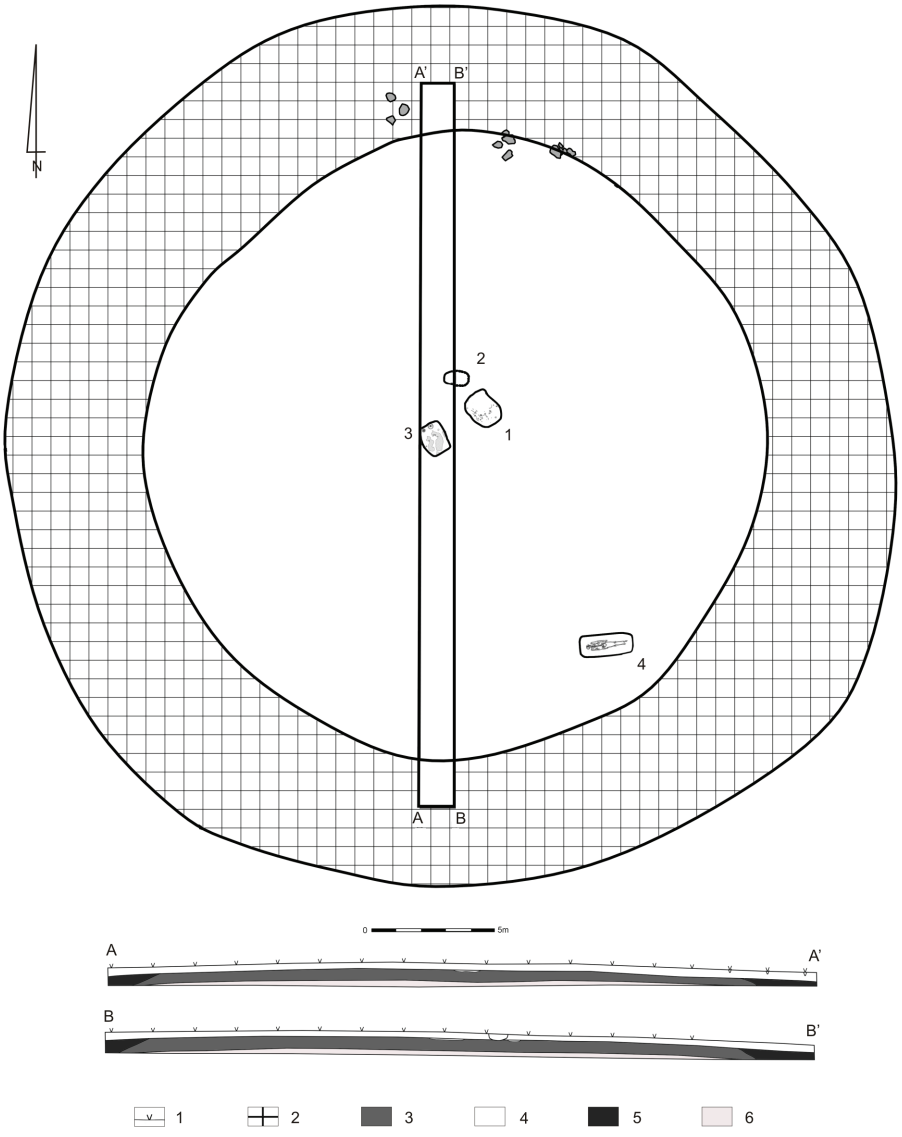

Fig. 16. Prydnistryanske, Yampil Region. Plan of barrow III. 1 – surface soil; 2 – barrow-surrounding ditch; 3 – mound remains, original humus and loess browning level; 4 – yellow loess spills; 5 – fill of barrow-surrounding ditch; 6 – yellow loess

the barrow mound, two features (III/1 and III/3) were located – they are likely to have been related to a single ritual cycle. Moreover, in this part, immediately below the base of the surface soil, scattered human remains (feature III/2) were found in an indeterminate stratigraphic position. Into the south-eastern part of the barrow,

a human burial was sunk. It was dated to the Early Middle Ages (feature III/4). The barrow edge was marked by a trough-like borrow ditch from which earth used to build the barrow had been excavated. It was filled with dark, black-brown sediment (Fig. 16). On the border between the ditch and the mound, lime stones were discovered: single ones on the eastern and southern edges, and a greater concentration on the northern mound edge; the concentration included a stone 'grinder'. From the barrow mound and from the secondary contexts of feature fills, 12 flint artefacts were recovered.

Feature III/1

Culture	Tripolye-Gordineşti		
Dating	Poz-66224: 4540 ± 35 BP (human bone)		
Grave pit		**Burial**	
Structure type	Pit	Sex	?
Number of burials	1?	Age	20+ years
Size at the level of discovery	1.55 × 1.2 m	Orientation	?
Size at the level of the bottom	1.35 × 1.0 m	Deviation	?
Depth	1.65 m	Arrangement of head	?
Pit orientation	NW-SE	Trunk orientation	?
Deviation	6°N	Upper limbs	?
Distance from the barrow centre	2.3 m	Lower limbs	?
Azimuth	58°	Ochre	–
Wooden roofing	–	Presence of mat	–
Roofing element orientation		Animal bones	–
Other structural elements	–	Ritual objects	Pot
Comments	The fill was found to contain a belly fragment of another vessel		

The feature was discovered under the mound, in the central part of the barrow. Its horizontal projection was oval. The upper portion of the fill had two distinct parts: a northern one of mixed brown earth and yellow loess and a southern one of darker and more homogeneous sediment. The pit walls were slightly oblique, while the flat bottom extended about 1.15 m below the original surface. At various levels, but mostly in the middle portion, scattered human bones were found (chiefly postcranial skeleton fragments, including vertebrae and rib fragments), which is interpreted as an effect of a post-funeral deconstruction ('robbery'). The bones belonged to an individual of indeterminate sex aged over 20 years. Amid them, numerous fragments of an S-shaped Tripolye culture pot were discovered, bearing an ornament of two rows of uneven, wedge-shaped impressions, and a single belly fragment of another vessel (Fig. 17).

Artefact description

1. An S-shaped pot with a wide, flat bottom. On the upper part of the belly,

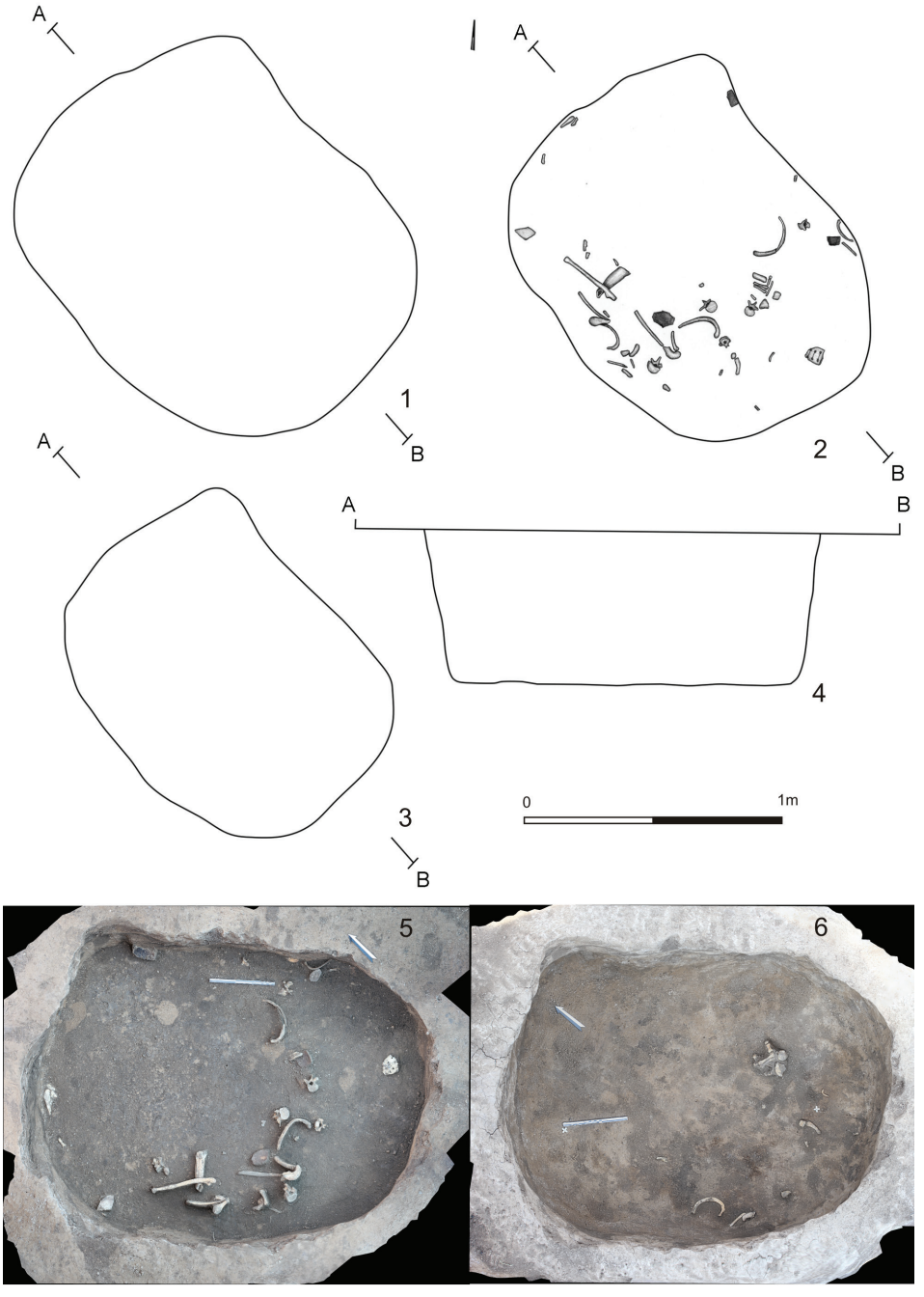

Fig. 17. Prydnistryanske, Yampil Region, barrow III, feature III/1. Horizontal projections of the upper (1), middle (2, 5), floor (3, 6) parts, and grave profile (4)

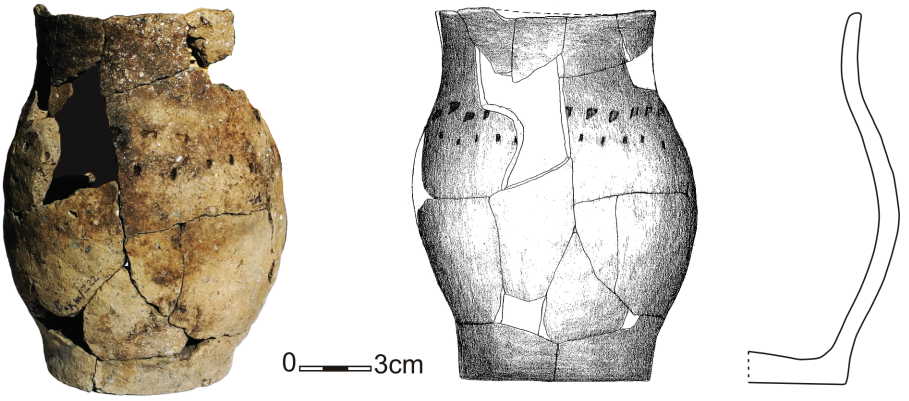

Fig. 18. Prydnistryanske, Yampil Region, barrow III, feature III/1. Vessel from the feature fill

it bears an ornament of two uneven rows of deep wedge-shaped impressions. The outer surface is slightly smoothed, mat, grey and light-brown in colour. The fracture is dark grey. The clay contains temper of crushed shells and fine sand. Height: 15.5 cm, bottom diameter: 9.2 cm, belly diameter: 11.9 cm (Fig. 18).

2. Fragment of a vessel belly (no data).

Feature III/2

Culture	Tripolye-Gordineşti		
Dating	Poz-66225: 4530 ± 35 BP (human bone)		
Grave pit		**Burial**	
Structure type	?	Sex	1. ? 2. ?
Number of burials	2	Age	1. 9-10 years (*infans II*) 2. 20+ years
Size at the level of discovery	?	Orientation	1. ? 2. ?
Size at the level of the bottom	?	Deviation	1. ? 2. ?
Depth	0.3 m	Arrangement of head	1. ? 2. ?
Pit orientation	N-S	Arrangement of trunk	1. ? 2. ?
Deviation	?	Upper limbs	1. ? 2. ?
Distance from barrow centre	2.58 m	Lower limbs	1. ? 2. ?
Azimuth	19°	Ochre	–
Wooden roofing	–	Presence of mat	–

Roofing element orientation		Animal bones	3 fragments
Other structural elements	–	Ritual objects	–
Comments			

Under the humus base, in the central portion of the barrow, the disarticulated bones of a child aged infans II were unearthed together with those of an adult individual aged above 20 years. Among them, three animal bone fragments were also identified. The remains were in part disturbed by deep ploughing. A related pit outline could not be captured. The depth at which the remains were discovered corresponds to the level at which the barrow was built. Hence, the stratigraphic position of the feature is difficult to determine with any certainty. The bones may have been raked up to the ground surface from a secondarily disturbed feature 1 (in particular, the remains of the adult) or placed on the original level as a funerary offering (*trizna*). Alternatively, they may come from the base portion of the pit sunk into the centre of the barrow mound (Fig. 19).

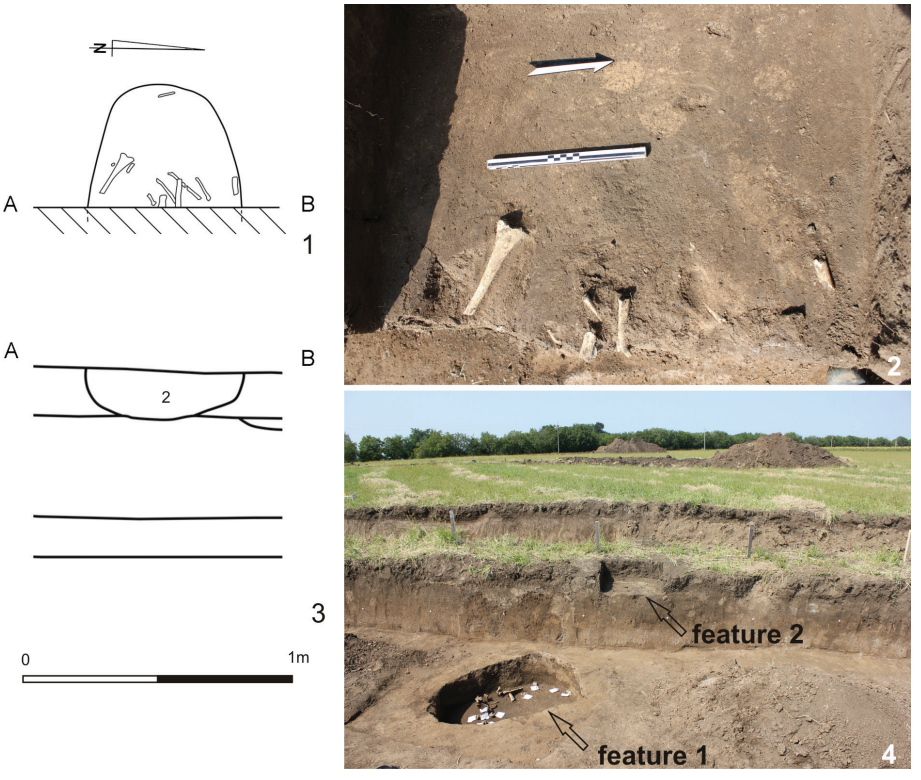

Fig. 19. Prydnistryanske, Yampil Region, barrow III, feature III/2. 1, 2 – fragment of floor part; 3, 4 – feature profile

Feature III/3

Culture	Tripolye-Gordineşti		
Dating	Poz-66226: 9090 ± 50 BP; Poz-71367: 4510 ± 40 BP (wood)		
Grave pit		**Burial**	
Structure type		Sex	?
Number of burials	1	Age	?
Size at the level of discovery	1.3 × 1.0 m	Orientation	?
Size at the level of the bottom	1.25 × 1.0 m	Deviation	?
Depth	1.45 m	Arrangement of head	?
Pit orientation	NW-SE	Arrangement of trunk	?
Deviation	21°N	Upper limbs	?
Distance from barrow centre	0 m	Lower limbs	?
Azimuth	0°	Ochre	+
Wooden roofing	–	Presence of mat	+ (bark?)
Roofing element orientation		Animal bones	–
Other structural elements	–	Ritual objects	Amphora, beaker, stone battle-axe
Comments	The feature fill was found to contain 5 flint artefacts		

The grave was discovered under the mound in the barrow centre. It was sub-rectangular with gently rounded corners and oriented NW-SE. Its fill consisted of homogeneous dark-brown earth and was found to hold single small pieces of wood. In the vertical cross-section, the feature formed a regular rectangle. The depth of the excavation was about 1.15 m from the level at which the barrow had been built. On the bottom, in the northern part of the pit, several sedimentations were recorded, being probably traces left by skull bones (of a child?). Apart from them, no other traces of a burial were recorded, but a rust-brown lining (bark?) was found instead. It was badly damaged by numerous animal burrows. Within it, in the north half of the pit, small lumps of red ochre could be seen. In addition, several small pieces of rotten wood were recovered. On the grave bottom, there lay grave goods: at the west wall – a stone battle-axe, at the north wall – an amphora and a beaker (Fig. 20).

Description of grave goods

1. A battle-axe made of fine-crystalline rock grey-green in colour macroscopically identified as basalt or, less credibly, amphibolite (assessment by Dr. V.I. Korinnij, Chair of Geography, Faculty of Natural and Geographic Sciences, Vinnitsa State Pedagogical University). The blade is asymmetrical and slightly damaged at the top. The butt is oval and flat, bearing traces of stamping or working. The upper and bottom surfaces are slightly smoothed out with deep flutes 6-7 mm wide and

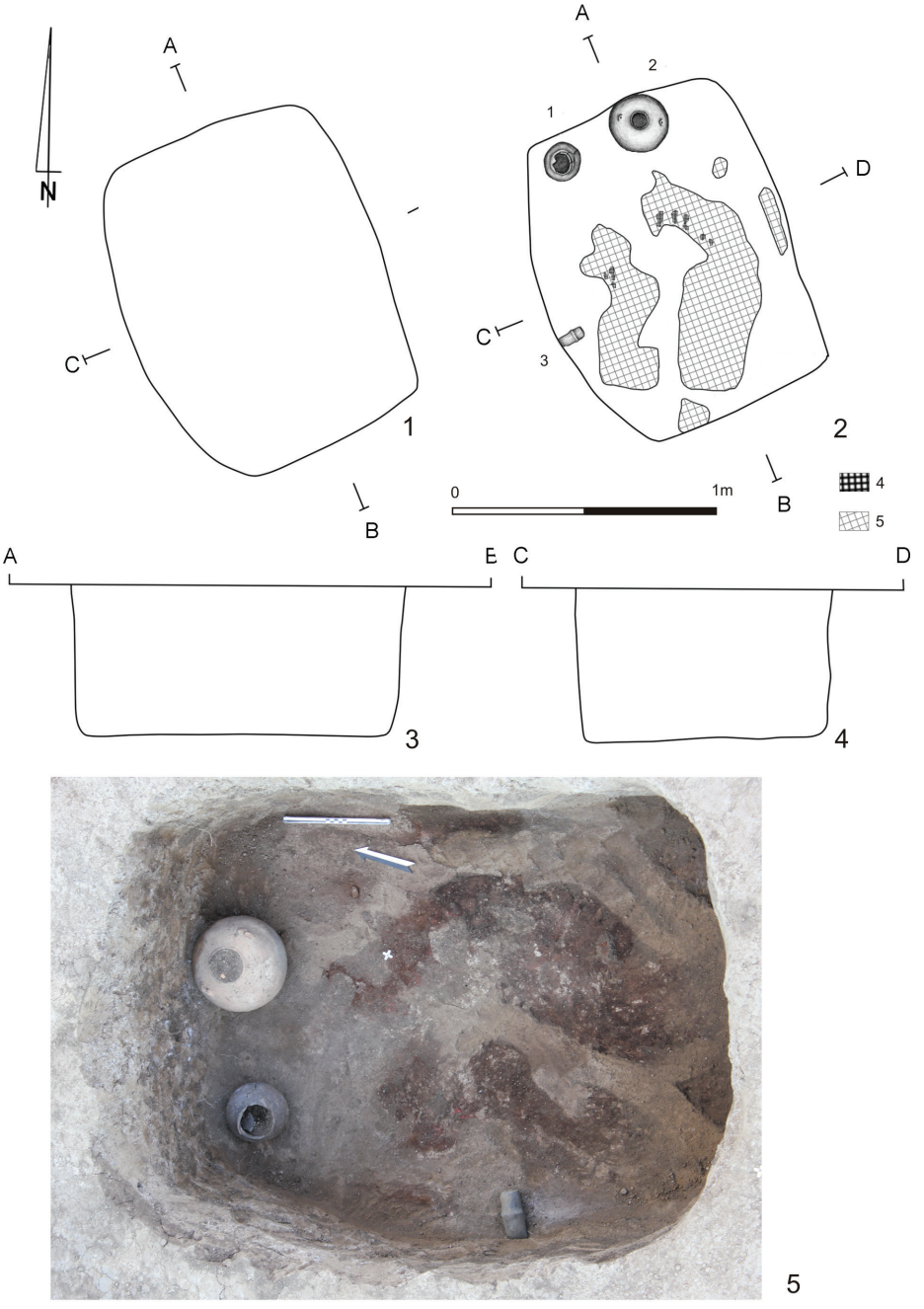

Fig. 20. Prydnistryanske, Yampil Region, barrow III, feature III/3. Upper part (1) burial level (2, 5) and feature profiles (3, 4) (1 – beaker, 2 – amphora, 3 – stone battle-axe, 4 – ochre, 5 – outline of mat)

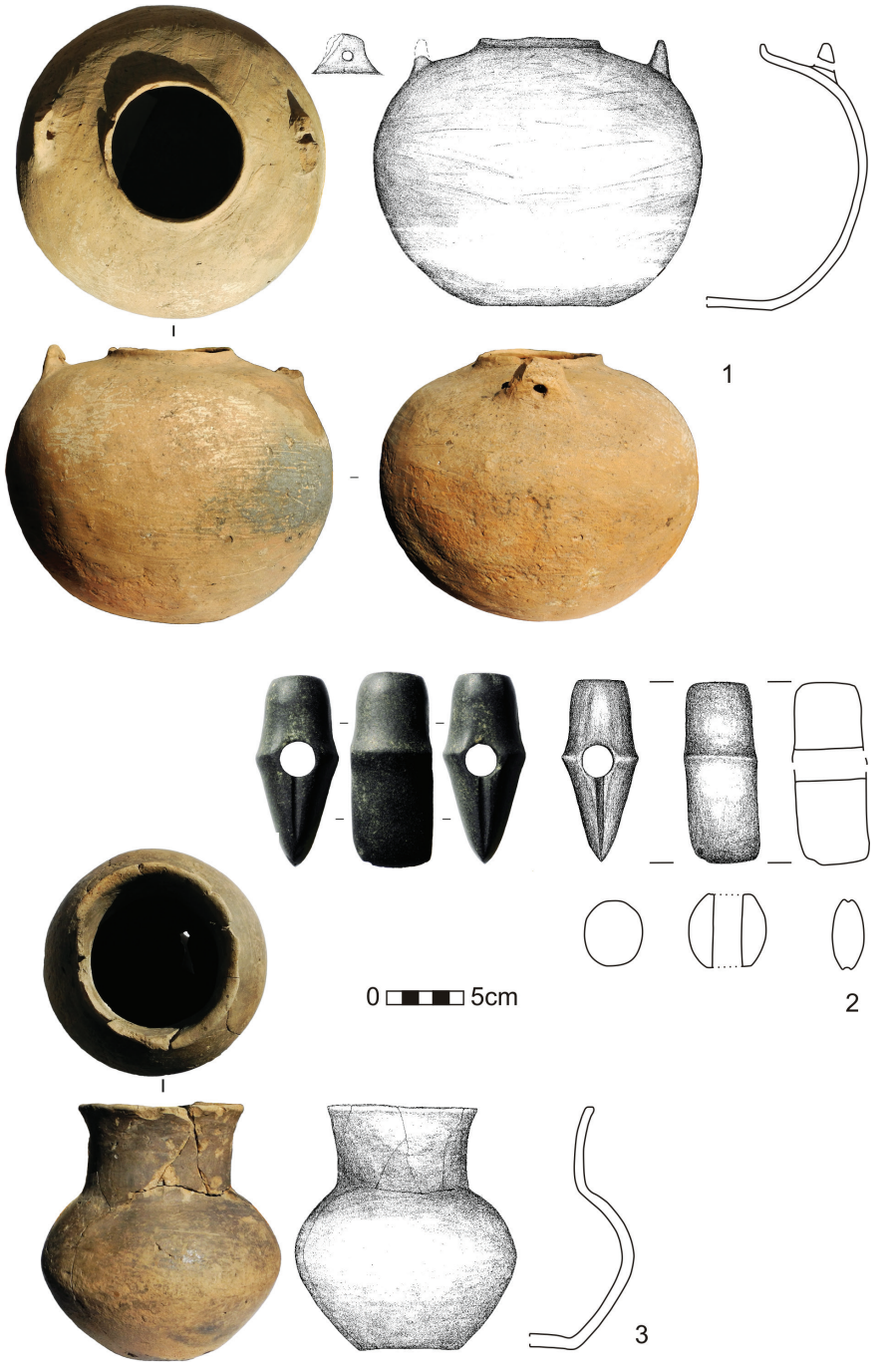

Fig. 21. Prydnistryanske, Yampil Region, barrow III, feature III/3. Grave goods: 1 – amphora, 2 – battle-axe, 3 – beaker

2 mm deep running across their middle; the flutes are slightly wider on the bottom surface. Lateral surfaces bear visible traces of wide facets (changes in the direction of polishing). The perforation was drilled from one side (diameter: 22 mm at the top and 19.5 mm at the bottom). Dimensions: length: 11.6 cm, blade width: 4.2 cm, height: 4.8 cm, butt size: 3.7 × 3.2 cm, thickness: 5.2 cm (Fig. 21: 2).

2. An amphora with a low, barely marked neck, globular belly and two symmetrically placed and vertically perforated handles on the upper portion of the belly. Its outer surface is covered with light-yellow-grey engobe, displaying clear trac-

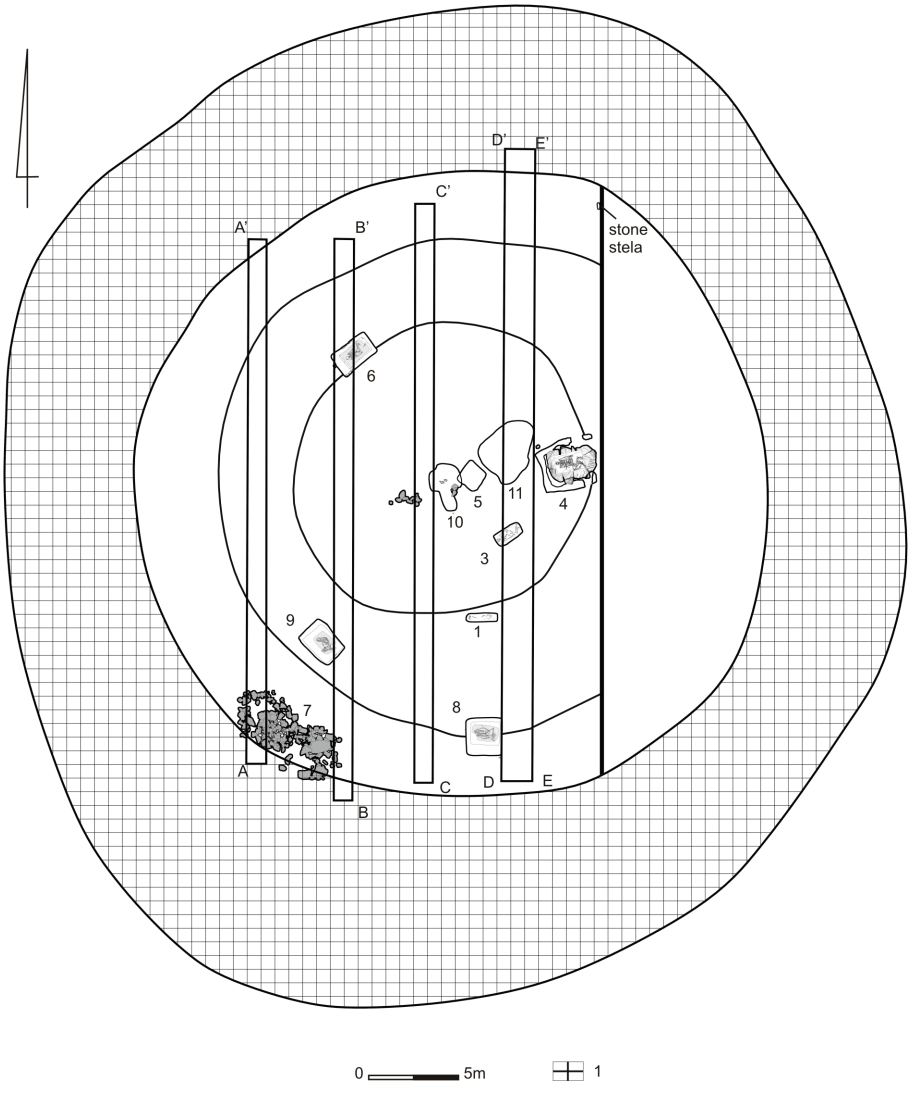

Fig. 22. Prydnistryanske, Yampil Region. Plan of barrow IV

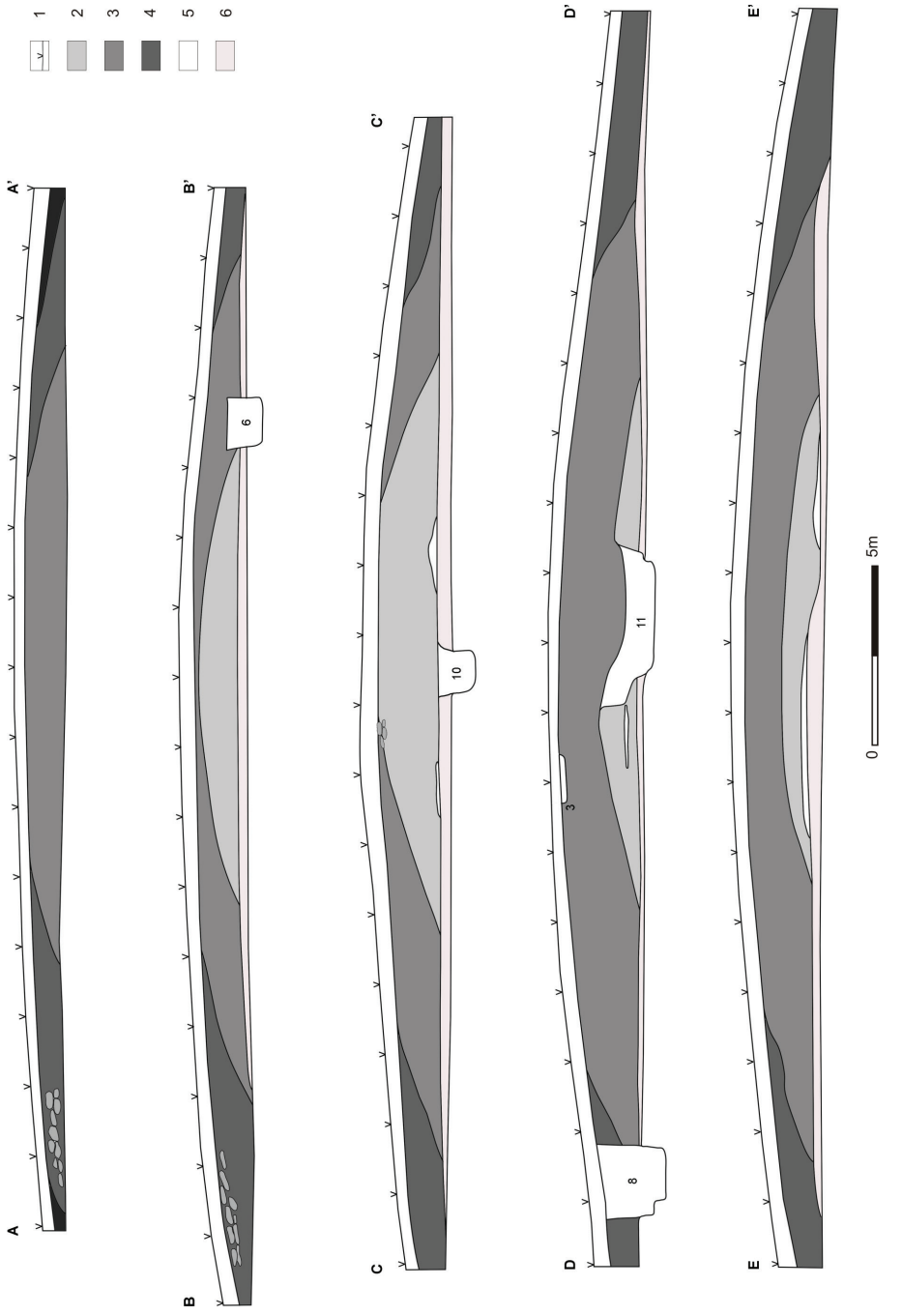

Fig. 23. Prydnistryanske, Yampil Region. Profiles of barrow IV. 1 – surface soil; 2 – first mound construction phase; 3 – second mound construction phase; 4 – third mound construction phase; 5 – yellow loess spills (from grave excavations); 6 – yellow loess

Fig. 24. Prydnistryanske, Yampil Region. Central profiles of barrow IV

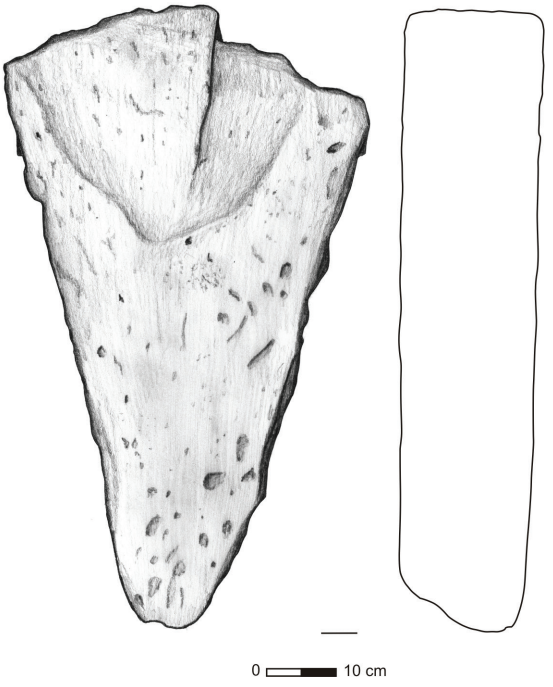

Fig. 25. Prydnistryanske, Yampil Region, barrow IV. Stone stela recovered from the north part of the barrow

es of burnishing. The ceramic body is light-yellow and contains temper of coarse crushed ceramics and fine sand. Height: 17.5 cm, neck height: 0.7 cm, diameter: 21.4 cm, lip diameter: 8.0 cm (Fig. 21: 1).

3. A flat-bottom beaker with a tall neck, flared lip and globular belly. The outer surface is covered with dark-grey engobe and smoothed out (polished). The ceramic body is light-grey with the temper of coarse sand. Height: 15.4 cm, neck height: 5.2 cm, belly diameter: 14.0 cm, neck diameter: 9.5 cm (Fig. 21: 3).

Barrow IV

Located on the very culmination of the watershed, the barrow stands 100 m N of the cluster of barrows I-III. When the excavations commenced, its height was 2.4 m. Its mound was circular and measured about 35 m in diameter (Figs. 22-24). In 2014, the western and central parts of the barrow were excavated: four trenches 4 m wide were laid out and one (westernmost) 7 m wide. Between them, baulks were kept: the central one 2 m wide and another three each 1 m wide. A stratigraphic analysis shows that the mound was built in three stages. At the first stage, related to the Eneolithic, a small mound was erected, about 17-19 m in diameter, over feature IV/10, associated with the TC [Goslar *et al*. 2015]. The mound strata connected with it were visibly darker than the strata linked to later stages. The

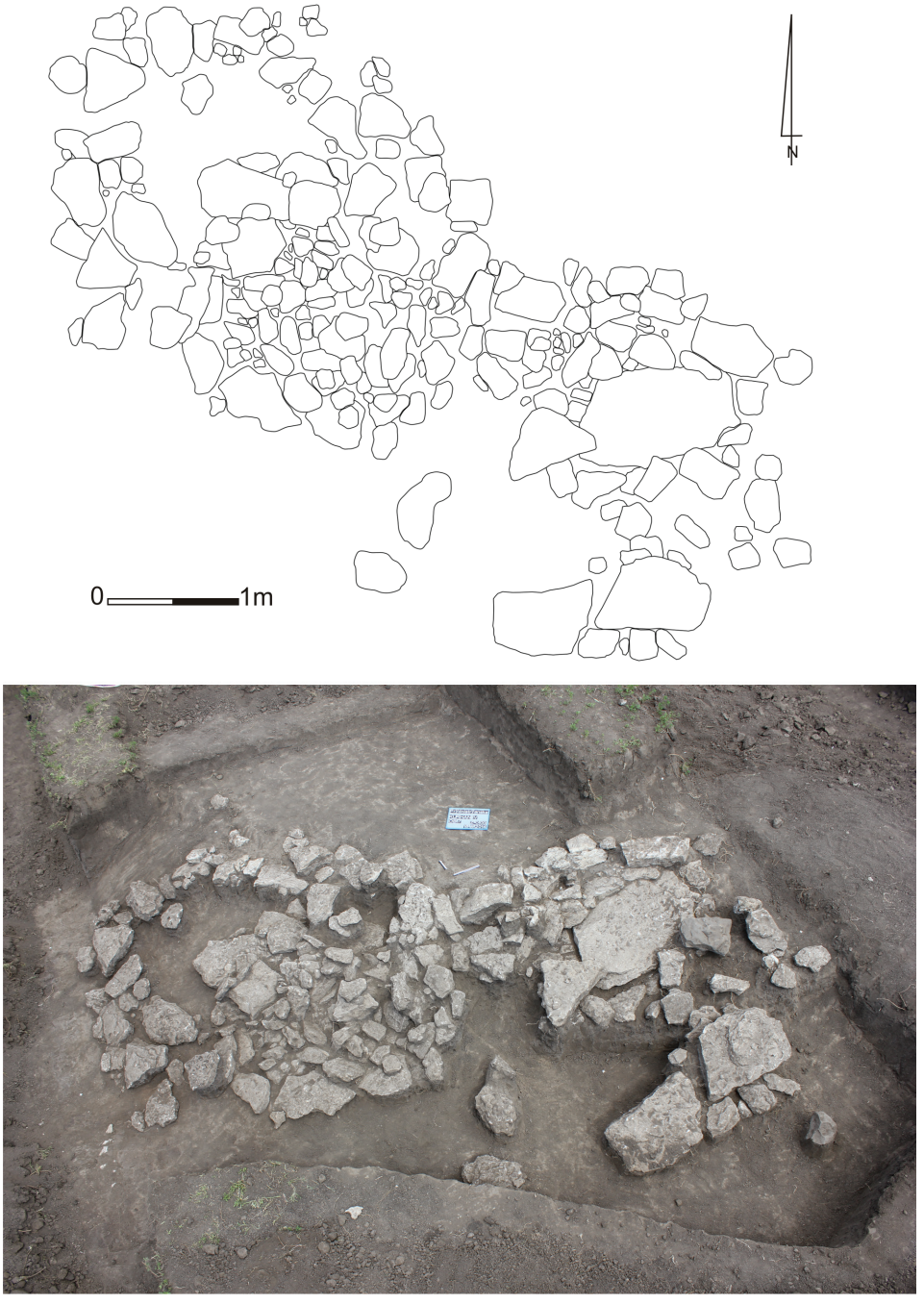

Fig. 26. Prydnistryanske, Yampil Region, barrow IV. Plan of large stones concentration: feature IV/7

mound of the oldest barrow was disturbed by a large, irregular excavation (feature IV/11, Fig. 22), which destroyed a large fragment of the central portion. Into the eastern part of the mound, in turn, grave IV/4 was sunk, linked to the early phase of the YC. This episode was most likely connected to the second stage of mound construction. The barrow was then extended mainly on its eastern side with its diameter growing to more than 25 m. Into the mound of the second barrow, a grave was sunk – feature IV/6 (YC). Already in the Early Bronze Age, the barrow was further extended (the third stage of mound construction) and reached its final size. On the south side, three YC graves were sunk into it (IV/3, IV/8 and IV/9), and much later one more was added – feature IV/1 – dated to the Sarmatian period. In its northern part, in the base of the youngest stratum of the mound, an erect stone stela was exposed (Fig. 25). Since it was found at the edge of the investigated area, its stratigraphic position and a ritual relation to a specific grave remain undetermined. Generally, it can be linked to the younger stage of the Early Bronze Age. Along the mound edges, in various places, several lime stones were found, while their large concentration was located in the southern part (feature 7, Fig. 26). Originally, it must have sat on the mound surface and only later was it covered with earth strata as a result of mound erosion. A smaller stone concentration (feature 2) was located over the central part of the Eneolithic barrow – immediately below the layer of modern humus. In addition, the central part was found to have been also dug into, albeit in a rather restricted manner, in modern times (for robbing purposes? – feature 5). It appears that the intrusion has not disturbed any archaeological features.

In the barrow mound and in the secondary context of archaeological feature fills, 86 flint artefacts were discovered.

Feature IV/3

Culture	Yamnaya		
Dating	Poz-66228: 4090 ± 35 BP (human bone)		
Grave pit		**Burial**	
Structure type	Pit?	Sex	?
Number of burials	1	Age	40+ years (*maturus/senilis*)
Size at the level of discovery	Unidentifiable pit outline	Orientation	SW-NE
Size at the level of the bottom	Unidentifiable pit outline	Deviation	0°
Depth	0.3 m	Arrangement of head	Face upwards, slightly tilted to the left
Pit orientation	NE-SW	Arrangement of trunk	On the back
Deviation	0°	Upper limbs	F
Distance from barrow centre	4.8 m	Lower limbs	7

Azimuth	130°	Ochre	Layer on the pit bottom and on skeleton bones
Wooden roofing	–	Presence of mat	+
Roofing element orientation		Animal bones	–
Other structural elements	–	Ritual objects	–
Comments	The grave fill was found to hold one flint artefact		

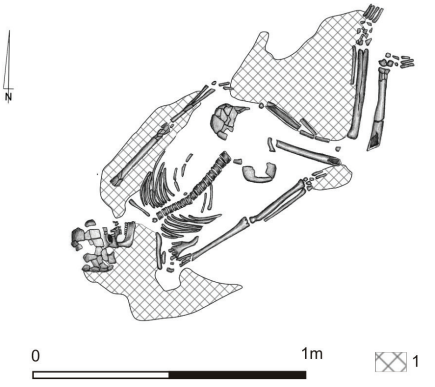

Fig. 27. Prydnistryanske, Yampil Region, barrow IV, feature IV/3. Level of burial

The grave was sunk into the youngest mound stratum, south of the barrow centre. The burial was exposed immediately below the layer of surface soil and for this reason the pit outline could not be captured. The skeleton of an individual aged *maturus/senilis*, of indeterminate sex, was poorly preserved. The corpse lay supine with its lower limbs flexed and turned to the right side. The upper limbs were extended along the trunk. The skull was slightly tilted to the left side. On both the skeleton and the pit bottom, the traces of sprinkling with ochre had survived, with the chest and left upper limb being covered with it rather profusely. No grave goods were recorded (Fig. 27).

Feature IV/4

Culture	Yamnaya		
Dating	Poz-66230: 4455 ± 35 BP (wood); Poz-66229: 4380 ± 35 BP (human bone)		
Grave pit		**Burial**	
Structure type	Pit with a step	Sex	Male
Number of burials	1	Age	35-50 years (*adultus/maturus*)
Size at the level of discovery	3.3 × 2.85 m	Orientation	W-E
Size at the level of the bottom	0.9 × 1.05 m	Deviation	13°
Depth	3.1 m	Arrangement of head	Face upwards
Pit orientation	W-E	Arrangement of trunk	On the back
Deviation	15°N	Upper limbs	F
Distance from barrow centre	7 m	Lower limbs	5
Azimuth	82°	Ochre	On the skull, a lump lying left of the skull
Wooden roofing	+	Presence of mat	+
Roofing element orientation	Longitudinal and transverse	Animal bones	-
Other structural elements	Stone grave cover, sealed with mats from above and below; grillage woodwork; 8 vertical wooden stakes, supporting, together with crossbeams, a ‘canopy’.	Ritual objects	-
Comments	The grave fill was found to hold nine flint artefact, including the fragment of a triangular, bifacially retouched point (Fig. 28) and a flint blade		

Fig. 28. Prydnistryanske, Yampil Region, barrow IV, feature IV/4. Fragment of a bifacial flint point from the upper portion of the grave fill

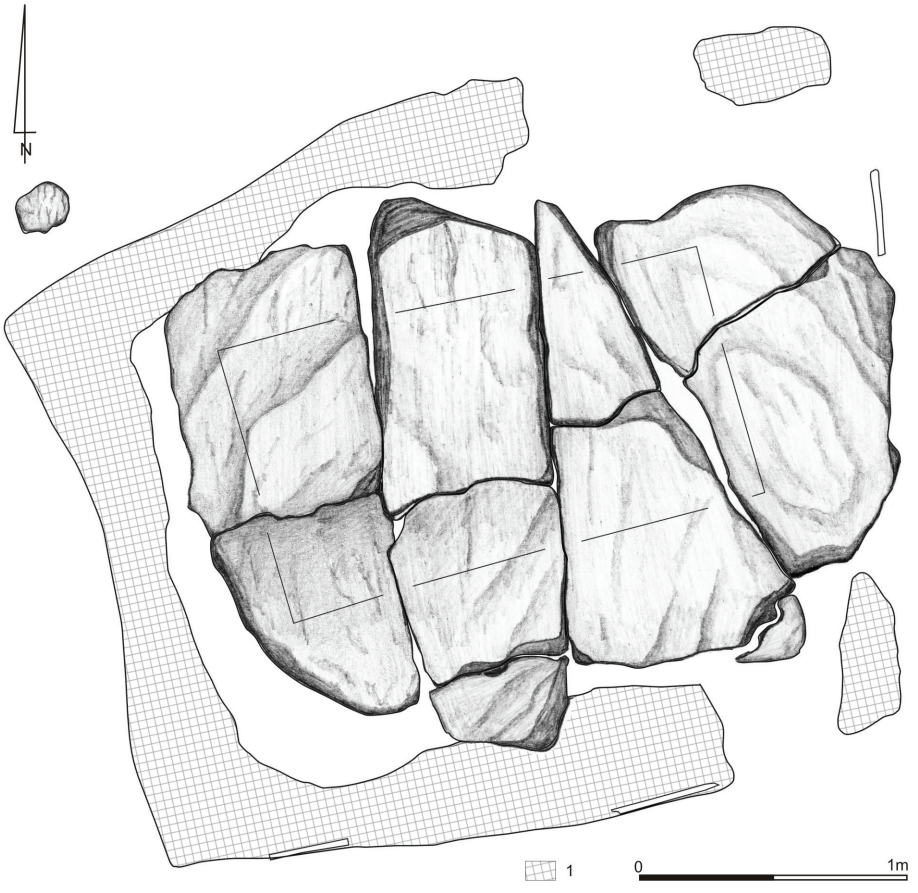

Fig. 29. Prydnistryanske, Yampil Region, barrow IV, feature IV/4. Stone grave cover 1 – remains of a mat covering the stone structure

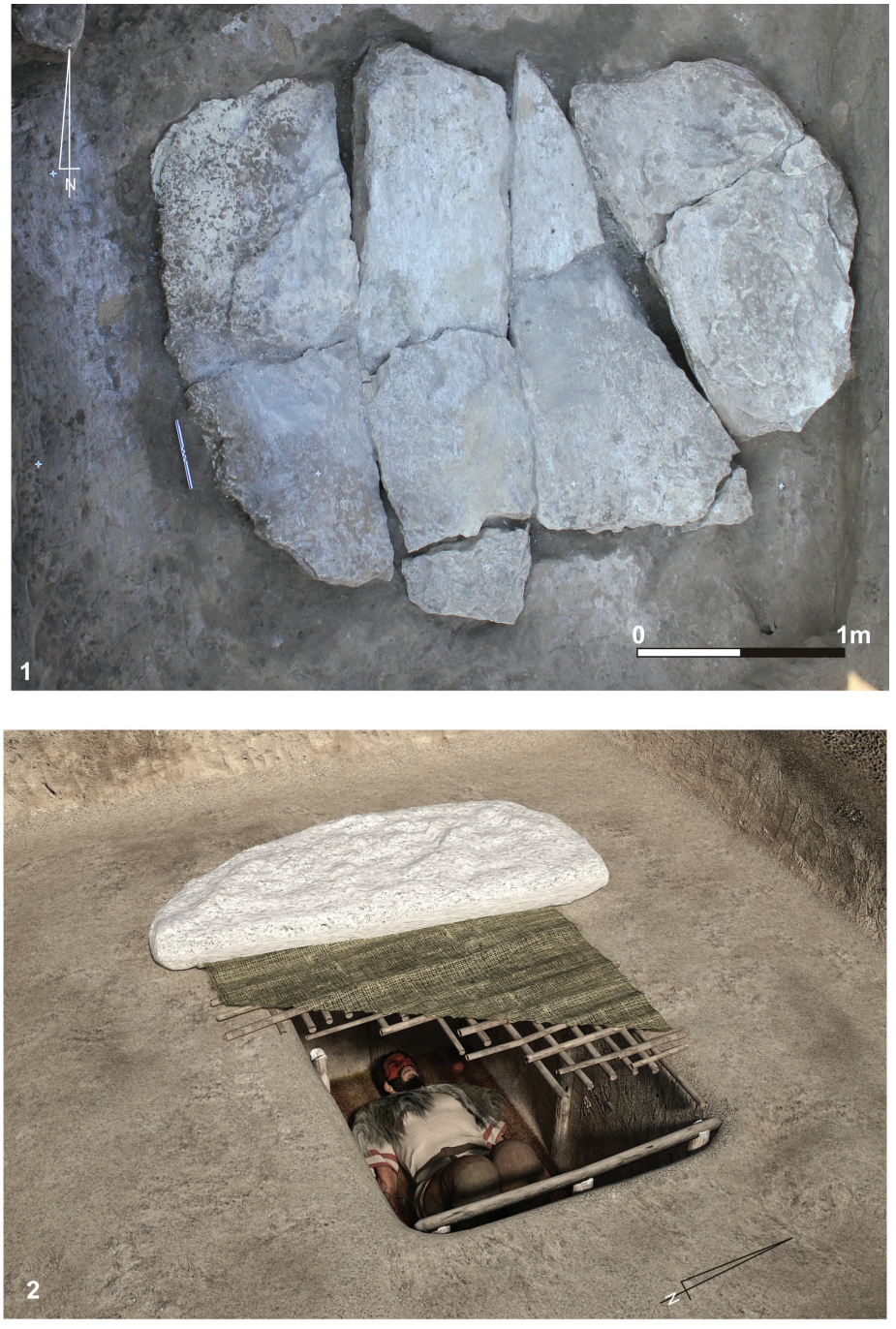

Fig. 30. Prydnistryanske, Yampil Region, barrow IV, feature IV/4. 1 – stone grave cover; 2 – cross-section reconstruction of grave cover elements (for a detailed description of elements see text)

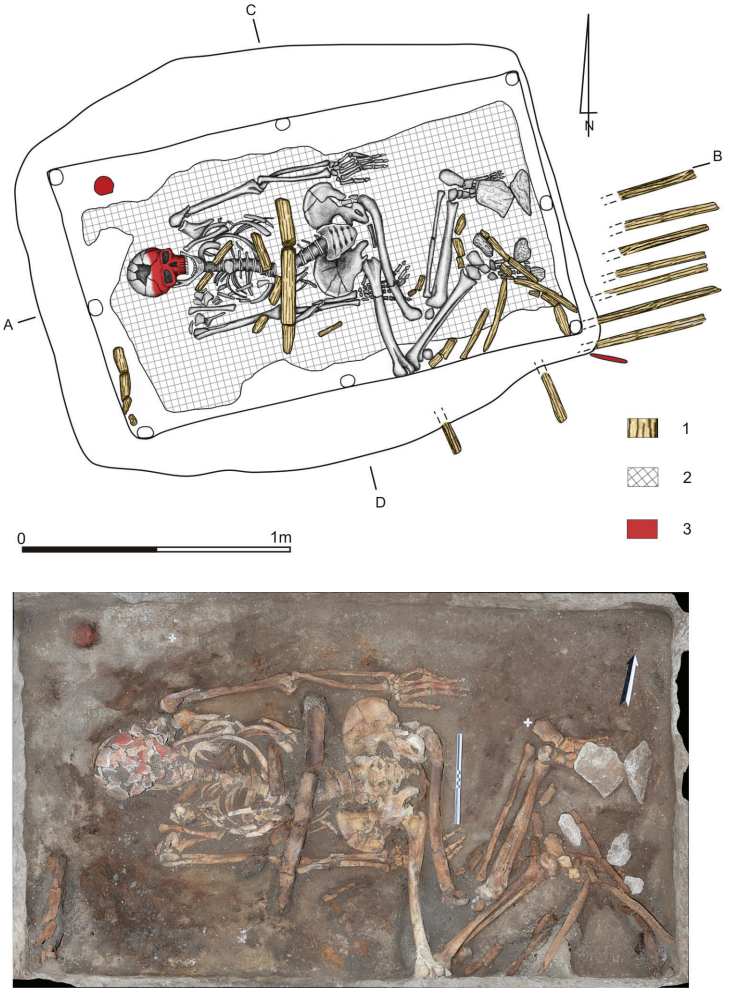

Fig. 31. Prydnistryanske, Yampil Region, barrow IV, feature IV/4. Burial level (1 – outline of mat; 2 – ochre; 3 – woodwork elements)

The grave was sunk into the eastern portion of the oldest (Eneolithic) barrow. The grave pit was covered with four large well-fitted limestone blocks 1.5-2.15 m long and 0.65-0.85 m wide (Figs. 29, 30: 1). Under the weight of earth, the blocks broke along the longer, central axis of the grave and slightly caved in, damaging the upper parts of pit walls. The stone structure was covered by a mat, roughly rectangular, measuring about 3.3 × 2.80 m. On its southern and eastern ends, black-grey post-pipes have survived left by wooden stakes 2.0-3.0 cm in diameter. They were driven into the ground where the mat ended (for the purpose of stretching it?).

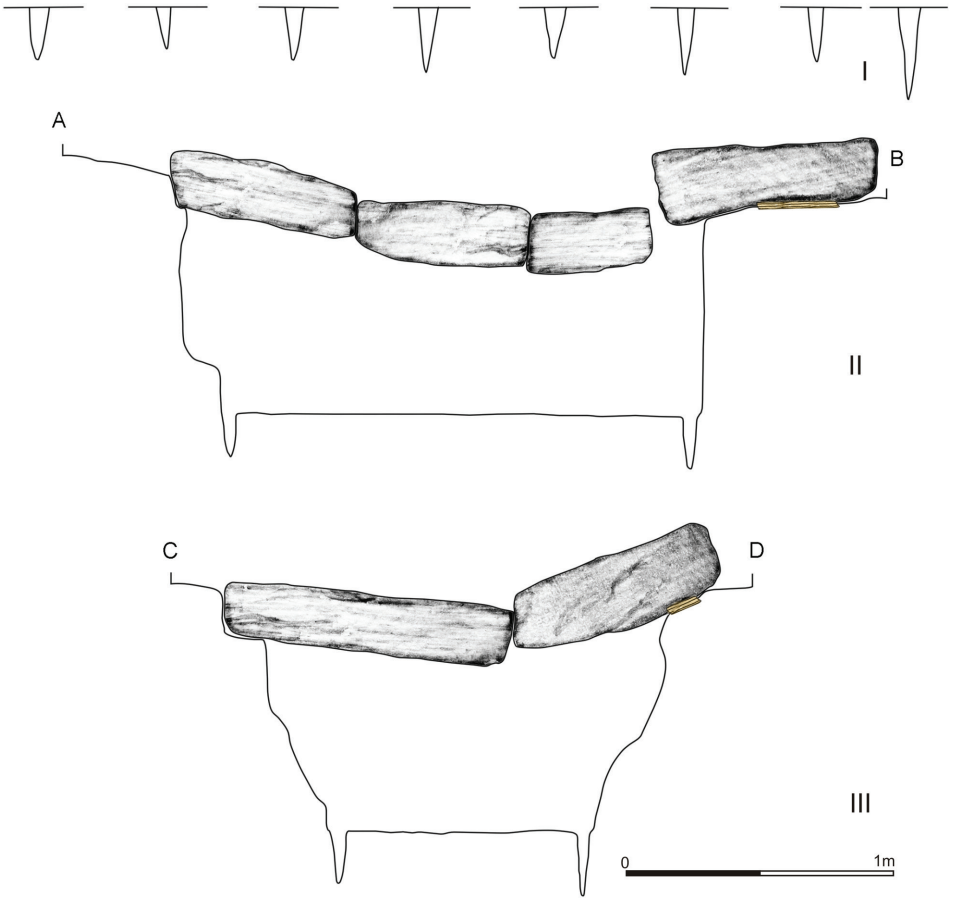

Fig. 32. Prydnistryanske, Yampil Region, barrow IV, feature IV/4. Feature profiles: I – stakes sunk into the grave bottom; II – W-E profile; III – N-S profile

Fig. 33. Prydnistryanske, Yampil Region, barrow IV, feature IV/4. Reconstruction of grave chamber profile

The slabs were placed on a grillage woodwork made of rods 5.0-6.0 cm in diameter. They were much longer than the grave pit at its eastern end and their portions extending beyond the pit edge were also covered by one of the slabs. The wooden grillage was additionally sealed with a wattled mat, the visible traces of which have survived on the bottom side of the stone cover (Fig. 30: 2). The bottom sides of the slabs bore traces of daubing with red colorant.

Located below a step, the grave chamber was originally regularly rectangular and measured 2.0 × 1.3 m. It was filled with loose light-grey-brown earth disturbed by many animal burrows (Fig. 31). The flat bottom extended at a depth of 95 cm from the level of the stone slabs (chamber ceiling). In the corners of the feature and halfway its sides, eight postholes were exposed. They were 5 cm in diameter and sunk about 20 cm below the pit bottom. Wood fragments, being the remains of the posts, were found inside the holes and in the chamber fill (some of them lay directly on the burial remains) (Fig. 32, 33). At the level of the roofing, the posts supported more sturdy crossbeams of which one (middle one) was found lying on the skeleton's ribs. The pit bottom was lined with a rectangular mat measuring about 1.7 × 0.85 m. The corpse of a man, aged *adultus/maturus* lay supine, with his lower limbs flexed and knees pointing up. Later, the knees leaned to the right side and rested against the northern wall of the grave. The upper limbs extended along the body. The head lay with the face upwards. The skull, originally well preserved, was partially destroyed in the course of exploration. Its neurocranium bore clear traces of colouring with ochre. Its traces were also visible on the bones of the left hand. Northwest of the skull, at the NW pit corner, a lump of ochre, 8 cm in diameter, lay, being the only element of grave furnishing (Fig. 31: 3).

Feature IV/6

Culture	Yamnaya		
Dating	Poz-66231: 4185 ± 35 BP (wood); Poz-70673: 4090 ± 40 BP (human bone)		
Grave pit		**Burial**	
Structure type	Pit with a step	Sex	Male
Number of burials	1	Age	45+ years (*maturus*)
Size at the level of discovery	2.35 × 1.4 m	Orientation	SW-NE
Size at the level of the bottom	2.1 × 1.05 m	Deviation	8°W
Depth	1.5 m	Arrangement of head	Face upwards
Pit orientation	SW-NE	Arrangement of trunk	On the back
Deviation	9°W	Upper limbs	K
Distance from barrow centre	8.44 m	Lower limbs	5

Azimuth	324°	Ochre	On the skull, a lump in the NW part of the grave
Wooden roofing	+	Presence of mat	+
Roofing element orientation	Longitudinal	Animal bones	–
Other structural elements	8 vertical posts	Ritual objects	–
Comments	The grave fill was found to hold 17 flint artefacts		

The grave was discovered in the north-western portion of the barrow; it could have been sunk into the mound of the second stage of barrow construction. In its upper portion, the grave was roughly rectangular. At a depth of 60 cm from the current ground level, there was a step, forming a base for the wooden roofing of the grave chamber (Fig. 34: 1). The planks of the roofing were laid along the longer axis of the feature and extended far beyond the chamber in the SW part of the grave. There, they were weighed down by several stones, the size of which was almost 25 cm (some of them remained at the top, while others fell inside the chamber together with the collapsed ceiling). The roofing structure had collapsed under the weight of earth along its entire length at the same time and its debris was recorded at a depth of about 25-30 cm above the bottom, that is immediately above the bones of the burial (Fig. 35).

Below the step, the grave chamber formed a regular rectangle and its fill consisted of homogeneous grey-brown earth. An additional structural element proved to be eight sharpened posts, 5 cm in diameter each, driven 15-20 cm into the ground below the grave bottom in pit corners and halfway pit sides. Their fragments were found in the grave chamber, with one lying on the corpse's skull. On the grave bottom, there were traces of a rectangular mat, measuring 1.55 × 0.80 m. On it, the skeleton of a man, aged *maturus/senilis*, rested on its back, with its lower limbs strongly flexed. The knees, originally pointing upwards, leaned to the left side, with the distal epiphysis of the left femur resting against the north-western grave wall. The upper limbs, straight at the elbows, were slightly removed from the trunk. The skull, slightly drawn to the chest, bore traces of being sprinkled with ochre. The trace of a decomposed lump of ochre, measuring about 10 × 5 cm, was discovered west of the corpse's head (Figs. 34, 36).

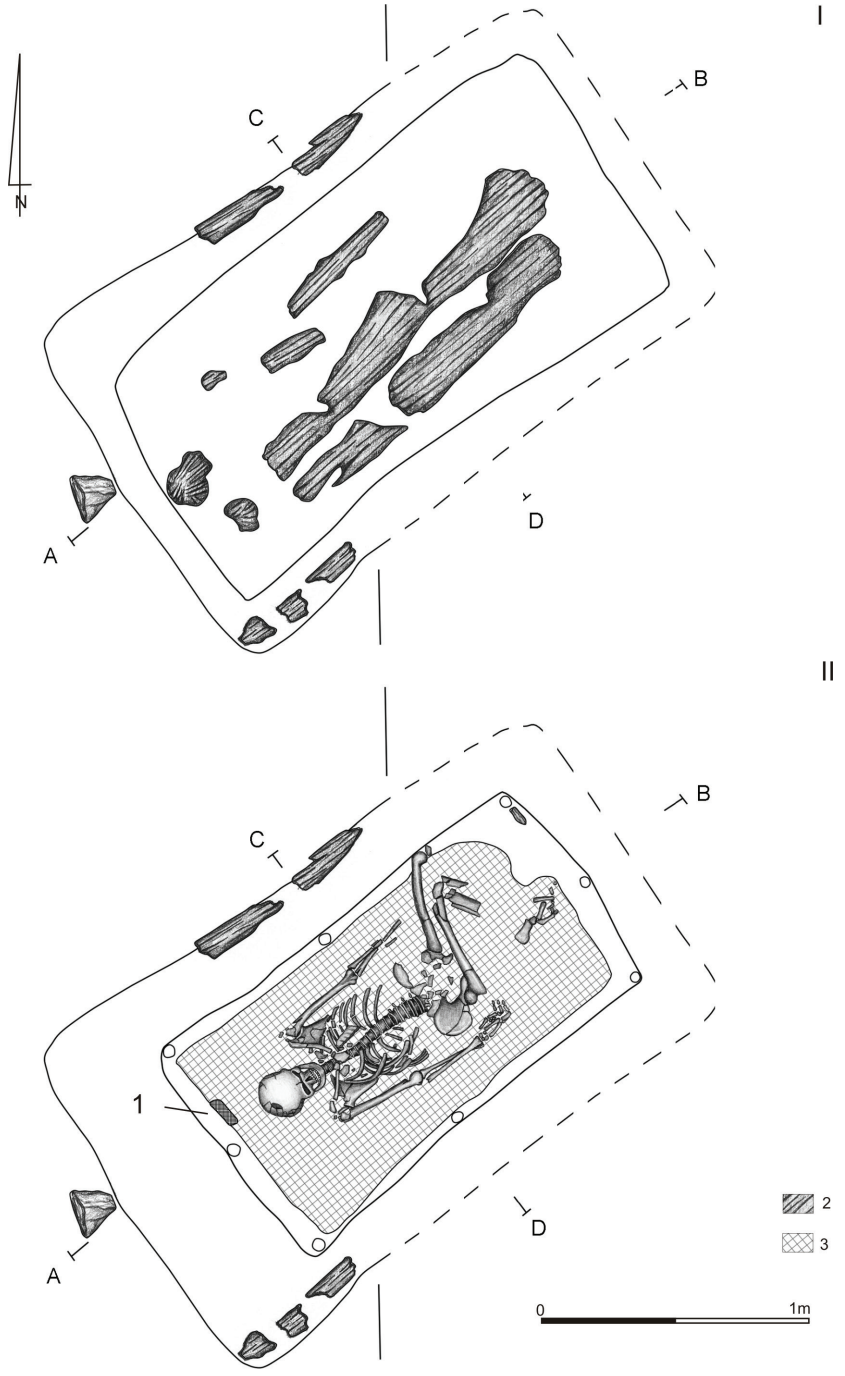

Fig. 34. Prydnistryanske, Yampil Region, barrow IV, feature IV/6. 1 – level of wooden grave roofing; 2 – burial level (1 – lump of ochre; 2 – fragments of wood; 3 – outline of mat)

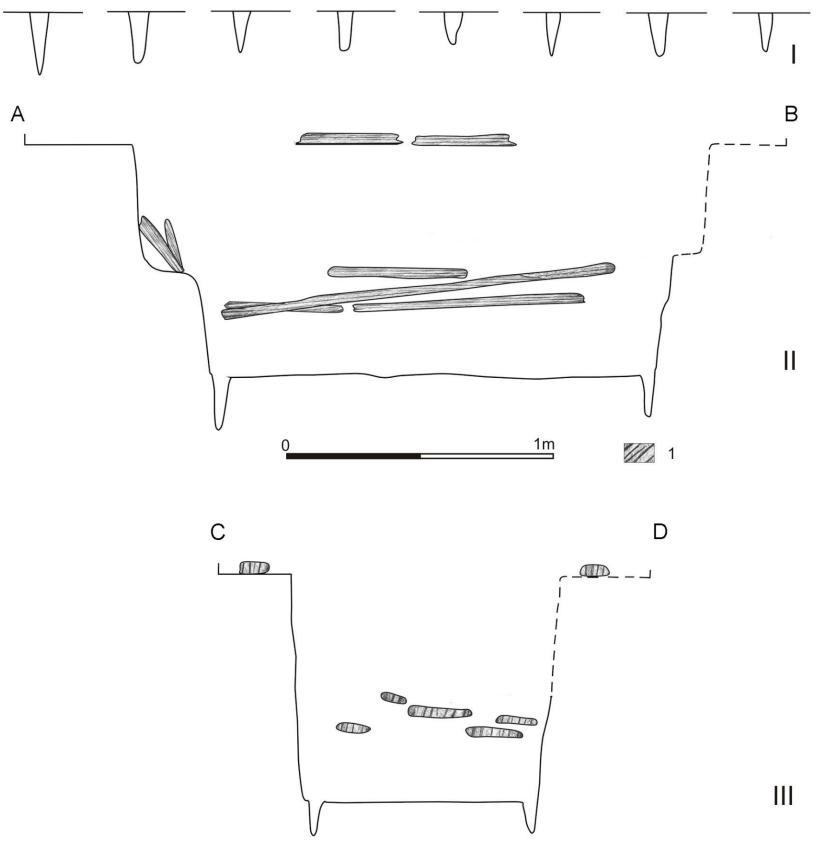

Fig. 35. Prydnistryanske, Yampil Region, barrow IV, feature IV/6. Grave profiles. I – stakes sunk into the grave bottom; II – W-E profile; III – N-S profile (1 – fragments of wood)

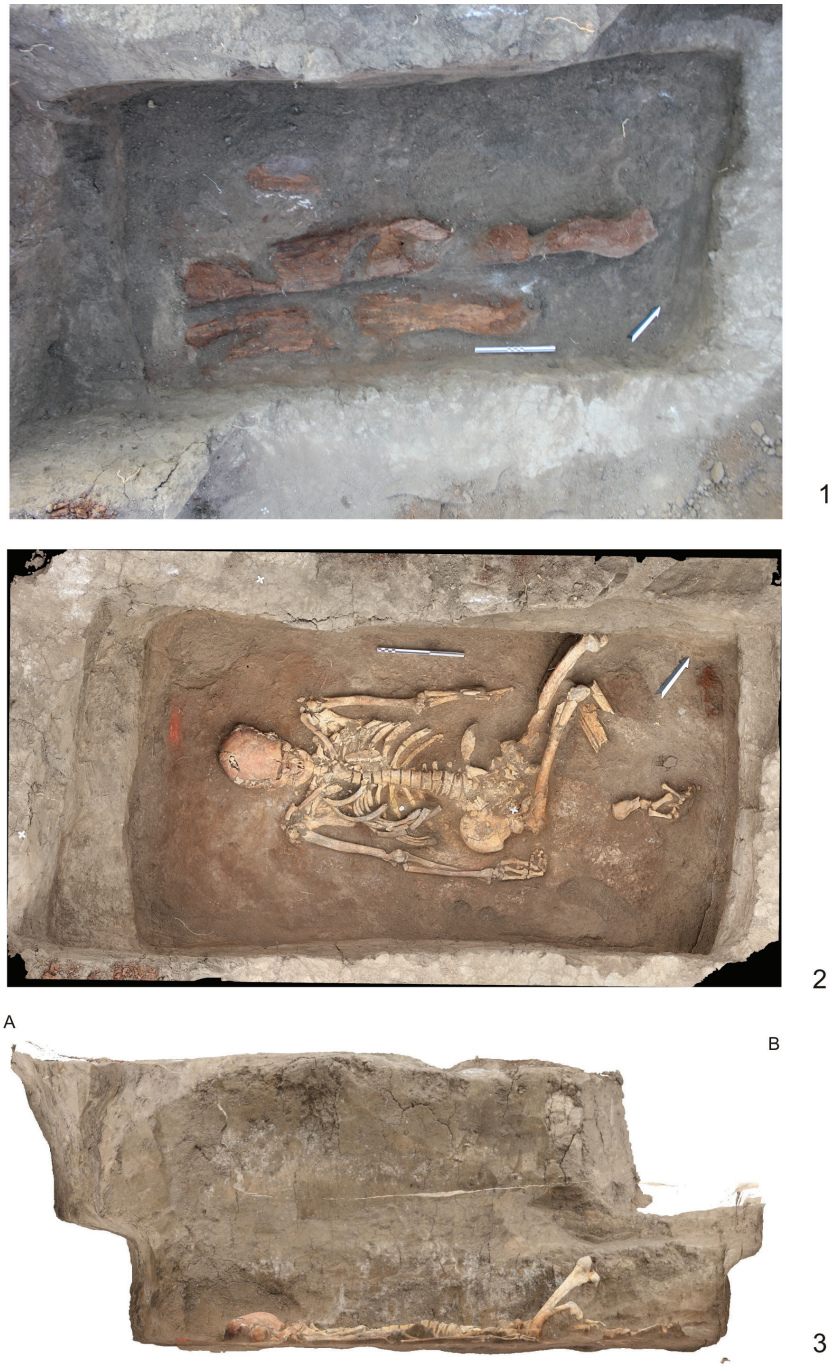

Fig. 36. Prydnistryanske, Yampil Region, barrow IV, feature IV/6. 1 – level of grave roofing; 2 – burial level; 3 – W-E profile

Feature IV/8

Culture	Yamnaya		
Dating	Poz-66232: 4090 ± 40 BP (human bone)		
Grave pit		**Burial**	
Structure type	Pit	Sex	Male
Number of burials	1	Age	35-50 years (*maturus*)
Size at the level of discovery	2.1 × 1.95 m	Orientation	W-E
Size at the level of the bottom	1.60 × 1.3 m	Deviation	6°N
Depth	2.2 m	Arrangement of head	On the left side
Pit orientation	W-E	Arrangement of trunk	On the back
Deviation	7°N	Upper limbs	H
Distance from barrow centre	14.68 m	Lower limbs	6
Azimuth	170°	Ochre	Spots at the right forearm and under the pelvis; a lump at the left elbow
Wooden roofing	+	Presence of mat	+
Roofing element orientation	Transverse	Animal bones	–
Other structural elements	–	Ritual objects	Blade knife insert, found at the pelvis
Comments			

Found in the southern portion of the barrow, the grave was sunk into the strata of the third mound. Its upper portion was rectangular, almost square and its fill was made up of grey-brown earth mixed with a substantial addition of yellow loess. At a depth of 190 cm, in the southern portion of the pit, there was a wide step forming a support for a roofing woodwork – six planks, 20-30 cm wide, placed transversely to the longer axis of the pit. From the northern side, they were supported by wooden elements arranged longitudinally. The grave chamber was regularly rectangular in shape and its fill was made up of homogenous grey-brown earth. The flat grave bottom extended 30 cm below the step (2.2 m below the current ground level). The skeleton of a male aged *maturus* rested immediately below the collapsed woodwork, on its back, with the lower limbs strongly bent at the knees and originally pointing upwards (later, they leaned to the left side). The upper limbs, slightly bent at the elbows, pointed towards the pelvis. The corpse was sprinkled with ochre. Its larger concentrations were found at the shins, below the pelvis, and next to the right upper limb. A lump of ochre, measuring about 5 cm in diameter, was found north of the left humerus. Below the pelvis, within the ochre concentration, a flint tool was discovered, being probably one of the grave goods (Figs. 37-39).

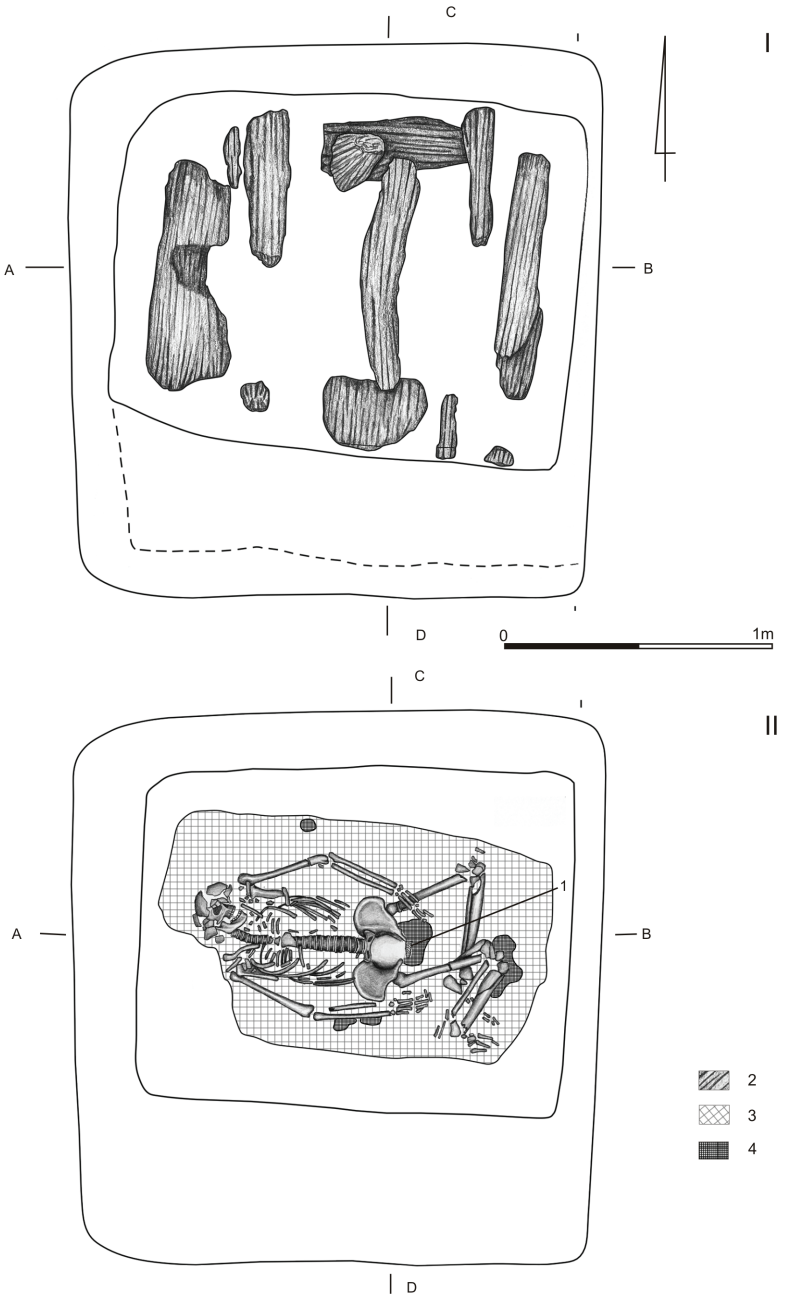

Fig. 37. Prydnistryanske, Yampil Region, barrow IV, feature IV/8. I – level of grave roofing; II – burial level (1 – flint tool; 2 – fragments of wood; 3 – outline of mat; 4 – ochre)

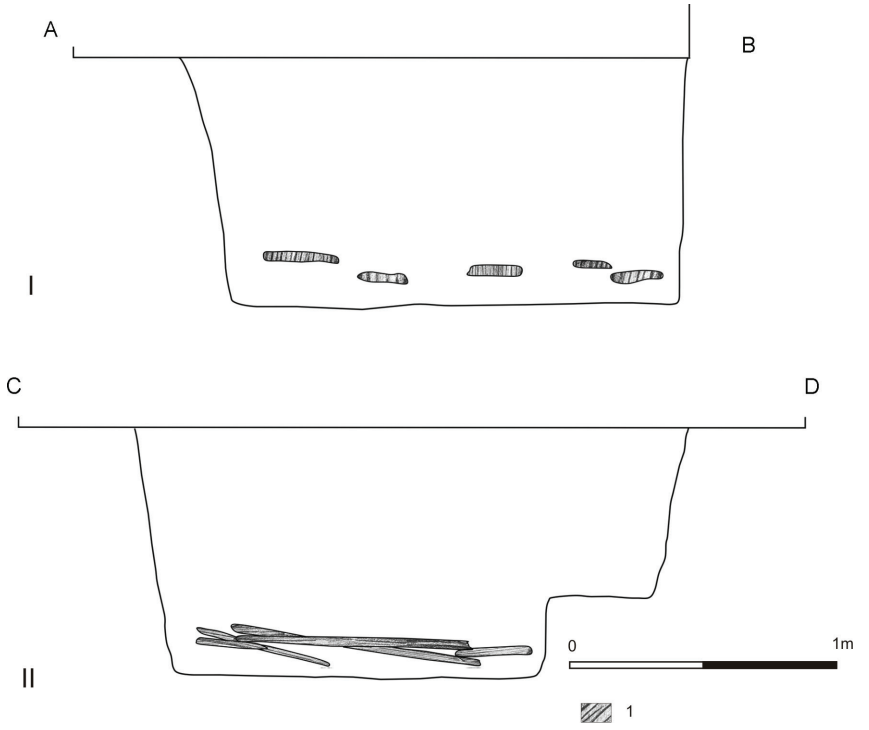

Fig. 38. Prydnistryanske, Yampil Region, barrow IV, feature IV/8. I – N-S profile; II – W-E profile (1 – fragments of wood)

Fig. 39. Prydnistryanske, Yampil Region, barrow IV, feature IV/8. Burial level

Description of grave goods:

1. A blade knife insert made of Cretaceous flint, found at the Dniester Region, whose colour changed as a result of contact with ochre. It was made from a regular blank of broad, chunky dimensions. It has a narrow, tongue-like butt and a pronounced bulb of percussion. Blade edges show micro-retouch and traces of crushing resulting from the tool use. Dimensions: 56 × 29 × 5 mm (Fig. 40).

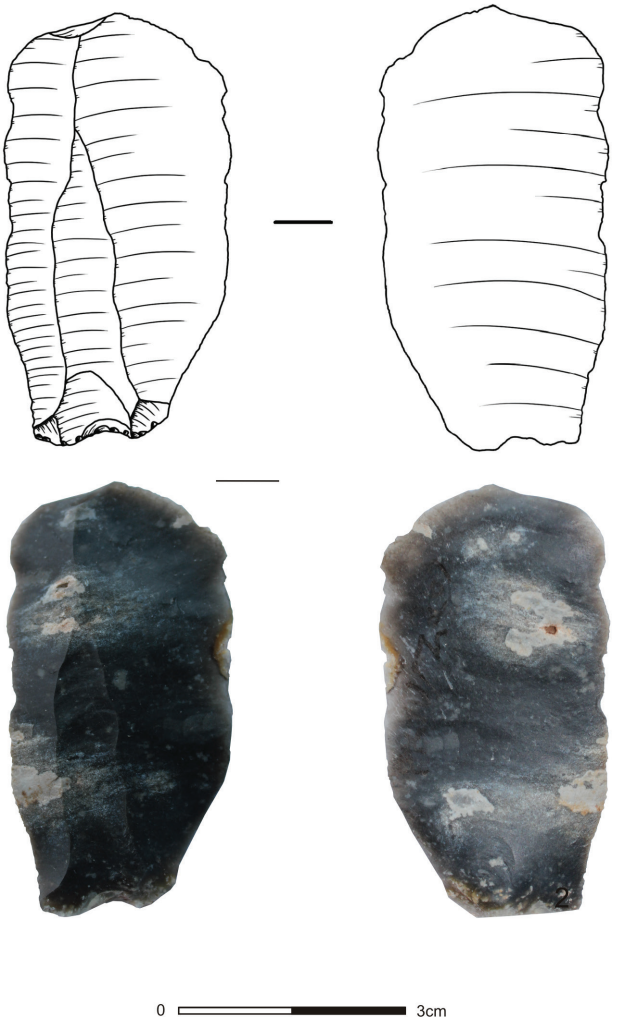

Fig. 40. Prydnistryanske, Yampil Region, barrow IV, feature IV/8. Blade knife insert

Feature IV/9

Culture	Yamnaya		
Dating	Poz-66233: 4120 ± 35 BP (human bone)		
Grave pit		**Burial**	
Structure type	Pit	Sex	Male
Number of burials	1	Age	25-35 years (*adultus*)
Size at the level of discovery	2.25 × 1.7 m	Orientation	NW-SE
Size at the level of the bottom	1.85 × 1.4 m	Deviation	6°E
Depth	2.25 m	Arrangement of head	On the right side
Pit orientation	NW-SE	Arrangement of trunk	On the right side
Deviation	5°N	Upper limbs	A
Distance from barrow centre	11.28 m	Lower limbs	2
Azimuth	216°	Ochre	+
Wooden roofing	+	Presence of mat	+
Roofing element orientation	Transverse	Animal bones	One bone fragment
Other structural elements	–	Ritual objects	–
Comments			

Unearthed in the south-eastern portion of the barrow, the grave was sunk into the youngest part of the mound. Its upper portion was sub-rectangular and its fill was made up of light-grey-brown earth, mixed with yellow loess. From its edges, several small wood fragments were recovered. Close to the bottom, the feature was regularly rectangular and its fill was visibly darker, brown in colour. Beginning at a depth of 2.1 m, immediately above the corpse, a woodwork was preserved, consisting of eight logs 20-35 cm wide laid perpendicularly to the longer axis of the pit. On the pit bottom, on a rectangular mat, measuring about 1.8 × 1.2 m, the skeleton of a man aged *adultus/maturus* rested in a crouched position on its right side. Its right upper limb was extended, while the left one was bent at the elbow and placed on the pelvis. The lower limbs were strongly contracted by being bent both at the hips and knees. At the skeleton, the presence of ochre was noted, with a large amount of it being recorded at the feet and shins, next to the arms and within the chest. No grave goods were recorded (Figs. 41-43).

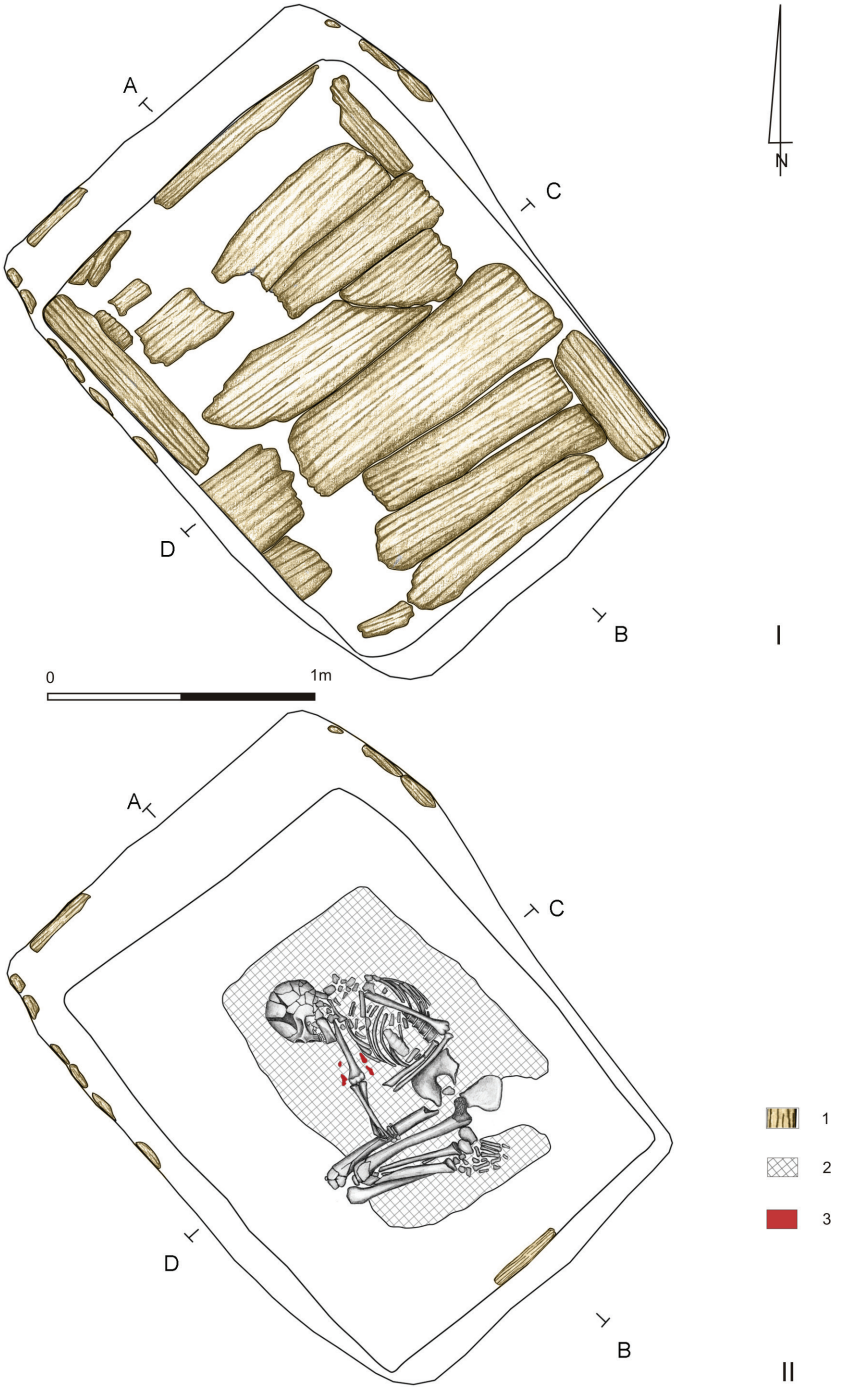

Fig. 41. Prydnistryanske, Yampil Region, barrow IV, feature IV/9. I – level of wooden grave roofing; II – burial level (1 – fragments of wood; 2 – outline of mat; 3 – ochre)

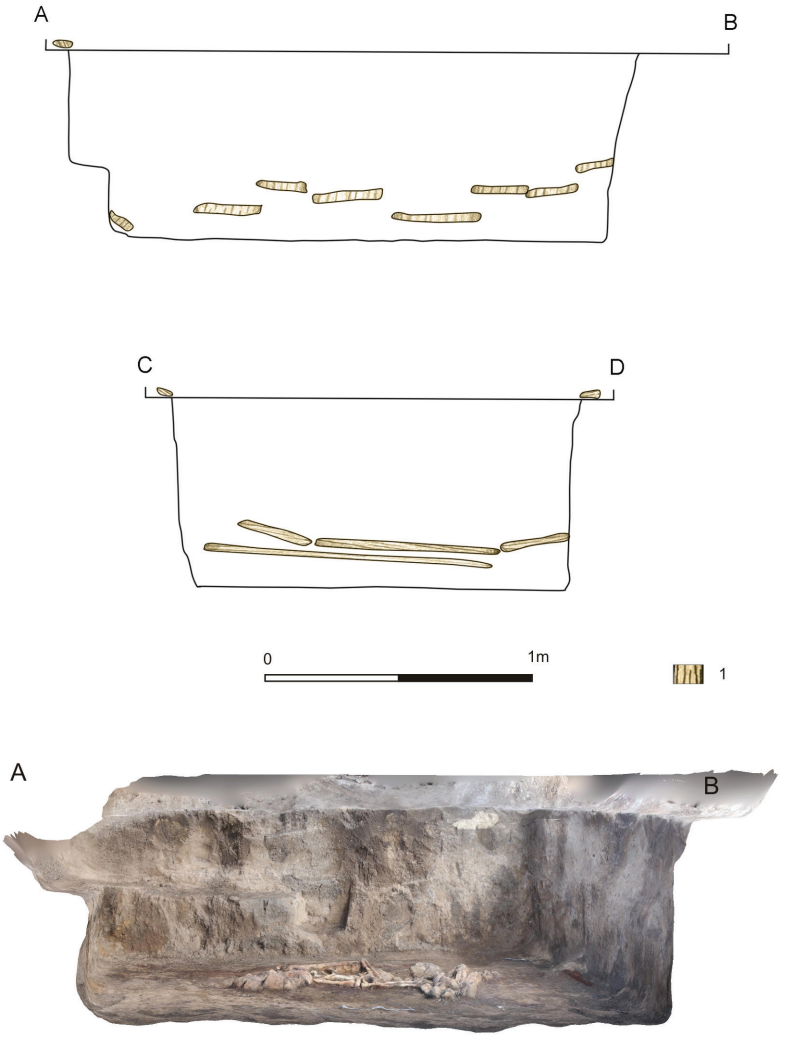

Fig. 42. Prydnistryanske, Yampil Region, barrow IV, feature IV/9. Feature profiles (1 – fragments of wood)

Fig. 43. Prydnistryanske, Yampil Region, barrow IV, feature IV/9. Burial level

Feature IV/10

Culture	Tripolye-Gordineşti		
Dating	Poz-66234: 4520 ± 40 BP (human bone)		
Grave pit		**Burial**	
Structure type	Catacomb?	Sex	?
Number of burials	1	Age	20 years (*adultus*)
Size at the level of discovery	2.65 × 1.8 m	Orientation	?
Size at the level of the bottom	1.8 × 1.45 m	Deviation	?
Depth	1.2 m	Arrangement of head	?
Pit orientation	N-S	Arrangement of trunk	?
Deviation	15°W	Upper limbs	?
Distance from barrow centre		Lower limbs	?
Azimuth		Ochre	–
Wooden roofing	–	Presence of mat	–
Roofing element orientation		Animal bones	–
Other structural elements	–	Ritual objects	–
Comments	The grave fill was found to hold shards and 12 flint artefacts		

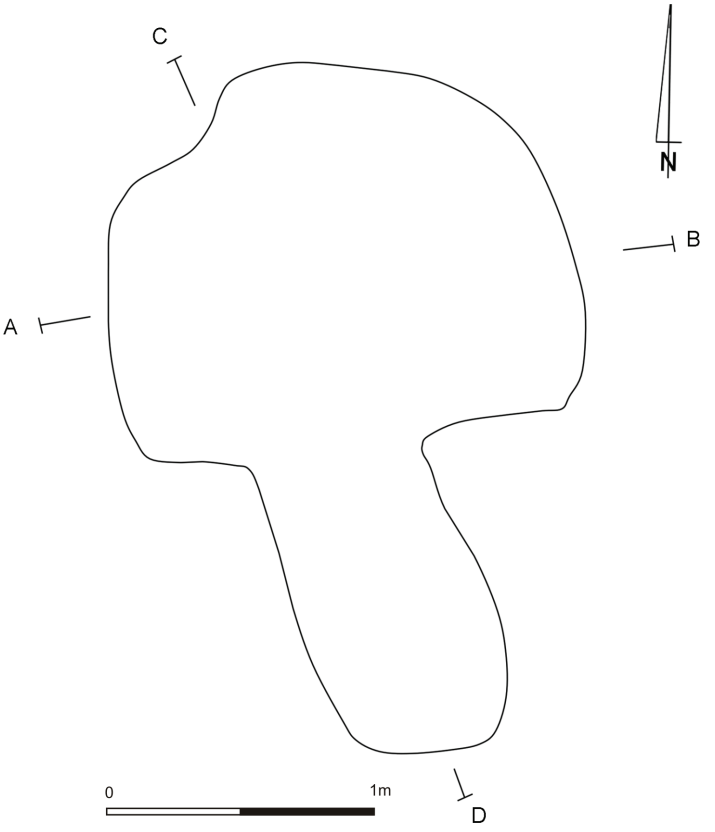

Fig. 44. Prydnistryanske, Yampil Region, barrow IV, feature IV/10. Grave profile: *see* Fig. 45

A central grave was discovered underneath the strata of the oldest mound. It was made up of two parts: the main semicircular chamber, measuring 1.8 × 1.5 m and located on the northern side, and a shallower narrow pit, measuring 1.2 × 0.75 m. The arrangement of these two parts is suggestive of a catacomb construction in which the pit located on the south side led to the grave vault directly (without any passage) over a steep threshold. On the northern and southern sides, the feature was accompanied by the spills of yellow loess up to 20 cm thick. In the ceiling portion, both parts of the feature had analogous fills of homogeneous grey-brown earth. At greater depths, and immediately above the bottom, the fill, although slightly brighter, was still homogeneous and consisted of dark, grey-brown earth of a humus nature. The chamber bottom extended 55 cm below the bottom of the entrance pit. At various levels of the grave, few and strongly fragmented human bones were found, including skull fragments, teeth, metacarpals, a hand phalanx,

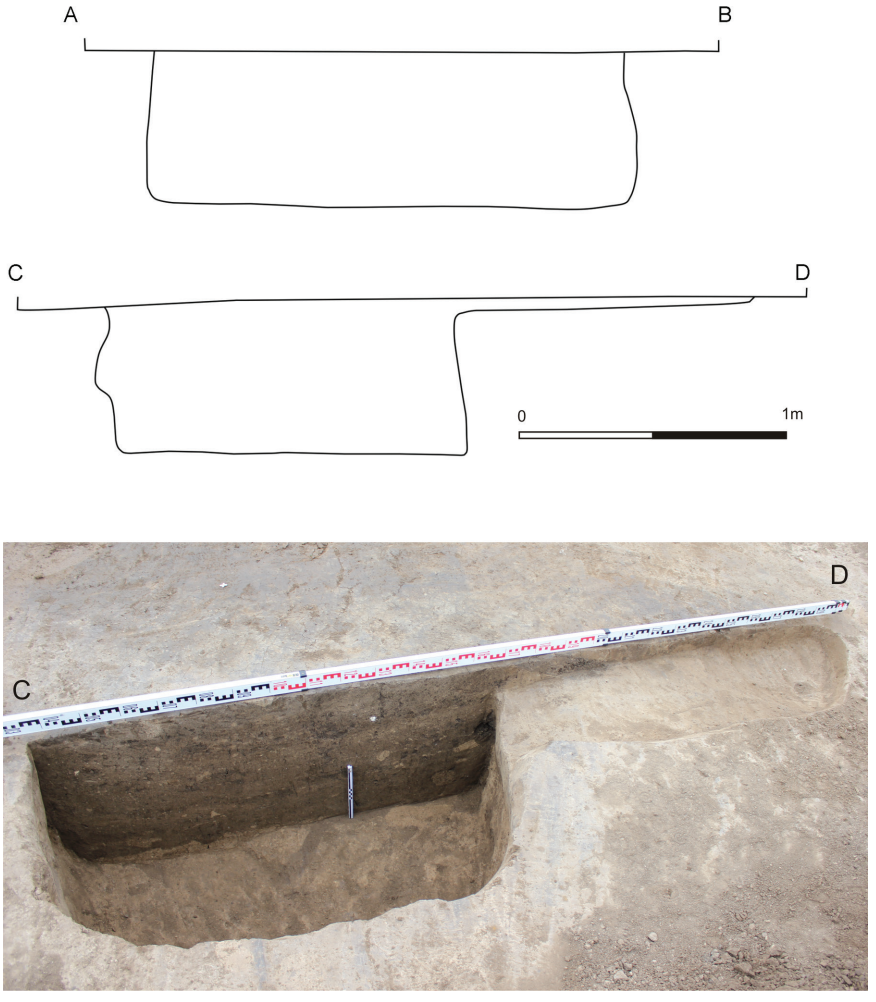

Fig. 45. Prydnistryanske, Yampil Region, barrow IV, feature IV/10. Grave profile

a wrist bone, fragments of the spine, ribs and unidentified long bones. These may have been the skeletal material of a single *adult* individual aged above 20 years. Several scattered bones were found at the feature bottom, too. No grave goods were recorded (Figs. 44, 45).

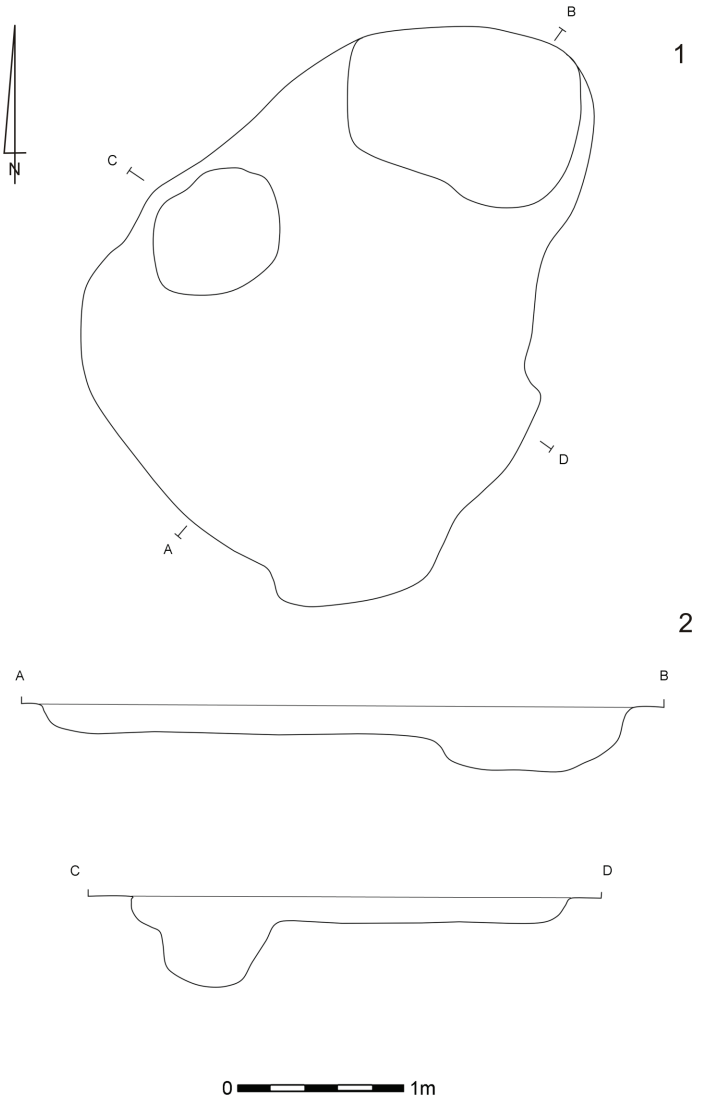

Fig. 46. Prydnistryanske, Yampil Region, barrow IV, feature IV/11. 1 – plan of floor level, 2 – feature profiles

Feature IV/11

Culture	?
Dating	?
Structure type	Irregular trench
Size at the level of discovery	3.65 × 2.7 m

Size at the level of the bottom	0.9 × 0.7 m
Depth	0.7 m
Pit orientation	SW-NE
Deviation	6°N
Distance from barrow centre	4.5 m
Azimuth	65°
Animal bones	–
Ritual objects	–
Comments	

A large irregular excavation in the central portion of the barrow was found, disturbing the strata of the oldest mound. In its northern portion, there were two trough-like hollows overdeepening it by about 14 and 40 cm, respectively. The feature yielded no artefacts. Most likely, it was a complex of animal burrows, dug after the Eneolithic mound had been built (Figs. 46).

3. PRYDNISTRYANSKE 1 CEREMONIAL CENTRE: RADIOCARBON CHRONOMETRY

The result of the investigations carried out at Prydnistryanske 1 is the discovery of a ceremonial-funeral complex set up, as can be judged from typo-chronological evidence, in the Eneolithic, specifically, in the second half of the 4th millennium BC, and expanded later, namely in the first half of the 3rd millennium BC, by Early Bronze YC populations only to be converted into a CC necropolis around the middle of the 3rd millennium BC.

The study of the radiocarbon chronometry of the ceremonial-funeral centre made use of 24 samples: 14 of bones and 10 of wood and charcoals, taken from features – graves. The results and their interpretation norms as far as comparative analyses are concerned have been presented in a separate paper devoted to the study of the radiocarbon chronometry of all Yampil ceremonial centres, associated with 'barrow cultures' related to the Eneolithic and the Bronze Age [Goslar *et al*. 2015]. The conclusions drawn there and concerning the Prydnistryanske 1 centre can be summarized as follows:

Stage I = Eneolithic barrows – I, II, III, IV (older mound – IVA) built between ca. 3350 and 3150 BC.

Stage II = YC barrow – IV (younger mound – IVB) built between ca. 3100/3000 and 2550 BC.

Stage III = CC grave dug into the mound of the Eneolithic barrow I (= feature I/4) ca. 2700-2400 BC.

When evaluating the scope of the above chronometric findings concerning the ceremonial-funeral centre, it is worthwhile to take note of data collection limitations encountered in the exploration of the surface of site 1 (*see* Introduction) and barrow IV (case of absolute necessity – power network protection).

4. PRYDNISTRYANSKE 1 CEREMONIAL CENTRE: TAXONOMIC ASSIGNMENT

The observations made here concern almost exclusively the macroscopic space: the taxonomic references (cultural-chronological) of studied sources in their funerary and manufacturing-stylistic aspects, which is true for the artefacts used in rituals. Exceptions include preliminary references to, undertaken at the same time, specialist raw-material analyses.

4.1. ENEOLITHIC STAGE

All four investigated barrows were built above features dated to the Eneolithic (*see* Ch. 3)[2]. The size of mounds did not vary much: they were about 20 m in diameter. Barrow IV (the oldest mound) occupied the highest portion of the crest, while the other three barrows followed closely one another in a line.

Under barrows I-III, discoveries were made of similarly oriented (NE-SW) and regularly rectangular pits 1.5 m deep without any burial remains. This argues in favour of the opinion that the layout of the entire centre was planned, that it was an instance of designing the 'architecture of a necropolis'.

A different typological position is occupied by the 'catacomb structure' of the grave pit recorded under the oldest mound of barrow IV. The pit held secondarily scattered and incomplete burial remains. Arguments in favour of its Eneolithic position, besides radiocarbon dating (ca. 3350-3150 BC), include also typo-chronological findings: the presence of 'catacomb structures' in the TC funerary rites [Koshylivtsi group: Tkachuk 2001-2002; Usatovo group: Patokova *et al*. 1989] and

[2] For a broader approach *see* Goslar *et al.* 2015.

those of steppe Eneolithic groups contemporary with the TC, including the Zhyvotilovka-Volchansk group [Rassamakin 2004: 58].

In the rites of Dniester 'Late Tripolye' communities, fire played a significant role. This can be seen in hearths accompanying graves, with the former being located on the original ground level – as is the case with barrow II (feature II/1). They are known from the Vykhvatintsi and Usatovo groups [Patokova 1979: 89]. Another meaningful characteristic is the absence of ochre traces (apart from the microtraces of red colorant on a mat in grave III/3). This characteristic is shared by Gordineşti group/type graves.

Graves III/1 and IV/10 were secondarily disturbed, which resulted in a complete scattering of the human remains and rendering them incomplete. Grave III/1 also held a broken vessel, the fragments of which were recovered from various levels of the fill. An analogous situation is encountered in many other graves covered by barrows and associated with the TC Gordineşti group [Larina 2003: 66].

From graves III/1 and III/3, the following grave goods were recovered: a pot, amphora, beaker and battle-axe. The list of material determinants is supplemented by ceramic shards recorded in the fills of graves I/1 and IV/10, but their functional assessment is debatable. The pottery from these features, in terms of style and technology, corresponds to the production by the 'Late Tripolye' communities of stage C/II, especially to the materials of the Gordineşti-Kasperovtsy-Horodiştea complex[3].

To make the above assessment more specific, it is worthwhile to review analytically the diagnostic objects listed above.

Found in grave III/1, a pot-like vessel ornamented with subtriangular impressions (Fig. 18) corresponds to Gordineşti group patterns. An analogy to it, a vessel from the Gordineşti-mys cemetery [Dergachev 1973], is associated with the eponymous settlement of the group.

The amphora from grave III/3 represents a type which is commonly found on sites linked to the TC, phase C/II (Fig. 21: 1). V.A. Dergachev assigns such forms to the general Late Tripolye horizon [Dergachev 1980: 203, Fig. 37]. We know of ornamented and unornamented amphorae coming from settlements, flat cemeteries [Topal, Tserna 2010: 285, Fig. 2: 5, Yarovoy *et al*. 2012: 293, Fig. 4] and barrow graves [Antoniewicz 1925: 240, Fig. 40; Dergachev, Manzura 1991: 258, 260, Fig. 37: 3, 39: 6].

Found in grave III/3, a large beaker with a tall neck (Fig. 21: 3) corresponds in terms of technology and style, to a group of pottery sometimes bearing an incised

[3] In this context, an expert assessment by Dr. S.M. Ryzhov is worth mentioning, to whom these authors are deeply grateful: "The entire ceramic assemblage discussed here [i.e. TC from Prydnistryanske 1, Ed.] belongs to the Tsviklovtsy group according to T.G. Movsha (materials published only in a small part) or the Gordineşti II group according to V.A. Dergachev (materials from the Gordineşti II settlement and cemetery have not been published). There are also visible analogies to sites in Brynzeny and Zhvanets Gora (unpublished materials). All these similarities are associated with the later stages of the TC in the region".

ornament encountered at Gordineşti group settlements. For barrow grave inventories, analogies come from feature 8/15 in Gura Bukului [Dergachev 1984: 28, Fig. 9: 10] and feature 10/16 in Taraclia [Dergachev, Manzura 1991: Fig. 35: 10]. Interestingly enough, similar forms are found in Eneolithic graves 8, 21 and 25 from a barrow in Bursuceni [Yarovoy 1978, Figs. 12, 36, 41].

A good analogy for the stone battle-axe from grave III/3 is hard to find. The closest one is offered by a specimen from grave 10/17 in Taraclia II [Dergachev, Manzura 1991: 256, Fig. 35: 12].

4.2. EARLY BRONZE AGE (YAMNAYA CULTURE)

In the set of features associated with the YC, two grave types were distinguished as a criterion using the current knowledge of the funerary rite evolution of its communities. The two types correspond to *early rites* (features IV/4 and IV/6) and *late rites* (features IV/3, IV/8 and IV/9). Features representative of this division were dated using the radiocarbon method, which corroborated the outlined typo-chronological criteria [Ch. 3, for a broader discussion *see* Goslar *et al*. 2015].

Associated with the early phase of the YC, features 4 and 6 from barrow IV formally coincide as far as skeleton arrangement is concerned. In both graves, the bodies were deposited with the upper limbs extended along the trunk and the lower limbs bent and knees pointing upwards. What they have in common also is the structure of their underground portion. It boasts a wide step leading to a regularly rectangular grave chamber and traces of evenly placed posts once supporting wooden roofing elements (‘canopy’?) or providing props for various kinds of wall structures [Dergachev 1986: 35]. Such taxonomically diagnostic structures are common throughout the Dnieper-Danube YC range, as well as in the western zone created by YC Danube expansion.

The issue of ‘holes in grave bottoms’ for ‘post or stakes’ was discussed in the studies of the YC on the middle Ingulets River (Kryvyi Rih Region). Such holes occur there in 3.9 per cent of ‘Yamnaya’ graves; their number varies from 4 to 10. They were elements of linings of grave pit walls [Melnik, Steblina 2013: 20; Fig. 17]. The percentage of structures ‘with holes’ in the ‘Southern Bug variety’ of the YC (between the Southern Bug and Ingul rivers) is 2.49 per cent. A particularly meaningful concentration of the use of such structures was recorded on the lower Southern Bug in barrow clusters at Kovalevka, Mykolaiv Region and Tarbarovka, Voznesensk Region [Shaposhnikova *et al*. 1986: 76-79, Fig. 33: 5, 36: 3, 37: 5].

Features with such structures in the Middle Dniester Area are mainly central graves and ones sunk into mounds associated with the older phase of their use. In

the Yampil Region, six graves with 'holes in the bottom' have been discovered so far, which represent 11.54 per cent of all 'Yamnaya' graves. These are: Pysarivka 1/2, 4/2, 5/1, 6/2, 7/2, and Severynivka 2/5 [Harat *et al*. 2014]. Further examples come from a nearby cluster of barrow sites at Kamenka Region, where five graves 'with holes' in the bottom were recorded. These are: Okniţsa; 3/14, 3/17, 6/11, 7/3, 7/11, which represent 8.20 per cent of all YC graves [Manzura *et al*. 1992]. Still more examples come from other, not very distant areas of the Middle Dniester Area [Mocra: *see* Kashuba *et al*. 2001-2002: 221].

Grave IV/4 boasted a particularly complex stone structure of the grave pit ceiling. It consisted of stone monoliths, a grillage woodwork and two mats. The stone part was made up of four stone slabs, bearing traces of rough hewing. Similar covers are typical above all of YC varieties west of the Dnieper, with their largest concentrations to be found in the drainage basins of the Southern Bug (80% of features), Ingulets (78% of features) and Ingul (55% of features) rivers [Shaposhnikova *et al*. 1986: 15; Rychkov 2001: 45]. Analogous structures, however, do occur also on the Dniester, which is well illustrated by graves 2/2, 6/8 and 13/11 at Olaneşti, Ştefan Vodă Region [Yarovoy 1990: 158, 178, 203, Fig. 68: 6, 79: 1, 92: 1].

The other three YC graves (IV/3, IV/8 and IV/9) were sunk into the youngest mound. The radiocarbon measurements of their age indicate, however, that this happened already in the first half of the 3rd millennium BC. The arrangement of the deceased in grave IV/3 resembles that in the two features of the older phase. A similar arrangement – with arms lying in a slightly different position – is found in feature IV/8. In contrast, an entirely different arrangement is encountered in grave IV/9. In this case, the corpse lay on its right side with the lower limbs drawn up and one arm bent at the elbow and placed on the dead individual's waist.

In two instances, wooden covers were found which consisted of logs placed perpendicularly to the longer axis of the grave (features IV/8 and IV/9). In addition, there were also boardings of the side walls of the graves. Structures of this type occur in the context of later YC development phases and are encountered above all on neighbouring Podolia sites [Manzura *et al*. 1992: 89; Kashuba *et al*. 2001-2002: 221]. Such a structure was also recorded in grave 1 from barrow 3A in Porohy dated late [Klochko *et al*. 2015: Fig. 7]. Hence, this is a local characteristic of Dniester sites.

A permanent feature of the funerary rite was the placing of the deceased on rectangular mats, covering most of the grave bottom. All skeletons were also coloured with ochre and in three cases, a globular lump of ochre, several centimetres in diameter, was placed next to the corpse's head (graves IV/4, IV/6 and IV/8).

Only in grave IV/8 was an intentional item of furnishing discovered: a regular blade knife insert made of good quality Dniester flint. Such tools are not a typical component of YC inventories [Razumov 2011: 146, 147]. They are, however, a frequent element of grave goods offered to males in Corded Ware culture (CWC)

graves, a large number of which is known from Małopolska [Włodarczak 2006: 30-32].

The radiocarbon measurements and funerary rite traits indicate that the graves from Prydnistryanske were dug in the older and middle phases of YC development, while the age of the youngest ones still stays in the first half of the 3rd millennium BC.

4.3. MIDDLE BRONZE AGE (CATACOMB CULTURE)

Unique in the *Yampil Barrow Complex*, grave I/4 is associated with the CC tradition. It was found to hold the remains of two individuals, lying with their lower limbs slightly flexed. The only element of grave furnishing was a stone mace with the copper elements of handle fastening (Fig. 9: 2, 10: 2, 4). Grave I/4 finds analogies in 'catacomb' burials from the various development stages of a given taxon [Klochko 2006: 105, Figs. 37, 45]. In the opinion of S.V. Ivanova and G.N. Toschev, the arrangement of the deceased (in the crouched supine position, leaning sideways) argues in favour of assigning this feature to the final part of the Early Catacomb period. This conclusion is not contradicted by radiocarbon dates, either, obtained from the bones of the burials and found generally to fit into the prologue as defined in the chronometry of the CC on the north-western Black Sea Coast [Ivanova, Toschev 2015; 2015a]. The traits of the burials are analogous chiefly to those of the Donetsk CC [Bratchenko 2001; Ivanova 2013]. In the northern reaches of the forest-steppe, a similar burial was found on the middle Prut River, in grave 3/7 from Corpaci, Edineţ Region [Yarovoy 1984: 60, Fig. 9: 4; 66, Fig. 12: 7], where it was considered a unique find as well. Its furnishing consisted of a mace analogous to that from grave I/4 in Prydnistryanske.

In the perforation of the mace, the fragments of a wooden shaft have survived together with the copper elements of its fastening. Similar metal fastenings were found in CC graves from left-bank Ukraine: from the Dnieper area [graves III/1 from Kamenka II and IV/1 from Kolpakovka III – Kaiser 2003: 193, Tab. 19] and from the Donets area [grave 12/2 from Svatove – Bratchenko 2003: 200, Fig. 10: 1].

Moreover, from the Podolia, left-bank part of the Dniester area, we know of other single burials linked to various territorial branches of the CC. With its early phase, grave 3/5 from Okniţsa is linked on the strength of its close formal analogies, in terms of inventory, to the burials of the following CC branches: Kharkiv-Voronezh, Donetsk and Predkavkaz-Manych [Manzura *et al*. 1992: 20, 21; Klochko 1990: 30]. Against this background – similarly 'early' – grave I/4 from Prydnistryanske forms a clear example of long-distance relations of Podiolia with the Donets, possibly Ingul, CC groups [Otroschenko 2013: Fig. 2]. Grave 2/5 from Kuzmin [Bubulych, Khakhei 2001: 132], in turn, held a burial where the deceased

lay crouched – analogously to the deceased in the hypothetically 'catacomb' feature 1/7 from Pidlisivka [Kośko *et al*. 2014: 226-228]. If these burials are in fact related to the CC, they have affinities with, in terms of ritual characteristics, its middle Prut group [Toschev 1991; 2013; Kaiser 2003: 40, 43].

5. PRYDNISTRYANSKE CEREMONIAL CENTRE: TOPOGENETIC CLASSIFICATION

The investigations of Prydnistryanske 1, from the perspective of the topogenetic studies of the Dniester Barrow Cemetery Complex in the area of Yampil, are innovative in three aspects, which we shall discuss in greater detail: (a) the origins of barrow cemeteries in the territory of 'Late Tripolye' forest-steppe groups (i.e. 'extra Usatovo' ones) in the Dniester and Prut drainage basins [as part of their so-called northern group as 'preliminarily' defined by T.G. Movsha 1971]; (b) the position of 'Yampil-Kamenka', Podolia ('left-bank') evidence for the Dniester exodus of the YC towards the 'Baltic' cultural space by means of the currently approved network of its 'local varieties' proposed by N.Ya. Merpert and O.G. Shaposhnikova [Merpert 1974][4]; (c) relatively polygenetic character of the CC in the left-bank Middle Dniester Area – nevertheless, generally identified with its Ingul-Donets centre.

(a) The Prydnistryanske 1 complex is the first barrow cluster of the Gordineşti group on the left bank of the Dniester [not counting the distant and mysterious find from Zawisznia, Lviv *Oblast*, Antoniewicz 1925]. It is located, however, in the Dniester Area, where finds associated with this group, both grave and settlement ones, are many. They include flat graves located within settlements (permanent and seasonal) and autonomous ones [Movsha 1964; Larina 2003; Topal, Tserna 2010]. The presence of graves under mounds stresses the differentiation of the funerary rite of the local 'Late Tripolye' group, most likely resulting from a socio-economic stratification. From another angle, however, the nearby presence of Eneolithic barrows holding extended burials ['post-Mariupol' – Okniţsa, graves 6/24 and 7/14 – Manzura *et al*. 1992; Timkovo, grave 1/5 – Ostroverkhov *et al*. 1993] raises the issue of relations between 'steppe' and 'Late-Tripolye' communities. A similar distance separates the barrows of both traditions in other areas of the forest-steppe [e.g. Sărăteni – Leviţki *et al*. 1996; Bursuceni – Yarovoy 1978]. Although graves with extended skeletons may be rather broadly dated [Ivanova 2015: 282; Ivanova,

[4] *See* Rassamakin, Nikolova 2008: Figs. 1, 2.

Toschev 2015], the barrow burials listed here may be linked to the Late Eneolithic and correspond to stage C/II of the TC [Manzura 2010; Rassamakin 2013]. No data has been obtained yet that would help to date these features more precisely and determine their temporal relation to the 'Late-Tripolye' tradition barrows.

To fully appreciate how illuminating topogenetically the studies of the Prydnistryanske 1 ceremonial centre have been so far, it is crucial to assess its genetic relationship to the TC Gordineşti group and observe topogenetically extraneous – 'steppe' – necropolises in the vicinity (Okniţsa, grave 6/24). The assessment may prompt us to formulate a research programme offer to measure the planning efficiency of distinguishing a local "Yampil-Kamenka variety" (i.e. as a germ of a field exploration programme) as part of the study of local trends in 'Late-Tripolye barrow architecture'. This opinion does not clash with placing these trends on a – conceptually justifiable – broad autogenetic scale: that of the Zhivotilovka–Volchansk horizon [Rassamakin 1994; 1999; 2002; Ivanova, Toschev 2015][5].

(b) The significance of the topogenetic studies of the Prydnistryanske ceremonial centre does not modify much the topogenetic assessment formulated, relying on the finds recovered from 20 YC barrows in the Yampil area and 13 others located in the Kamenka Region, about 18 km to the southeast (7 from Okniţsa, 1 from Hrustovaia, 1 from Podoima and 4 from Kuzmin). The finds form a compact concentration representing the Podolia, north-western frontier of the YC complex[6]. At the same time, they form part of a broader forest-steppe zone of the Dniester and Prut drainage basins, which comprises both Podolia barrows (e.g. Mocra, Timkovo) and north Moldavian ones (e.g. sites on the Reut river: Brânzenii Noi, Brăviceni, Orhei or on the upper Prut: Corpaci). The area is unique in its modest funerary rite when compared to the Dniester-Danube steppe areas (Budzhak), specifically in the absence of certain characteristic ceramic forms, for instance regionally highly diagnostic 'Budzhak pots' [Ivanova 2013: Figs. 3, 5; Ivanova, Toschev 2015]. Instead, there appear items testifying to contacts with Globular Amphora Cultura - GAC CWC communities, including characteristic ceramic vessel types and flint inventories. The former are chiefly amphorae, which can be found in the middle and lower Dniester area and on the lower Prut and Danube [Iwanowa *et al*. 2014: Fig. 4.3.3:3; Razumov 2011: 141-148].

The problem of relations with the YC Southern Bug group appears interesting in O.G. Shaposhnikova's definition. According to it, the group comprises mainly the steppe interfluve of the Southern Bug and Ingulets [Shaposhnikova 1985: 347ff; Shaposhnikova *et al*. 1986; Rassamakin, Nikolova 2008: Fig. 2]. The definition is borne out in the *Yampil complexes* by the presence of characteristic pottery: e.g. a pot ornamented on the lip and upper belly with the 'impressions of

[5] For the perspective of 'western development correspondences' *see* Koško 2000; Włodarczak 2008.

[6] For a sketch of the conception how to identify the *Yampil (Podolia) Territorial Centre see* Ivanova, Toschev 2015.

a toothed wheel' [Pysarivka, grave 2: Razumov 2014: 343-345] or grave structures (e.g. Prydnistryanske, grave IV/4). In this perspective, a difficult problem is posed by the connection to the area of Southern Bug-Dnieper forest-steppe, located between the Podolia group under discussion and the YC Middle Dnieper group right-bank drainage basin of the middle Dnieper, the drainages of the Ros', Rosava, Tyasmin, Omei'nik and middle Southern Bug – the drainages of Siniukha and Tikych [Shaposhnikova 1985:347ff; Rassamakin, Nikolova 2008: Fig. 2]. Few better-known sites from that area [Talyanki and Dobrovody – Klochko, Kruts 1999; Bunyatyan, Nikolova 2010] prevent us from making any broader comparisons. Originating from both this forest-steppe area and the steppe zone on the lower Southern Bug or the middle Ingulets, pottery inventories show several manifest differences such as the absence of round-bottom pots 'from Podolia'. Such pots are diagnostic 'in the Dnieper Area' in the case of both the early and late phases [Shaposhnikova *et al*. 1986: Figs. 13, 15; Melnik, Steblina 2013: Figs. 29-31].

The Prydnistryanske 1 discoveries draw our attention to the problem of the legacy of the funerary rite performed by 'Late Tripolye' Eneolithic groups in the Dniester-Danube area in YC rituals. A special trait of *Yampil barrows*, including Prydnistryanske 1-IV, is seen in the presence of simple, 'idealized' stone stelae – analogous to those found in Eneolithic barrows [Shaposhnikova *et al*. 1980: Fig. 1; Yarovoy 2001]. The scope in which older stone funerary architecture was adapted by YC communities remains unknown. The frequent integration, however, of younger, Early Bronze layouts with older, Eneolithic ones seems to be no coincidence. A separate study ought to be devoted to the issue of inspiration in pottery production and the role of selected pottery types in YC funerary rites (see the grave inventories of the Gordineşti group, including that from feature III/3 in Prydnistryanske).

(c) A very limited amount of sources that in Dniester barrow cemetery complexes should be indisputably linked to CC communities clearly point to their early character by emphasizing their topogenetic setting in the circle of Ingul-Donets Early Bronze civilization [Klochko, Kośko 2013; Otroshchenko 2013; Toschev 2013]. Whereas in the case of the Okniţsa grave, in the opinion of E.O. Klochko, one should notice connections to the CC Kharkiv-Voronezh and Donets groups or even to as distant a CC group as the Fore-Caucasian-Manych one [Klochko 1990: 30], analogies to grave I/4 from Prydnistryanske 1 can be found closer [*see* maces with a copper wedge – Bratchenko 2003, 200, Fig. 10: 1; Otroshchenko 2013, Fig. 2-15, in a broader taxonomic approach].

***

Summing up, it must be stressed that among diagnostic sites important for documenting the early stages or development forms of Northern Pontic 'barrow cultures', Prydnistryanske 1 should enjoy the status of a highly illuminating feature, which can be gathered from both this paper and the series of simultaneously published ones [Litvinova *et al*. 2015; Goslar *et al*. 2015] or currently conducted

'aspect studies' (such as bioarchaeological, palaeopedological or ones devoted to fossil DNA). Their results will be published in the next volume of *Baltic-Pontic Studies*. The *Prydnistryanske Research Programme* should bring forth initiatives to continue field work – both non-invasive and excavations – between the Dniester and Markivka rivers.

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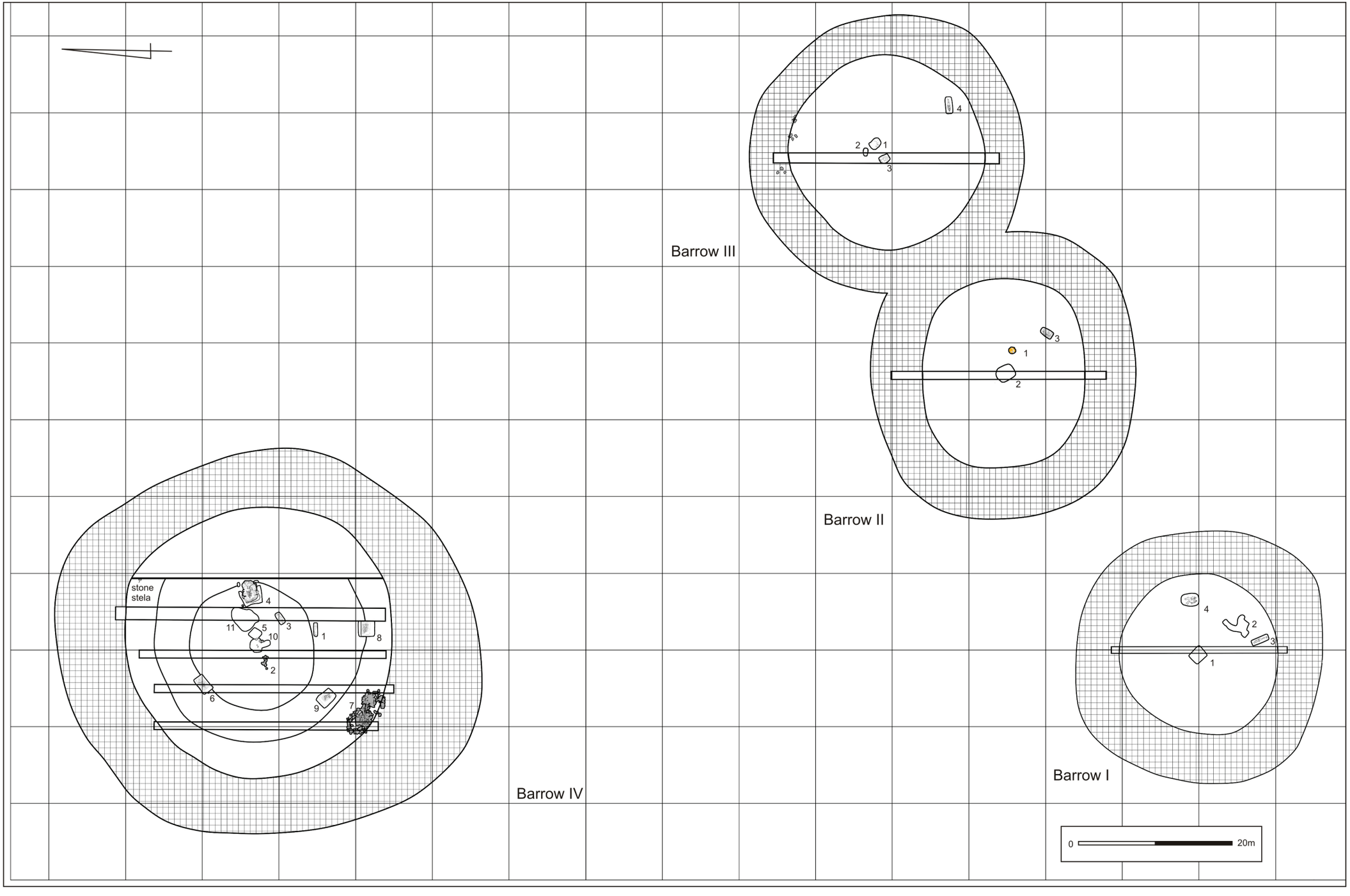

Fig. 4. Prydnistryanske, Yampil Region. Plan of barrows I-IV