

**‘CORD’ ORNAMENTS ON POTTERY  
IN THE VISTULA AND DNEIPEP  
INTERFLUVIAL REGION:  
5TH – 4TH MILL. BC**

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**BALTIC-PONTIC STUDIES**

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## Editor's Foreword

The issues outlined in the above volume of *Baltic-Pontic Studies* (BPS) presented here, can be said to generate several important and complex questions among which, one relating to the topogenesis of 'corded' ornamentation on the bio-cultural borderlands of east and west Europe, gave birth to an innovative research project. In this respect, specialist researchers of the Pontic-Baltic Eneolithic (from Middle and Late Neolithic contexts) chose 45 vessels (mostly fragments) originating from the Dnieper-Southern Bug drainage area and Vistula, dated to the 5th - 4th/3rd mill. BC for the purposes of microscopic analyses conducted with the aim of identifying 'corded' patterns of ornamentation. These laboratory tests were led by an archaeologist specialising in microscopic analysis to identify interdisciplinary, pre-historic and archaic techniques in the textile crafts.

The implications of the above tests would seem to warrant a manifold approach to possible conclusions on the basis of specialist (microscopic) criteria of differentiated - previously identified as macroscopic - in general terms as 'corded' motifs of ceramic ware ornamentation (part 1). This also concerns an outline of investigation drawn from hermeneutics, prompted by various contexts such as historical and cultural assessment of bio-cultural communities and related findings as well as attempts to generate a coherent framework of linguistic and cultural research for 'corded ornamentation on ceramic ware' (part 2).

In discussing further the 'main issues' presented in this publication of BPS 15 in respect to the hand manufacture of ceramic ware of the Vistula and Dnieper interfluvial region and its peoples, a modus operandi of investigation in the context of region has been proposed whereby researchers of this particular project have been given a free hand, as it were, in respect to the degree and forms of application in microscopic analyses and their findings. A series of commentaries has therefore arisen, from various points of view in so far as reflections on research conducted - possible future strategies for vital questions in this matter that are yet to be answered (part 3).

It is assumed therefore that this volume has in some measure initiated a process of the highest consequence, one introducing a new level of off-site investigation into the genesis of corded ornamentation development, which deserves to be supported in addition through a personal engagement in this research field.

## Editorial comment

1. All dates in the B-PS are calibrated [BC; see: Radiocarbon vol. 28, 1986, and the next volumes]. Deviations from this rule will be point out in notes [bc].
2. The names of the archaeological cultures and sites are standarized to the English literature on the subject (e.g. M. Gimbutas, J.P. Mallory). In the case of a new term, the author's original name has been retained.
3. The spelling of names of localities having the rank of administrative centres follows official, state, English language cartographic publications (e.g. *Ukraine, scale 1 : 2 000 000*, Kiev: Mapa LTD, edition of 1996; *Rèspublika BELARUS', REVIEW-TOPOGRAPHIC MAP*, scale 1:1 000 000, Minsk: *BYELORUSSIAN CARTOGRAPHIC AN GEODETIC ENTERPISE*, edition 1993).

**Natalia B. Burdo, Mykhailo Y. Videiko**

**‘CORD’-ORNAMENTED POTTERY  
OF THE TRYPILLIA CULTURE.  
A MACRO ANALYSIS<sup>1</sup>**

The most ancient ceramic objects with ‘cord’ marks, found in settlements of the Trypillia culture (TC), can be dated back to the BI-BII stages. These individual fragments were linked by researchers to imports from monuments of the so-called ‘Eneolithic steppe’. Similar objects were also referred to the early BII stage; for instance, a fragment bearing four rows of ‘cord’ imprints was found in the Nemyrivske settlement (Kodyma River basin between the Dniester and Southern Bug rivers). The same settlement contained fragments of pottery typical for the Trypillia culture of that period, with heavily smoothed marks of a cord.

Most of the objects with corded ornamentation originate from BII-stage settlements of the Middle Dnieper area. Hence, several fragments of pottery were found in the Hrebeni settlement (Fig. 1). Such finds were more common in Chapavka type monuments, in particular in the eponymic settlement [Kruts 1977:49, Fig. 19]. They were also found in the Kazarovychi settlement (Chapavka type horizon), which is one of the most northern monuments of that type.

Traditionally, the occurrence of corded ornamentation on the Trypillia culture ceramics was seen as a manifestation of steppe culture influence, particularly that of the Sredniy Stog. Recently, some researchers have argued that the opposite was true, and that it was Trypillia that had established itself as one of the contributors to the prevalence of corded decoration on ceramics of the ‘Eneolithic steppe’ monuments [see Kotova..., in this volume].

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<sup>1</sup> In this article the original version of town names etc. have been retained as per the author’s wishes.

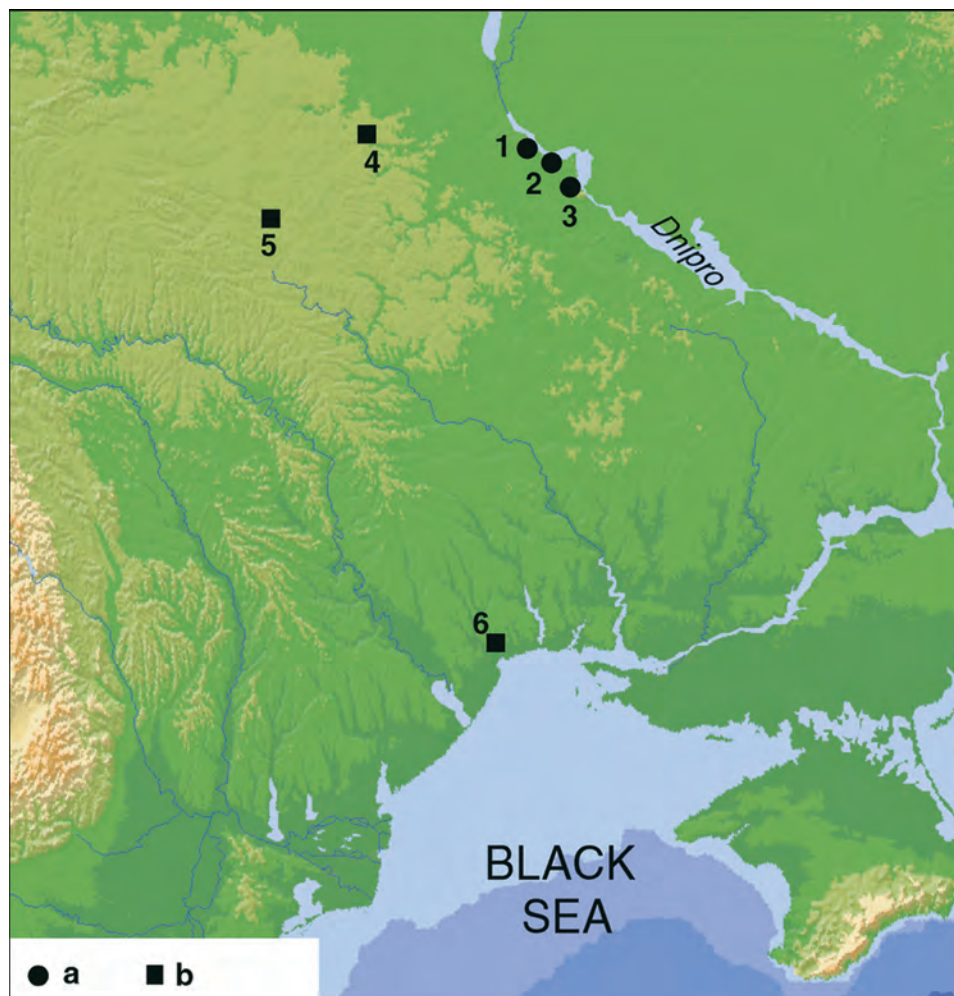


Fig. 1. Monuments of the Trypillia culture mentioned in the text: a – BII stage; b – CII stage: 1- Chapaivka; 2 – Hrebeni; 3 – Ihnatenkova Hora; 4 – Trojaniv; 5 – Sandraki; 6 – Usatovo

#### 1. THE DIFFUSION STAGE OF DEVELOPMENT: CORDED ORNAMENTATION IN THE TRYPILLIA CULTURE (PHASES C I – C II)

The tradition of decorating pottery with a ‘cord’ remains in the region in the CI stage. Materials of that kind were found in excavations of the Ihnatenkova Hora and Khomyne settlements. It is noteworthy that those monuments were located further southward than Chapaivka and Hrebeni. The tradition of using

cord imprints for decorating pottery, dating back to the BII stage, had been interrupted in such settlements.

Throughout the CII stage a cord was used for pottery ornamentation in various groups (cultures) of the Trypillia area. There are certain differences between the two zones of the area, the northern and the southern. The latter includes complexes of the Usatovo type (culture), where vertical ribbons made by impressions of a braid could be observed, in addition to horizontal corded compositions. In the north, the predominant pattern was one to three rows of horizontal imprints under the vessel rim. Occasionally, more than three rows of cord imprints could be observed, a pattern typical for pots. Special attention can be paid to bowls with their outer surfaces decorated with several rows of cord imprints.

Occasionally, some vessels bear cord marks on their inner surfaces. Possibly, such vessels should be linked to influences of neighbouring cultures' traditions, while individual fragments ornamented with atypical compositions should be regarded as imports [Videiko 2000:44-61].

## 2. RESEARCH SITES FOR PARTICULAR (MICRO) ANALYSES OF TRYPILLIA CORD ORNAMENTATION

Studies were performed on samples of cord-ornamented ceramics that had come from the CI and CII Trypillia monuments in various regions, including the Volyn and Dnieper areas, as well as the North-Western Pontic region (Fig. 2). The monuments are described in the chronological order below.

**IHNATENKOVA HORA** [samples 19-20, see Koško, Sikorski, Szmyt... – part 1, in this volume] is a Trypillia settlement referred to the CI stage. It is located near Hryhorivka village of the Kaniv rayon of the Cherkasy oblast, on a high hill constrained by ravines from the north and the north-west, over the Kaniv reservoir and belongs to the Hryhorivka type of settlements of the Kolomyischyna group discovered in 1960, then excavated in 1961 by M. Shmagliy and M. Videiko, 1993 [Shmagliy 1970:119-122; Videiko, Burdo 1997:23-26]. The excavation of 1993 covered an area of 1,200 sq m, providing a variety of corded materials and dates with seventeen household pits studied on the site. The pits were of irregular shape, funnel-like in section, located 0.5 – 1.4 m below the present-day surface. These pits were filled with animal and fish bones, shells, fragments of pottery, anthropomorphous figurines, flint, stone, bone and horn tools. The bones for dating were taken from two of the pits (# 15 and # 16).

The vessels found during the excavation can be classed into two groups: kitchen pottery and tableware. The pottery was of two types: some objects were made of clay with an admixture of shells, while others with an admixture of shells

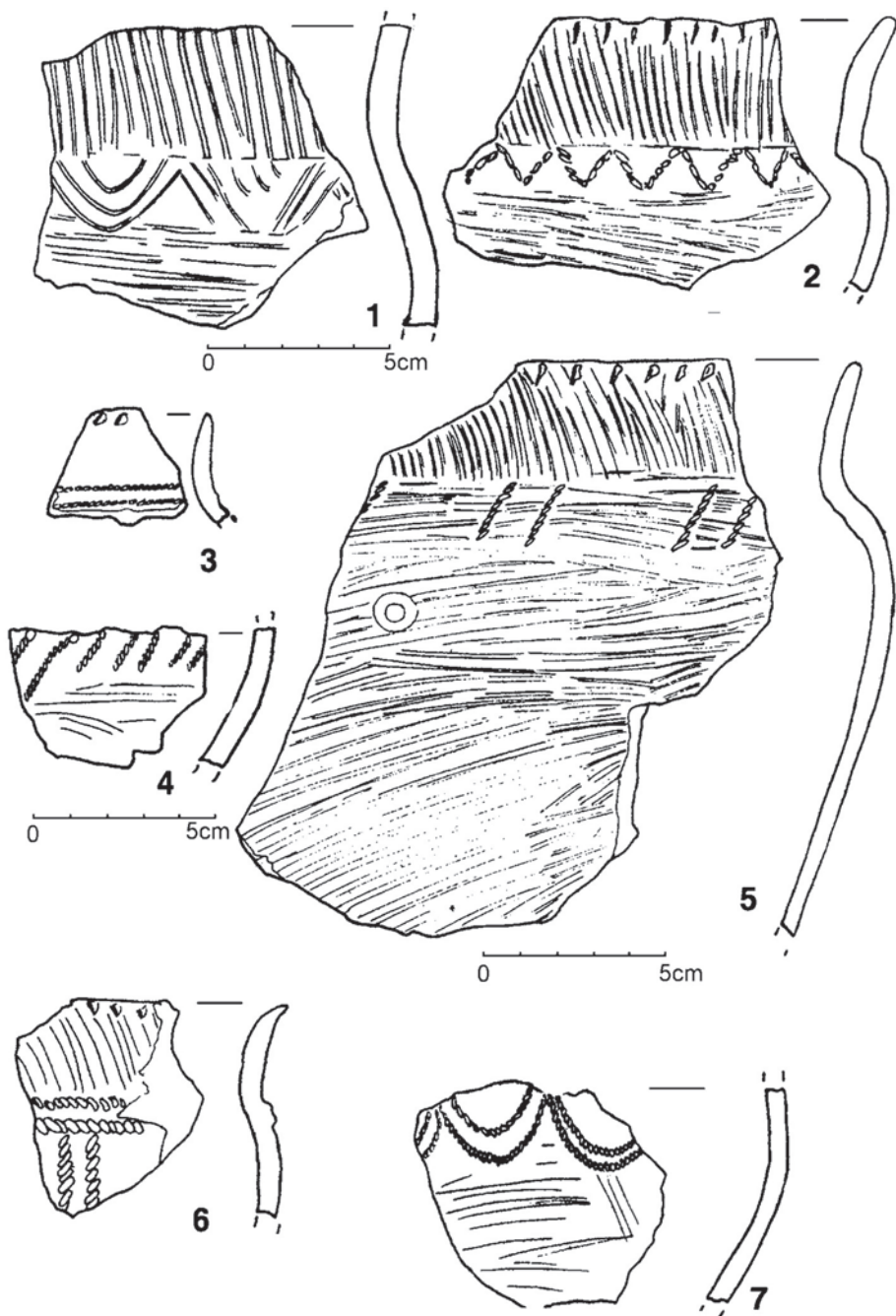


Fig. 2. Fragments of ceramics with cord imprints from Ihnatenkova Hora settlement (1993 excavation)



Fig. 3. Fragments of pots with cord impressions, Troyaniv settlement (excavation by M.M. Shmagliy)

and sand. Pots of various sizes with turned-back high rims were the most common kind of vessels featuring surfaces that were covered with a 'streaky smoothing-out' design. The ornamentation had been performed with various cuts, inlays, cliché marks and cord imprints placed below the rims on the upper parts of the vessels (Fig. 3). Occasionally, vessels have plaster work and so called eyes. On some of the fragments, ornamental compositions were made with scratches.

The tableware could be divided into three types: with an incised ornament (the least common), without ornamentation, with a smoothed surface (conical bowls, goblets, goblets with handles, biconical vessels), with monochrome painted ornament made with dark brown paint (fragments of conical and semi-spheric bowls, a zoomorphous bowl, goblets, biconical vessels).

Based on the manufacturing technique applied, two subtypes can be identified in the painted pottery group, likened to the Kaniv and the Tomashivka groups. Imports of painted pottery allow synchronizing the Ihnatenkova Hora settlement with the second and third phases of the Tomashivka group. Specific features of the ceramics complex (the second group of table ceramics) allow to assume contacts with a population that left monuments of the Lublin-Volyn Painted Pottery culture. In this context, anthropomorphic plastic modelling is represented by fragments of female figurines typical for the Kolomyishchyna group.

According to O. Zhuravliov [Zhuravliov 2004], the predominant parts of fauna remains were wild animal bones, which means that the settlement's residents

Table 1

Dated complexes from a Trypillia settlement in Ihnatenkova Hora

Object	Material	Lab Index	BP	BC
pit 15	bone	Ki - 9613	4520±80	1σ 3360-3090 2σ 3400-2900
pit 15	bone	Ki - 9614	4590±80	1σ 3240-3100 2σ 3650-3000
pit 15	bone	Ki - 9615	4570±80	1σ 3240-3100 2σ 3550-3000
trench 1, sq. 3, cut 1, depth: 0.56 m	ceramics	Ki-10856	4490±80	1σ 3345-3093 2σ 3367-2921
trench 1, sq. 3, cut 2, depth: 0.56 m	ceramics	Ki-10857	4515±90	1σ 3359-3093 2σ 3377-2921
pit 16	bone	Ki-9616	4650±90	1σ 3540-3340 2σ 3650-3100
pit 16	bone	Ki-9617	4530±80	1σ 3370-3090 2σ 3550-2900
pit 16	bone	Ki-9618	4500±80	1σ 3350-3090 2σ 3400-2900
pit 16	ceramics	Ki-1467	4430±90	1σ 3343-3203 2σ 3371-2915
pit 16	ceramics	Ki-11468	4630±90	1σ 3523-3333 2σ 3543-3255
pit 16	ceramics	Ki-11469	4520±90	1σ 3363-3093 2σ 3377-2921

obtained their meat foods predominantly by means of hunting. The absence of traces of permanent housing and the proximity to the Dnieper floodplain suggest the location of a seasonal camp on the site, where its residents grazed their cattle herds, went fishing and hunting. The excavation materials from that settlement are kept in the Science Reserves of the Institute of Archaeology of the National Academy of Science of Ukraine.

**SANDRAKI** [sample 21, Koško, Sikorski, Szmyt... – part 1, in this volume] is a settlement of the CII stage of the Trypillia culture, located on a high cape plateau near Sandraki village (Pahurok Gorge) of the Khmelnytsk district, Khmelnytsk region discovered by Dobryansky and studied by the Verkhniy Bug expedition of the Institute of Archaeology of the Academy of Science of the Ukrainian Soviet Socialist Republic, led by E. Lagodovska in 1949 – 1950 [Lagodovska 1953:76-77; 1956:118-129]. One on-surface clay dwelling was excavated from which the ceramic materials for identification and dating were taken.

The remainders of dwelling places consisted of two layers of burnt clay. The upper layer was represented by clay, burnt to a red colour, with imprints of wood. The lower layer was represented by 50 sq m. of solid rectangular base of burnt



Fig. 4. Fragments of pots with cord impressions, Sandraki settlement (excavation by O.F. Lagodovska)

clay coating. Most of the clay mass was of reddish hue and lay in a solid layer up to 0.15 m thick. The total area of that layer was about 28 sq m.; the clay contained a substantial admixture of chopped straw chaff and some of the pieces bore marks of log and sometimes of wood. At the south-eastern part of the rectangular base there were three layers of different shapes, made of pure clay and surrounded with a low edge, amorphous piles of burnt clay, which are also remainders of clay ceiling construction in wooden house structures. The objects found in the dwelling included a collection of five weights of various shapes and whorls, fragments of ceramics and anthropomorphic plaster modelling pieces. Also a cultural layer of fragments of pottery and animal bones was found under the base.

Other objects studied included five pits, some of which had been found under the layer of burnt clay. Pit # 1 was  $0.75 \times 0.65$  m and 0.3 m deep. The filling of the pit consisted of a small number of ceramic fragments, including a vessel's bottom with a drawn cross on the inner surface, and animal bones. Pit # 4

Table 2

Dated complexes from Sandraki, a Trypillia culture settlement

Object	Material	Lab Index	BP	BC
Sq.3-7 - hearth	bone	Ki-6746	4175±50	2720±92
Sq.3-7 - hollow	bone	Ki-6747	4210±45	2790±92

contained a small number of finds. Pit # 9 was 1.1 m long, 0.9 m wide and 1.5 m deep, its walls narrowing down to the bottom. The filling, particularly its upper part, contained fragments of coating, an oval stone, fragments of pottery, a weight, animal bones, notably including stag antlers with traces of incision. Pit # 10 was 1.1 m long, 1 m wide, and 1.32 m deep with vertical walls. The filling included fragments of ceramics and animal bones. Pit # 11 was round, 0.78 m in diameter and 1.32 m deep, filled with large pieces of coating with marks left by log, and fragments of ceramics. The traced objects could probably belong to two building horizons dated within the CII stage.

A large number of flint tools were found in the settlement. The majority of the objects in this regard were tools and semi-finished large slabs and bars that had been further finished in the settlement, as suggested by the find of 67 splinters, found in one place and apparently produced in the process of making an axe. The flint tools included scrapers, knife-like plates, among which the Sandraki hoard contained axes, and arrow-heads. Ox rib bones served as the material for making numerous tools for picking up threads in spinning, piercing pieces, and smoothers. The horn was used for making hoes and spatulae. Ceramic tools included weights and whorls.

The majority of the finds were fragments of ceramics with most from ceramics with a red well polished surface. A small part of the ceramic complex included pots and cups decorated with a hollow ornament of cord imprints and holes (Fig. 4). The dough used for making the pots had an admixture of sand, quartz grains and finely ground shell. While in general the fragments bearing corded ornamentation were few, there was a significant variety [Videiko 2000: Fig. 25, 26, 27].

Painted ceramics were made of slit clay and featured rosy polished surfaces painted with black or dark brown, sometimes in combination with red paints. The painted pottery included bowls, cups, amphorae and tops (lids). A small number of fragments of the pottery contained plant admixtures in the dough. Anthropomorphic and zoomorphous sculptures included fragments of schematic female figurines and statuettes of oxen. The materials from the Sandraki excavations are kept in the Science Reserves of the Institute of Archaeology, National Academy of Sciences of Ukraine.

**TROYANIV** [samples 22-23, Koško, Sikorski, Szmyt... – part 1, in this volume] is a CII-stage Trypillia culture settlement. An eponymic monument of the

Table 3

Dated complexes from Troyaniv settlement of the Trypillia culture

Object	Material	Lab Index	BP	BC
House 28	Bone	Ki-6748	4360±55	2967±64
Sq.XIII-19, house	Bone	Ki-6749	4410±50	3003±83
House 25	Bone	Ki-6750	4430±45	3013±105

Table 4

Dated complexes from the Mayaki settlement of the Usatove culture (new dates)

Object	Material	Lab Index	BP	BC
sq. 08. depth 1,07-1,24	bone	Ki-9751	4600±90	1σ 3517-3403 2σ 3537-3083
sq. 09. depth 1,34-1,61, # 8370	bone	Ki-9752	4490±90	1σ 3345-3089 2σ 3373-2917
Trench 4-5	bone	Ki-9753	4180±90	1σ 2819-2663 2σ 2921-2551
1970, sample 1,	ceramics	Ki-11463	4370±100	1σ 3100-2885 2σ 3355-2860
1970, sample 2,	ceramics	Ki-11464	4530±90	1σ 3363-3093 2σ 3377-2921
1970, sample 3,	ceramics	Ki-11465	4460±90	1σ 3337-3209 2σ 3365-2911
1970, sample 4	ceramics	Ki-11466	4360±90	1σ 3100-2880 2σ 3350-2855

Troyaniv type is located at the outskirts of the Troyaniv village (Horikhova Hora ravine), Zhytomyr region, on a high cape over the Hnylopyat River. The settlement was discovered by R. Vyezhev in 1947, and studied by T. Belanovskaya and M. Shmagliy in 1956-1958 [Belanovskaya, Shmagliy 1959:125-128].

The dimensions of the settlement measure 150 m × 50 m. The remainders of 35 huts, arranged in two groups, were unearthed on a territory of 2,000 sq. m. Eleven huts were located in the south-western part of the settlement and 21 others stood in its south-eastern part. The huts were arranged in circles, with several huts standing outside the imaginary ring. On-surface huts were represented with piles of burnt coating that contained impressions of chopped wood and poles, being rectangular in plane and 6 m × 3 m in size. Semi-dug-outs, deepened in the soil to the level of 0.9 – 0.6 m, were oval in plane and had been heated with open bonfires. In addition to the huts, household pits were found on the site.

The cultural layer of the settlement was filled with fragments of ceramics, objects made of flint, stone and bone, most of which were found in the foundation pits of the semi-dug-outs and near the on-surface dwellings. Stone had been used

to make melling stones and pestles. An unfinished axe-hammer of note suggests that such kinds of weapons had been produced locally. A large number of other objects included flint wedge-shaped axes, knives, scrapers, and arrow heads, as well as bone tools (piercing pieces).

The settlement's ceramic complex includes kitchenware and tableware. The kitchenware had been made of clay with admixtures of ground shells, sand and organics. Some of the pots had been covered with red-coloured slipware. The vessels were of various shapes (bowls, goblets and amphorae) and included pots decorated with one or two rows of cord imprints on the shoulders (Fig. 4), cone-shaped clots, bowls and horn-handled amphorae, with some displaying impressions of clichés and prick marks. The tableware had been made of silt clay decorated with monochrome painting.

The finds also included a large number of fragments of anthropomorphic figurines made of the forming mass typical for production of kitchenware (i.e., clay with sand). Standing out among the finds is 'Troyaniv Venus', a standing schematic female figurine. The excavation produced a vast collection of ceramic weights – spindle whorls (conical, biconical), some of which were decorated with pictograms or ornamented with cut-in lines and prick marks. The objects found on the site also included the heddles of a vertical loom.

The materials have been housed at the Scientific Reserves and displayed at the Archaeological Museum, both at the Institute of Archaeology, National Academy of Science of Ukraine.

**MAYAKI** [samples 24 – 27, Koško, Sikorski, Szmyt. . . – part 1, in this volume], a complex of monuments of the Usatovo culture, includes a CII-stage settlement, a barrow and earthen burial sites near the village of Mayaki, Bilyaivsky district in the Odessa region. The site was located on a cape of the third terrace of the Dniester River. The settlement was studied by V. Zbenovich in 1964–1965 and in 1970 and the burial mounds were studied by E. Patokova and K. Zinkovsky in 1974–1975, V. Petrenko in 1986, 1990 and in 2002–2003 [Zbenovich 1974:22-35; Petrenko *et al.* 1984:50-81]. The materials for dating and identification of the cord imprints were provided from the excavations performed by Zbenovich.

The Mayaki settlement was a ritual monument. The only types of objects found on the site were ash-filled ditches, 1.9-3.8 m deep and 2.7-5.5 m wide in their upper parts. A structure of six such ditches was located on an area of 130 × 40 m: the ditches lay straight, parallel to the precipice, were linked with crosscut sections, made turns and surrounded sectors without any cultural remains, 10-15 m in diameter. In ancient times, all of the ditches had been filled with various multiple layers, thick and thin, with up to 30 sections displayed. The fillings contained remains of camp fires, ash, and a large number of material culture remains, which included pieces of burnt coating bearing imprints of wood, pieces of grain grinders, statuettes, cubes, and individual bronze objects. The predominant finds were fragments of ceramics and animal bones. The burial

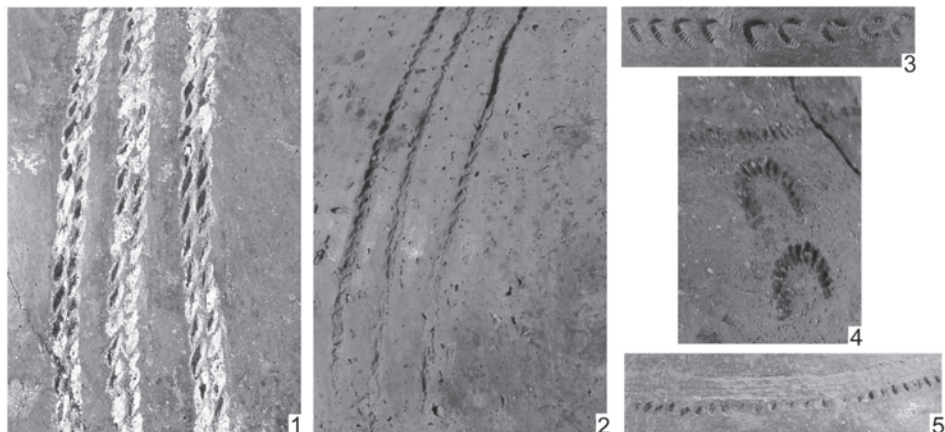


Fig. 5. 1-5 – Usatovo culture pottery with ‘cord’ decoration (from burials); 1 – cord decoration with white paste incrustation

mound occupied an area of  $300 \times 150$  m where 46 graves with 56 inhumations, mostly children, have been studied.

The burial rite involved simple pits and, less often, catacombs; the absence of ‘ceilings’; bent (foetal) positions of the buried bodies, usually on their left sides, mostly eastward-oriented with the use of a small quantity of ochre, the presence of tools, mainly crockery, sometimes anthropomorphic plastic artwork, and other objects.

The ditches and graves contained painted pottery of the Vykhytyntsi type, which allows, according to V. Petrenko [Petrenko 2003] classifying the Mayaki complex among the older stage of the Usatovo culture.

Ceramics with cord imprints comprise a minor part of the Usatovo ceramic complex, represented mostly in the pottery group and contained an admixture of ground shell. The necks and upper parts of the pots were decorated with corded compositions [Petrenko *et al.*, 1984:111-112, Fig. 37]. Sometimes the imprints made by a cord or a braid contained remainders of decorative inlays that had been made with white paste (Fig. 5). According to V. Petrun that paste had been made of ground fossilized bone material, in which the terraced deposits of the Lower Dniester had abounded [Petrun 2000:474-482; 2004:400]. The materials from the excavations of settlement, used in this study, have been kept at the Scientific Reserves of the Institute of Archaeology, National Academy of Science of Ukraine.

## CONCLUSIONS

The emergence of corded ornaments on Trypillia pottery may be referred to the late 5<sup>th</sup> mill. BC. The next stage of its dissemination throughout the first half and the beginning of the second half of 4<sup>th</sup> mill. BC (BII-stage and CI-stage complexes) was linked to the Middle Dnieper region (monuments of Chapaivka and Kolomyishchyna types). The largest area of corded ornamentation spread is linked to the CII complexes (or post-Trypillia cultures) and may be dated to the period from the last quarter of 4<sup>th</sup> mill. BC to the first quarter of 3<sup>rd</sup> mill. BC.

The connection with the previous stage's traditions can be observed primarily at the level of techniques [see Koško, Sikorski, Szmyt. . . – part 1, in this volume]. The explanation for this phenomenon can be found in the heredity of textile-making techniques in the Trypillia and post-Trypillia complexes, which proved to be noticeably distinct from those of the 'steppe' cultures traditions.

*Translated by Inna Pidluska*

## ABBREVIATIONS

- AP URSS – Arkheologiczni pamiatky Ukrainskoyi Radianskoyi Sotsialisticheskoi Respubliki. Kiev.
- BPS – Baltic-Pontic Studies. Poznań.
- KSIA – Kratkiye Soobshcheniya Instituta Arkheologii. Moskva.
- KSIA AN USSR – Kratkiye Soobshcheniya Instituta Arkheologii Akademiyi Nauk Ukrainskoy Sovetskoy Sotsialisticheskoy Respubliki. Kiev.
- MIA – Materialy i Issledovaniya po Arkheologii USSR. Moskva. Leningrad.
- SA – Sovetskaya Arkheologiya. Moskva.

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