

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

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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).

Sławomir Kadrow, Piotr Olejarczyk

‘CORD’ ORNAMENTS ON FUNNEL BEAKER CULTURE POTTERY AT TOMINY, SITE 12

Geographically, site 12 at Tominy is located on the Kielce-Sandomierz Upland, being part of the Central Poland Uplands (Fig. 1). It is situated in the southeast Ilża Piedmont, forming part of the Kielce-Sandomierz Upland [Kon-dracki 1978:356-360]. This mesoregion differs greatly in terms of terrain and soil types from the other regions of the Upland. What mainly sets it apart is sandy, argillaceous in places, substrate. Although strongly characteristic of the region, the loess cover does not reach site Tominy 12, with its range ending about 1 km southwest of the site.

Site Tominy 12 lies in the Wyszmontów Valley, on a slope descending slightly northwest. The terrain is rather monotonous. The central part of the site is located on a major prominence of moraine origin (Fig. 2).

Administratively, the site is situated in the Ożarów Commune, Opatów District, Świętokrzyskie Province. It covers a series of small hills, stretching along the southern edge of the Wyszmontów Valley, and the slope tops of the valley of a small watercourse. Local soils developed on a sandy, argillaceous in places, substrate.

1. GENERAL DESCRIPTION OF PREHISTORIC FEATURES AND MATERIALS

Rescue excavations on site Tominy 12 preceded the construction of a bypass around Ożarów. The area of 1.61 ha was excavated, while 4.5 ha were surveyed, unearthing in total 308 features (Fig. 3) and 64,188 artefacts. Most features are pits. The second largest category of features is postholes.



Fig. 1. Position of site 12 in Tominy, in terms of Funnel Beaker culture range

Almost the whole site was covered by a cultural layer. It supplied almost 70 per cent of all artefacts. The most numerous group of artefacts is made up of pottery. In total, 29,321 pottery fragments were discovered, including 3,260 distinctive and 26,061 indistinctive ones.

The flint inventory from the site includes 16,273 specimens while stone artefacts number 18,071. Other artefacts comprise 157 bone objects, 29 metal ones and 285 fragments of daub. In addition, 52 movable individual finds were recorded including axes, reaping-hooks and spindle bobs, etc.

The largest concentration of features was observed around a small terrain prominence, in the centre of the site (Fig. 3). The most numerous features are those attributed to the Funnel Beaker (52) and Linear Pottery cultures (26) while relatively rare are those associated with the activities of the populations of the Malice (6), Lublin-Volhyn (15), Globular Amphora (2), Mierzanowice (2) and Lusatian (16) cultures. There were also features recorded that were dated only generally to the Neolithic (6), the Bronze Age (9) and modern times (3). The chronology of 171 features could not be determined due to the absence of any dateable material or clear stratigraphic indicators.



Fig. 2. Location of site 12 in Tominy on a topographical map

It must be added here that all the features, especially those situated at the prominence summit, were badly damaged due to strong slope erosion. In many cases, only bottom parts of features could be isolated.

The cultural layer, spread all over the site (except for the eroded prominence culmination), is made of loamy sand saturated with artefacts, in places 40-50 cm deep.

2. FUNNEL BEAKER CULTURE MATERIALS AND FEATURES

The Funnel Beaker culture (FBC) settlement is believed to have left behind 52 features which reflect almost a half of all the features that have been culturally attributed. The traces of the settlement are marked chiefly on the prominence

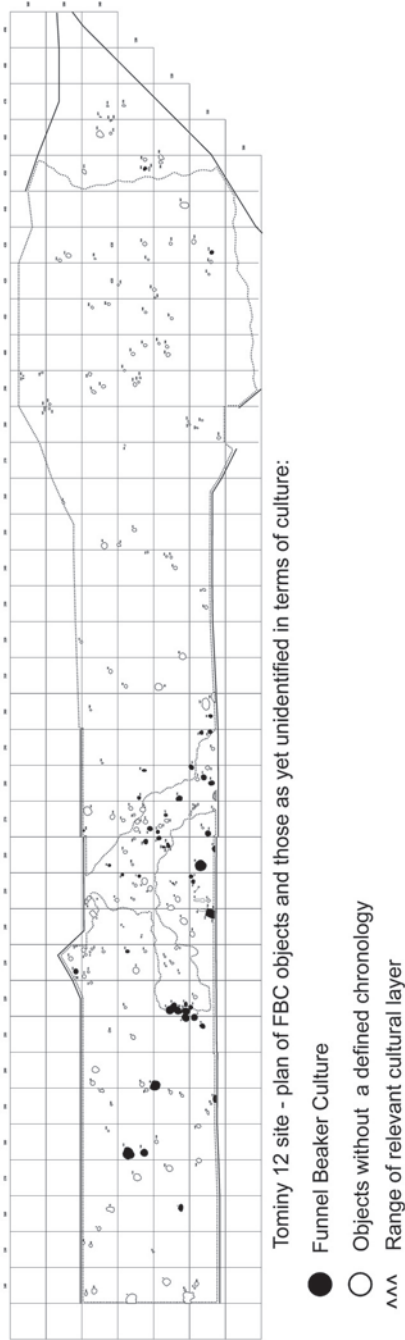


Fig. 3. Spread of prehistoric objects (immovable) on site 12 in Tominy

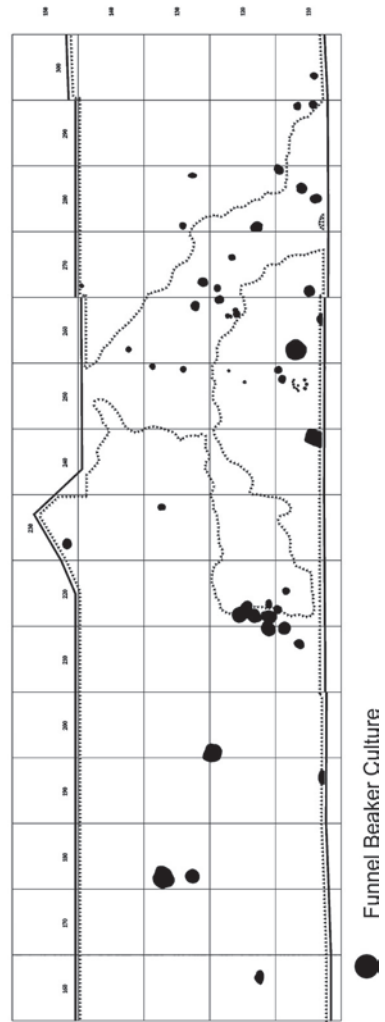


Fig. 4. Spread of Funnel Beaker culture prehistoric objects (immovable) on site 12 in Tominy

summit, both adjacent parts of the slope and on the lower portions of the southwest slope (Fig. 4). Only two features were identified in the lower portion of the northeast slope, at a considerable distance from the settlement centre.

In total, 6,262 pieces of FBC ceramic material come from features, of which from FBC features come 5,760 pieces. As many as 592 FBC pottery fragments were obtained from the fills of the features of other cultures.

FBC material in the cultural layer was found throughout the whole excavated space, in a belt 290 m long – from are 150 to are 430 – stretching east-west. The cultural layer yielded 8,038 fragments of pottery.

The inventory of FBC pottery under investigation includes 30 fragments bearing cord ornaments, accompanied sometimes by other ornamentation techniques (Fig. 5:4,6), and 3 fragments of lips with their rims obliquely cut off inwards (Fig. 6).

In terms of vessel forms, funnel beakers dominate, albeit of different varieties (Fig. 5:3-6,9), i.e. with short and tall necks. They bear varied ornament patterns made using varied techniques. Quite numerous, horizontal continuous rows of classic bars are sometimes doubled and impressed with a rectangular stamp under a rim. In addition, a wide variety of other techniques is encountered such as pinholes, impressions of an oval, round and square stamp, the use of which yielded an effect similar to that of the classic bar. Frequently, bars and their derivatives are accompanied, usually underneath, by rows of zigzag lines made with impressions of a rectangular bar, pinholes or impressions of an oval or square stamp. Occasionally, bars are replaced with rows of small arches. What is relatively frequently encountered is horizontal (double or triple) impressions of a cord of varied thickness (Fig. 5:4,6) or a single cord accompanied by a zigzag line.

Next in terms of numbers were saclike vessels decorated with a cordon under the rim. The cordons were usually corrugated using impressions of fingers or nails (Fig. 5:7). A quite large number of amphorae is evidenced by pottery fragments with handles, relief strips in the form of “drooping whiskers”, and a ladder ornament. Single specimens of collared bottles (Fig. 5:2), cups with *ansa lunata* handles and cylindrical vessels were recorded as well.

In terms of technology used, all the vessels are quite uniform. The ceramic body was usually made leaner by using medium-size crushed pottery. The vessel surfaces are even, sometimes smoothed and polished. The fractures are usually two-coloured and compact.

‘Cord’ ornaments (Fig. 5:4,6) and the presence of lip specimens, having their rims obliquely cut off inwards (Fig. 6), testify to the fact that a substantial portion of the FBC ceramic material belongs to the culture’s late phase. Whereas the presence of collared bottles, cups with high *ansa lunata* handles, ladder ornaments on small amphorae, and frequent classic bar ornaments under the rims of funnel beakers (Fig. 5:5, 9) show that the remaining pottery belongs to the classic phase of the culture.

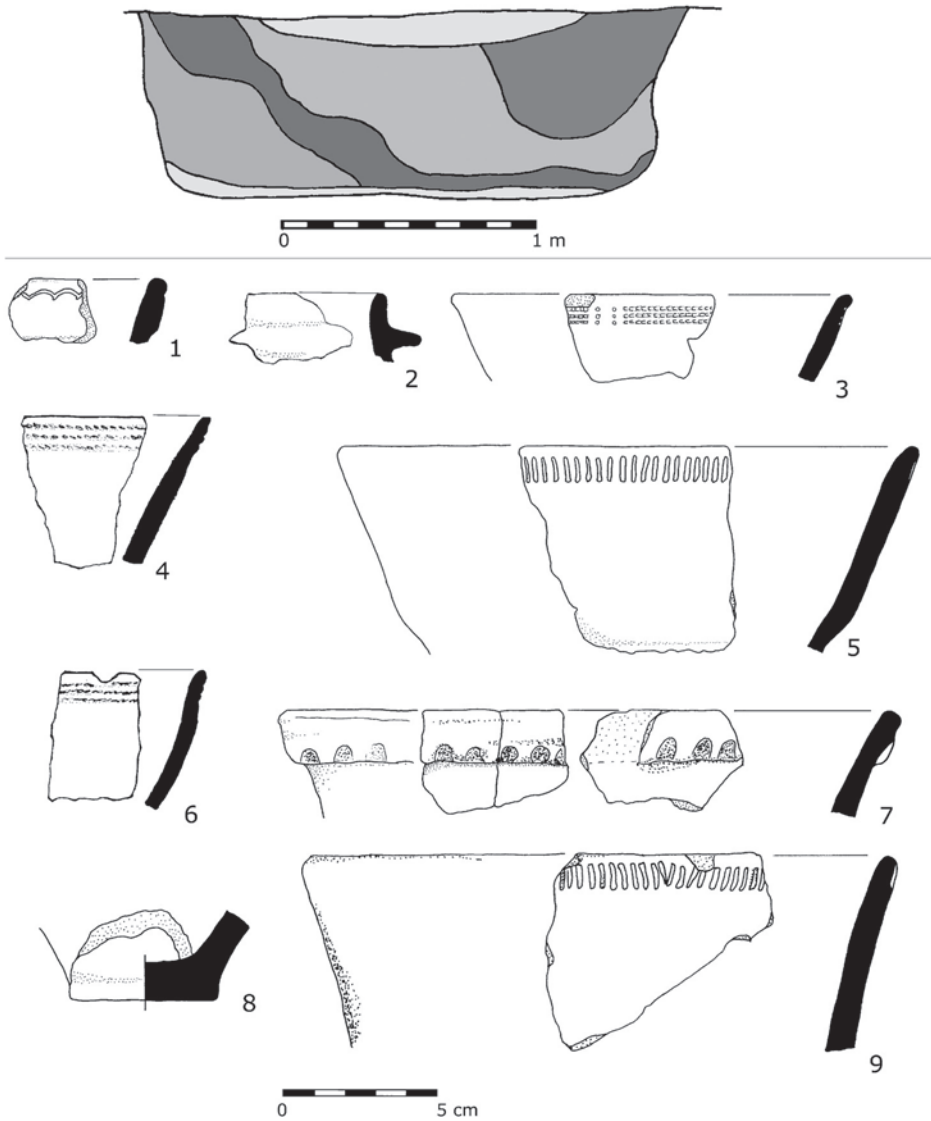


Fig. 5. Funnel Beaker culture object 33 on site 12 in Tominy

As a result of performed analyses [Koško, Sikorski, Szmyt... – part 1, in this volume], we know now that ‘cord’ ornaments on pottery fragments from site Tominy 12 were made by impressing more or less complex needlework goods and not a hemp cord. ‘Cord’ ornaments were partially smoothed out in areas close to rims. The surfaces of the vessels were slipped (covered with engobe) and slightly

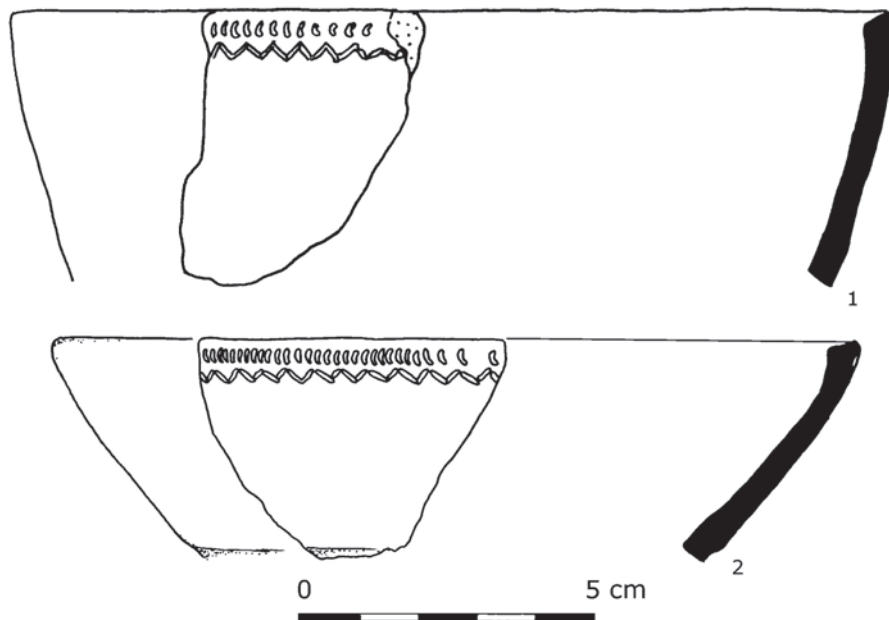


Fig. 6. Funnel Beaker culture ceramic ware from a cultural layer on site 12 in Tominy

polished. The consistency of technique used to make ‘cord’ ornaments, their partial smoothing out as well as slipping and polishing the surfaces of vessels thus decorated testify to the single technological and stylistic tradition of their makers.

The widespread use of needlework goods to make ‘cord’ ornaments [Koško, Sikorski, Szmyt. . . – part 1, in this volume], found at Tominy as well, does not allow us to draw any conclusions as to the directions from which the ornaments, found on the FBC pottery from the site, were imported. To determine the time of import and inspiration centres of ‘corded’ ornaments on FBC pottery at site Tominy 12, one should refer to our knowledge of the chronology and origins of such ornaments in the FBC southeast group.

3. THE LATEST RESEARCH INTO THE CHRONOLOGY OF THE FBC SOUTH-EAST GROUP

In the south-east group of the FBC, the best constructed and verified empirically is the chronology of the settlement in Bronocice [Kruk, Milisauskas 1981; 1983; 1990; 1999]. The settlement’s lifetime covered the period from 3800/3700

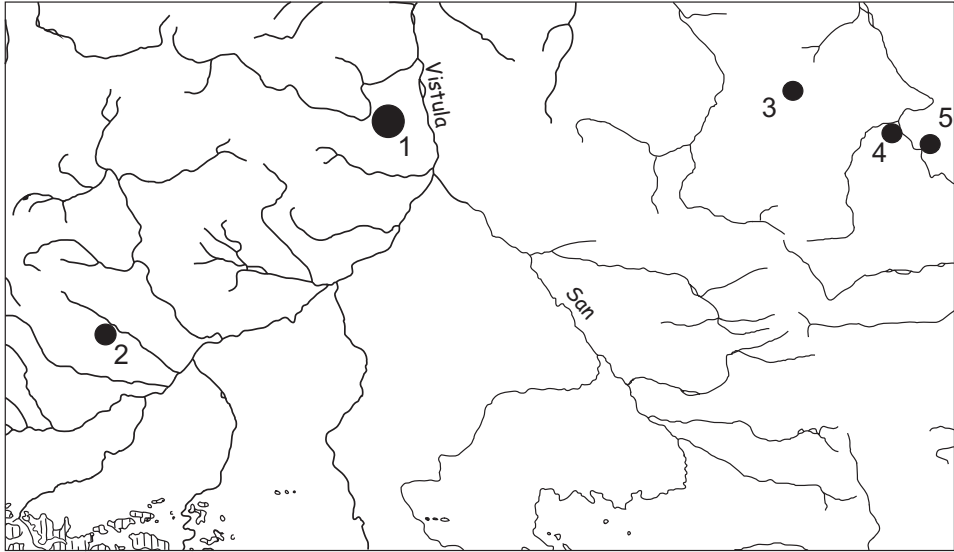


Fig. 7. Position of chosen Funnel Beaker culture sites, south-east group late phase (1 – Tominy, 2 – Bronocice, 3 – Majdan Nowy, 4 – Gródek Nadbużny, 5 – Zimno)

to ca. 2600/2500 BC. Of crucial importance was setting the beginnings of the stage of great settlement on this site at 3650/3600 [Kruk, Milisauskas 1999:120; see also Nowak 2009:339], which made it tantamount to and simultaneous with the emergence of the south-east group of the FBC on the loess areas of Małopolska [Kadrow 2009:140]. To the same period, the beginnings of the settlements in Gródek Nadbużny and Zimne are currently dated [Bronicki *et al.* 2003:31, 64, Fig. 27; 2004:107-109, 122, Fig. 4]. Equally important, the dating of the beginnings of badenization in Bronocice (ca. 3050/3000 BC) is related to the stage of reduction and concentration of FBC settlement in west Małopolska [Kruk, Milisauskas 1999:135]. The chronology of the beginnings of the process found confirmation in more recent studies [see e.g. Furholt, Machnik 2006:340-342; Furholt 2009:235; Zastawny 2008:184-186]. Other papers suggest that the beginnings of badenization be moved to a slightly earlier date, i.e. 3200/3100 BC [Włodarczak 2006:58, Fig. 21; 2008:251-252, Fig. 2].

The processes of badenization took place only on the loess area of western Małopolska [Kruk, Milisauskas 1999:174-176; Włodarczak 2008:251-252; Zastawny 2008:184-186]. They were not observed on the Sandomierz-Opatów, Lublin and Western Volhynia uplands. The study of 'classic' FBC materials from Gródek Nadbużny [e.g. Jastrzębski 1991] revealed the presence of older materials [designated as phase Gródek I, see Jastrzębski 1991:189, Fig. 3] and younger ones [designated as phase Gródek II; see Jastrzębski 1991:189, Fig. 4] with few Wiórek links and prevalence of vessels with short, funnel-like necks. What clearly

set apart the younger materials was supposedly the presence of relatively numerous imports of Late Tripolye pottery in their context [Burchard *et al.* 1991:98; Jastrzębski 1991, Fig. 5]. A re-analysis of settlement assemblages, radiocarbon dated, containing Gródek I pottery, made it possible to set the beginning of the phase contemporaneously with phase Bronocice II [or at ca. 3650 BC, see Bronicki *et al.* 2003:31, Table 2; Kadrow 2005:12] and not as suggested earlier contemporaneously with the beginnings of phase Bronocice I [Burchard *et al.* 1991:96-99, Fig. 2]. Hence, instead of a long term of persistence between 3900 and 3500 BC [Burchard *et al.* 1991: Fig. 2], phase Gródek I should be dated to a relatively short period of 3650-3500 BC [Bronicki *et al.* 2004:107-108]. A similar problem is posed by the dating of the end of phase Gródek II. Originally, the end of the phase was synchronized with the end of phase Bronocice III (or ca. 3100/3050 BC), admitting, however, of a possibility that it could have lasted longer [see Burchard *et al.* 1991: Fig. 2; Włodarczak 2006:45, Fig. 16]. In light of available radiocarbon dates, the end of phase Gródek II was dated to 2900/2800 BC [Bronicki *et al.* 2004:108, Table 2]. The presence of ceramic imports from the Gorodsk group of the Tripolye culture in the assemblages of that phase in Gródek Nadbużny [Jastrzębski 1985: Fig. 5; 1991: Fig. 5:6, 8, 10] justifies, however, moving the dating of the end of FBC settlement on site 1C in the town to 2700/2600 BC [Bronicki *et al.* 2003:49; 2004:108].

The late dating of the end of phase Gródek II is justified by the analysis of FBC ceramic materials and radiocarbon dates for artefact assemblages from site Grodzisko in the locality of Zimno [see Bronicki *et al.* 2003:32-63; 2004:111-121]. The lifetime of the settlement can be divided into two phases: Zimno I and Zimno II, which were separated by an interval of over 300 years. Zimno I lasted from 3650 to 3400 BC while Zimno II continued from 3050 to 2600 BC [Bronicki *et al.* 2004:122; Fig. 4].

For the questions of the origin and dating of 'cord' ornament on the FBC pottery on site Tominy 12, of crucial importance is determining its position in relation to other FBC inventories, containing similar ornaments. What is meant here in the first place is materials from the Neolithic settlement in Majdan Nowy [Kadrow 2005:15, 16], where 'cord' impressions on late FBC pottery were found to be relatively frequent (11% of all ornamented fragments) [Bronicki, Kadrow 1988:96; Table 6, 7; Figs. 9:11; 10:9; 11:6; 12:6; 13:8; 14:1, 10; 20:3, 11; 21:5, 6, 9; 23:5].

Special attention is deserved by the joint occurrence of 'cord' ornaments and vessel lips with their rims obliquely cut off inwards [e.g. Bronicki, Kadrow 1988: Fig. 19:5; 20:11]. Bowls with obliquely cut off rims are frequently encountered in southeast Balkan cultural groups, belonging to the horizon of Sitagroi Va – Radomir I-II – Junacite XIII-IX [Némejcová-Pavúková 1999: Figs. 1-4; 8:9, 10; 9:12], synchronized with the Foltești and Usatovo groups and the Coțofeni culture [e.g. Raczky 1991:340]. Occasionally, such bowls bear a 'cord' ornament

[Kadrow 2005: Fig. 18:13, 14]. They are quite frequent in the assemblages of the Kasperivtsy group [e.g. in Bilcz Złoty; see Kadrow *et al.* 2003:73, 74; Fig. 24:11-13, 15; Kadrow 2005: Fig. 18; 3, 4, 6, 8] and the Gorodsk group [e.g. Kruts, Ryzhov 2000: Figs. 4:3; 6:3; 9:9] of the Tripolye culture.

It seems that the analogies cited [because of the chronological position of the Kasperivtsy group materials in Bilcze Złote; see Kadrow *et al.* 2003:120-128; Figs. 53-55] allow us to safely date late FBC materials in Majdan Nowy, comprising vessels with their lip rims obliquely cut off and occasionally bearing 'cord' ornaments, to the beginning of the 3rd millennium BC [Kadrow 2005:15; Fig. 19:2-4, 8].

The typological and stylistic peculiarities of pottery assemblages representing the late phase of the FBC [Bronocice – see e.g. Kruk, Milisauskas 1983; Gródek Nadbużny – see Jastrzębski 1991; Majdan Nowy – see Bronicki, Kadrow 1988; Kadrow 2005; Zimne – see Bronicki *et al.* 2003; 2004] show that at the turn of the 4th and in the early 3rd millennia BC the culture continued to develop local differences in south-east Poland (Fig. 7). The differences, as it seems, existed already in the beginnings of the south-east group [Kadrow 2009: Fig. 1], which must have been related to different cultural substrates in the different areas of its range.

The impact of the Tripolye culture on some FBC settlement regions in Małopolska continued over a longer period of time. It was the impact that contributed to the rise, especially in the late phase, of local typological and stylistic peculiarities in pottery. At the earliest, they are recorded already in phase Bronocice II as imitations of Tripolye painted ware [Jastrzębski 1985:88]. The imports of Tripolye painted ware are also known from the assemblages of phase Gródek I in Gródek Nadbużny [Jastrzębski 1985: Figs. 2-4; 8:3-6]. Quite numerous at the site, the imports of pottery belonging to the Gorodsk group of the Tripolye culture bear cord ornaments [Jastrzębski 1985: Fig. 5]. Whereas in Zimno, discoveries of pottery imports from the Horodiştea and Gorodsk groups were made [Bronicki *et al.* 2004:122]. It must be stressed in this context that the pottery bearing 'cord' ornaments and coming from the sites in Majdan Nowy and Tominy does not represent Tripolye imports or imitations. What it does represent, however, is a form of adaptation of the selected traits of the Tripolye culture pottery to local FBC pottery.

4. THE CHRONOLOGICAL POSITION OF FBC WARE, BEARING 'CORD' ORNAMENTS, FROM THE SITE IN TOMINY

At present no results of precise statistical analyses of FBC ware from the site in question can be given. The work on source processing of the artefacts is

still underway. What can be responsibly given, however, is their general description. The number of 30 pottery fragments bearing 'cord' ornaments is, so far, the highest of all known FBC inventories in Małopolska. It must be observed, however, that the incidence of the ornament in the settlement at Majdan Nowy [Bronicki, Kadrow 1988:91, 100, 101, Table 6, 7] is visibly higher than at site 12 in Tominy. In Majdan Nowy, there were recorded 14 FBC pottery fragments bearing 'cord' ornaments in the pottery inventory of 3,201 shards, whereas in Tominy, 30 fragments of vessels bearing such ornaments were obtained from an inventory of over 14,000 ceramic artefacts. Likewise, in the case of the number of pottery specimens with their lip rims obliquely cut off inwards, in Majdan Nowy two such artefacts were unearthed, while in Tominy – out of a much numerous inventory – only three were discovered.

On both sites, FBC settlement could have been divided into two phases. The materials that are encountered there belong to both the classic and late phases. A distinguishing trait of the latter is 'cord' ornamentation. Due to hardly legible nature of strata and feature fills as well as a lack of any clear stylistic-typological differences between most of the pottery from the two phases, no unambiguous classification of all the pottery can be offered. The ceramic materials of the late phase from Tominy should be dated similarly to those from Majdan Nowy on the strength of the presence of lips with their rims obliquely cut off inwards accompanied by cord ornaments. As it has already been mentioned, similar elements are recorded in the Kasperivtsy and Gorodsk groups of the Tripolye culture. Hence, they can be dated to the first centuries of the 3rd millennium BC [Kadrow *et al.* 2003:120-128; Figs. 53-55; Kadrow 2005:15]. As regards direct sources of inspiration for the use of 'cord' ornamentation, they are to be found in the late groups of the Tripolye culture, chiefly the Kasperivtsy and Gorodsk groups. Jointly occurring in them, specifically in the former, lips with their rims obliquely cut off inwards and cord ornaments are recorded in Majdan Nowy and Tominy. The origins of the former trait have their roots in Anatolia and the eastern Balkans, while the latter trait – cord ornaments – comes from Pontic steppes. The two traits may have merged in the late groups of the Tripolye culture at the mouth of the Danube.

Translated by Piotr T. Żebrowski

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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