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ŚWIĘTE 11, FEATURE 1149: SEQUENCE OF FUNERARY RITÉS PRACTICED BY CORDED WARE PEOPLES AND EARLY BRONZE NORTH PONTIC CULTURES

ABSTRACT

A set of sources embodied by features 1149A and 1149B at Święte 11, Jarosław District, Podkarpackie Province, is one of a kind in Lesser Poland as it includes a vessel associated with steppe cultures of the Northwest Black Sea Coast. The vessel has been discovered in a stratigraphic context that is not fully clear. It probably constituted an offering (*trizna*) connected with the male burial identified in the niche grave underneath. The vessel appears to be linked to the late Yamnaya/early Catacomb horizon. Such chronological attribution is further supported by an absolute date of the 2nd half of the third

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millennium BC established for bones. The vessel sits alongside other finds that provide corroboration for connections the population of the younger Corded Ware phase in Lesser Poland had with eastern European regions.

Key words: Final Eneolithic, Corded Ware culture, Yamnaya culture, Catacomb culture, Lesser Poland

INTRODUCTION

On 16 August 2010, during an archaeological excavation on the A4 motorway route, on the San River, at Święte (site 11), Radymno Commune, Jarosław District, the first ever feature in the Vistula basin was documented that can be conclusively identified with Early Bronze Age cultures of the Black Sea region, i.e. late Yamnaya culture (YC) or Catacomb culture (CC) [Klochko, Koško 2009, with further references]¹. The feature (1149B) was recorded at the Corded Ware (CWC) cemetery that is discussed in a separate study [Olszewski, Włodarczak 2018] referred to herein for a description of the sources, i.e. observations made during exploration of feature 1149A.

The innovative nature of the aforesaid set of sources determined our decision to rapidly present (as early as in 2012) results of our analysis of the above at the Kiev forum of research specializing in barrow cultures of the Black Sea region [Koško *et al.* 2012]. Feature 1149 at site 11, Święte, was also a meaningful inspiration for an overview of existing research into the share of signature features of the Black Sea cultures of the Early Bronze Age in the development of Old Upland communities of the CWC (Lesser Poland groups) and Złota culture [Włodarczak 2014a; 2014b].

Steps were also taken to re-examine the initial way the topic was approached in 2012, in the context of the comprehensive analysis of materials documenting the CWC ‘ceremonial centre at Święte’ (sites 11, 15 and 20) that are presented in *Baltic Pontic Studies*, vol. 23. This contribution, therefore, combines two interpretative approaches: one from the perspective of an internal analysis of the feature as outlined already in 2012 (through direct reference), and the other from the perspective of the *ceremonial centre* and its topogenetic links, i.e. current academic

¹ The discovery was made by ARCHE Teresa Dobrakowska excavation expedition headed by Aleksandra Łukaszewska and Łukasz Łukaszewski. In May 2011, Aleksander Koško received an offer from ARCHE Teresa Dobrakowska, represented by the Expedition Head, to examine the ‘Black-Sea component’ for the purposes of a conservation report and, more broadly, for a project involving the northwestern outskirts of the above-specified culture circle, pursued by the Institute of Archaeology, Adam Mickiewicz University [Koško 2011].

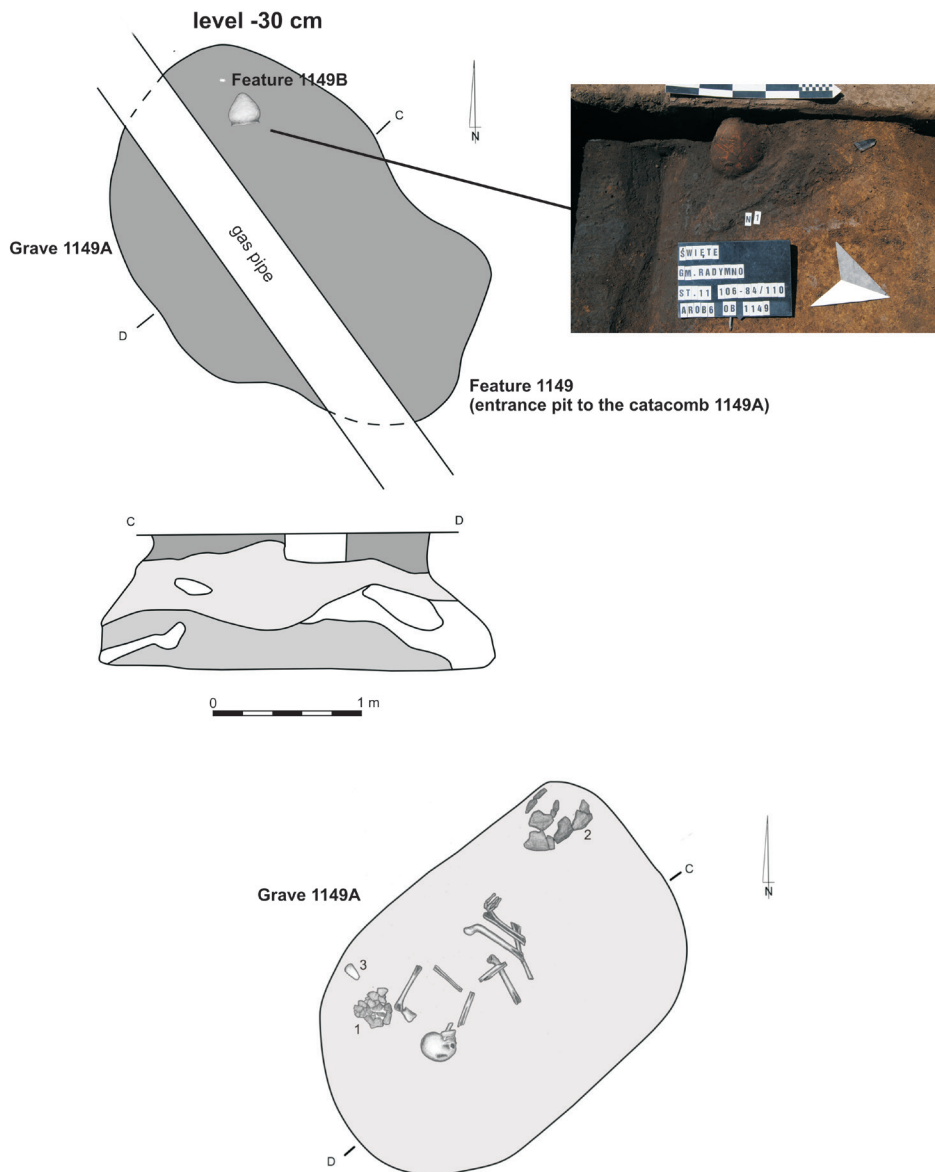


Fig. 1. Święte, site 11. Grave 1149A and feature 1149B. Drawing by M. Podsiadło

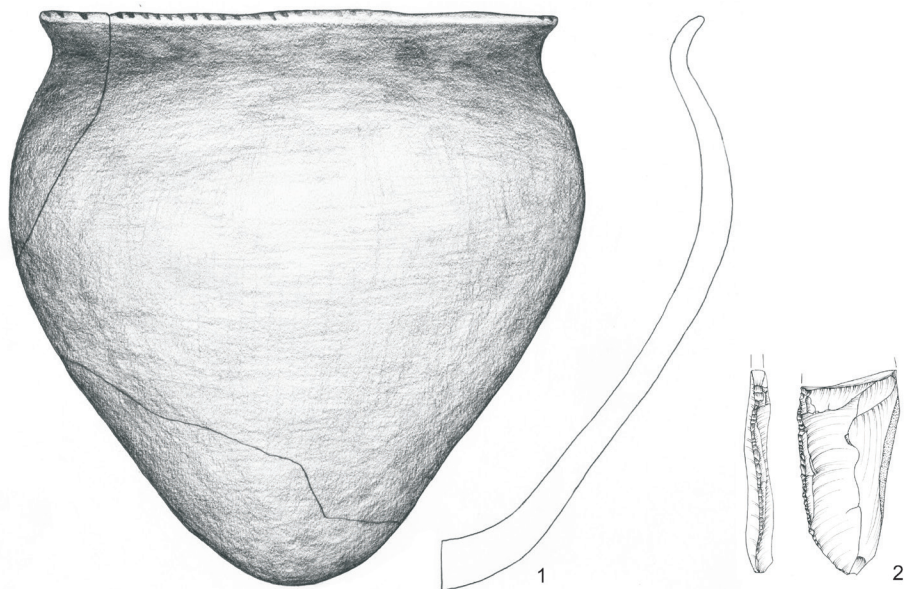
discussions on the value of information derived from feature 1149 for our understanding of the Baltic and Black Sea ‘barrow culture’ borderlands.

1. FEATURES 1149A AND 1149B: ARCHAEOLOGICAL AND TAXONOMIC DATA

For the purpose of the analysis, the sources embodied by what has been named ‘feature 1149’ have been divided into the following two parts: niche grave (feature 1149A), and evidence of ritual acts recorded in a top layer of a niche fill (feature 1149B), attested by the presence of a vessel (Fig. 1). Feature 1149A belongs to the group of thirteen features identified at site 11, Święte, and associated with the CWC [Olszewski, Włodarczak 2018]. However, the top layer of the fill of feature 1149A yielded an exogenous vessel differing from technological and stylistic standards of eastern Lesser Poland [‘Lubaczów group’ of the Corded Ware culture: Machnik 1966: 185; 1979: 343; Włodarczak 2014a]. Components of this *ceremonial centre* cannot be studied in detail due to post-depositional disturbances. However, a full analysis of planographic and stratigraphic details gives grounds for abandoning ‘initial reconstruction’ of the site as ‘concentration of under-barrow features’ [Koško *et al.* 2012: 68]. According to what Piotr Włodarczak assumed in 2014, grave 1149A ‘was a classic example of the Lesser Poland flat niche structure, with position and orientation of the body (adult male) as well as qualitative value of grave goods typical of local customs’ [Włodarczak 2014a: 41-43; *see also* Olszewski, Włodarczak 2018].

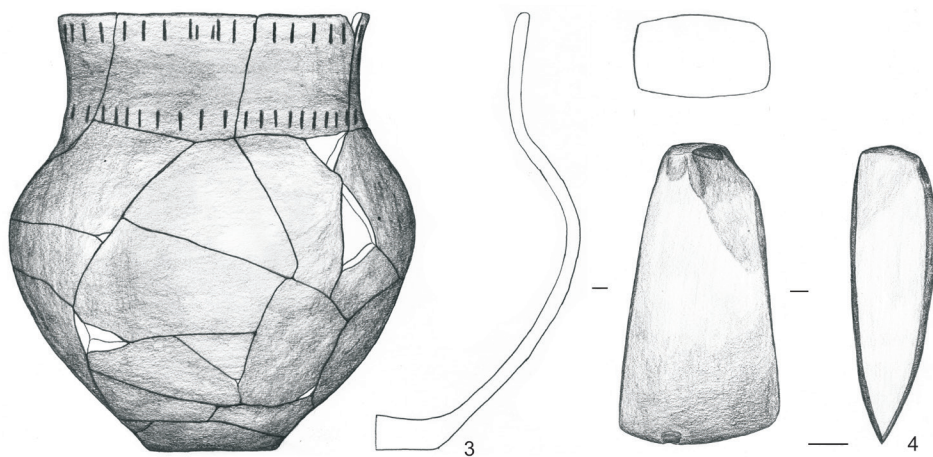
The analysis of the fill of grave 1149A reveals a characteristic niche (=catacomb) construction destroyed following collapse of the ceiling of a burial chamber. In terms of spatial and chronological distribution of the CWC groups in Lesser Poland, niche structures are absolutely dominant in the younger phase [Włodarczak 2006: 53], forming the following four concentrations: Kraków, Sandomierz, Lublin (including Sokal Ridge), and Subcarpathian. The Subcarpathian one, including the site at Święte, has been only recently somewhat better understood through research preceding the implementation of road construction projects in the region of the Rzeszów Foothills and Lower San Valley. The date range of ca. 2400-2300 BC gives us a *terminus post quem* for the emergence of Złota and Corded Ware culture niche graves in Lesser Poland [Włodarczak 2006: 159; Machnik *et al.* 2009]. Between ca. 2600-2500 BC and ca. 2400-2300 BC, niche graves were prevailing at cemeteries of the younger CWC phase.

In terms of archaeological properties, the feature should be studied using typological standards employed in research into the CC [Ślusarska 2006, with further references]. Consequently, an outline of the grave (Fig. 1) with a rectangular/oval entrance pit (118 x 89 cm), a short corridor (*dromos*) and a chamber (niche) of a nearly rectangular shape (267 x 177 cm), i.e. structure belonging to type IIIA (alternatively IIA) was documented [Ślusarska 2006: Fig. 15]. On the bottom of the chamber, there was a male (?) body aged 60-65, placed on the back oriented SE-NW, in a contracted position, head pointing south, with face looking to the



Feature 1149B

0 5 cm



Grave 1149A

Fig. 2. Święte, site 11. Inventories from feature 1149B and grave 1149A. Drawing by M. Podsiadło

south [Szczepanek 2018]. The burial was accompanied by two vessels, one placed at the feet (no. 2) and the other one placed at the shoulder (Fig. 2: 3). A siltstone axe (Fig. 2: 4) was recorded to the east of vessel no. 3. Yet another vessel (no. 1) and a fragment of a large retouched blade of Volhynia flint (Fig. 2: 2) were found within a ceiling of the chamber [Olszewski, Włodarczak 2018: 35-38]².

The following two vessels are the only ones of any greater taxonomic value: no. 3 found at the skeleton, in the bottom layer of the chamber fill, which is a form attributable to an older rite, and no. 1 found in the top layer of the preserved part of the chamber, which is a form attributable to a younger rite. The third vessel (no. 2), which seems to have been deposited as a fragmentary piece, is difficult to evaluate in stylistic terms. Based on technological properties, it can be attributed to the CWC.

Vessel no. 3 (Fig. 2: 3) is a CWC beaker belonging to type IVc according to Machnik's classification, and finds its closest parallels in group C: coexistence of traits of 'corded' ware in Lesser Poland (Brzezinki, district of Lubaczów, barrow III, grave 1) [Machnik 1966: 185, table XXVI: 5]. Its ornamentation, which consists solely of rows of vertical incisions, is also characteristic of assemblages recorded in eastern Lesser Poland and sometimes considered to be a manifestation of further eastern European relations (with the Middle Dnieper region?) [Janczewski *et al.* 2018].

Attributable to the older rite and finding no parallels in the CWC, vessel no. 1 (Fig. 2: 1) exhibits stylistic features typical of the YC [Shaposhnikova 1985: Fig. 98; Shaposhnikova *et al.* 1986: Fig. 15] (*see* section 4 for more information). It may be described as a pot with a pointed/oval-shaped base and a short rim decorated with diagonal stanchions impressed on the edge. A preliminary analysis of the impressions points to the use of a needle-knitted piece of textile (macroscopic analysis, courtesy of Andrzej Sikorski) [Koško *et al.* 2010]. In relation to its indisputable formal 'Yamnaya' prototypes, the production method applied in the vessel is considered by Ukrainian experts to be 'somewhat atypical' as it uses a crushed stone temper (sand and crushed stone additive). It should be, however, highlighted that the outer and inner surfaces of the vessel exhibit brush strokes (so-called *razchiosi* involving charred residue adhering to the inner wall of the vessel). In general, such brush strokes should be viewed as a clear identifier of the 'eastern' topogenesis of the vessel (*see* section 4).

² The cited paper dates the flint artefact to the Middle Eneolithic and attributes its presence in the context of features 1149A and 1149B to the older Funnel Beaker settlement at the site. As such, the artefact is not discussed further in this contribution.

2. RITUAL PLACE – SEQUENCE OF RITUAL ACTIVITIES (FEATURES 1149A AND 1149B)

Differences in stratigraphic position between sources coming from the top layer and those from the bottom layer of the fill of feature 1149 became indisputably clear already at the fieldwork stage. The recognition of these differences appears grounded also from the taxonomic perspective referred to above and encourages the following division into two features, with a different function for each of them, for the purpose of our further analysis:

- a) 1149A – grave (bottom layer);
- b) 1149B – *trizna* (top layer).

Suggested above, ritual identifications stem from hands-on field experience of Black-Sea archaeologists; although there are large and genetically complex difficulties with finding any unambiguous ‘formal parallels’ in the Black Sea regions (*see* section 4).

There are two acceptable reconstruction avenues for the emergence of this ritual place. The first assumes that what we are dealing with is a sequence of ritual activities performed at relatively short time intervals, while the second allows for much longer time intervals involving even genetically different cultural units (idea of ceremonial centres: [Koško (Ed.) 2015; *see* also observations on *ancient cult practices* in Kuyavia: Cofita-Broniewska (Ed.) 1989]. Given the post-depositional destruction rate for the concerned part of the site, manifesting itself in the destruction of the niche, surface grave marker and entrance pit, these uncertainties are unlikely to be resolved. For a more likely hypothesis we can, however, suggest the following cycle of ritual acts, with some being optional:

- a. Selection of a ritual place: generally speaking, a flat but prominent area at the edge of the San Valley [Olszewski, Włodarczak 2018: 8, Fig. 1].
- b. Setting up a ‘ground’ grave chamber (=1149A) [*see* incidental attestations of ‘ground’ graves in the CC: Toshev 1994]; Fig. 1.
- c. Preparation and deposition of the body of a 60-65-year old male (?) within the chamber (feature 1149A) [Szczepanek 2018].
- d. Preparation of offerings (three items at minimum: two pottery vessels and stone axe).
- e. Deposit the offerings within the chamber (of feature 1149A).
- f. Backfilling an entrance pit with soil, and construction of ‘surface grave markers’ to identify the burial place (although there are anthropological and thanatological indicators, no grave markers have been attested archaeologically).

Placing the body within the empty space of the chamber of grave 1149A (kind of a room or ‘house of the dead’) is a characteristic element of the Final Eneolithic thanatological ideology. A stratigraphic analysis of the fill clearly shows that the niche was destroyed by the collapsing ceiling. As a result, the

lowermost part of the fill is made up of the sediment composed largely of yellow loess, while to its uppermost part there is an ablation basin filled in with homogenous black sediment. Within the basin, a vessel has been discovered which is an indication of an act of offering (*trizna*). It is unlikely that the pit was dug into the basin that was already totally filled. It is, however, highly likely that the vessel was deposited prior to destruction of the niche and its original position was changed following the collapse of the ceiling. The secondary stratigraphic position of the vessel causes difficulties in establishing the sequence of ritual acts. The fact of the vessel being found above the niche suggests that it predates grave 1149A. So far, there has been not a similar attestation from Lesser Poland that spaces above niches were used for any purpose whatsoever, including for offering pits. Most probably, there were efforts made to avoid destruction of the ceiling of the chamber, including marking the chamber at the ground level. We can, therefore, assume that the vessel was placed in a shallow pit at the CWC cemetery, following which the niche for grave 1149A was dug underneath the vessel. At a decliner point in time, the offering pit was destroyed and the vessel became dislocated, migrating downwards into a depression so created.

A closer genetic relationship between features 1149A and 1149B is, however, possible, because it is also acceptable that the vessel was deposited at the ground level (or in a shallow depression) above the catacomb, immediately after the end of the burial ceremony. Subsequently, during the collapse of the chamber ceiling, the vessel migrated somewhat downward into the basin formed at that time. Such a strong relationship between features 1149A and 1149B (grave and *trizna*) is possible as there are no other Final Eneolithic features in the vicinity.

The description of ritual acts above draws on research experiences with Early Bronze cultures of the North Black Sea area: *see* section 4³.

3. CHRONOMETRY

Steps to more precisely specify the taxonomic and chronological framework referred to above were taken through a two-stage process relying on radiocarbon dating of: (a) human bones found within feature 1149A, and (b) charred residue adhering to the inner wall of the ‘Yamnaya’ vessel from feature 1149B. The lack of taxonomic acceptance of effects of both aforesaid dating efforts triggered (c)

³ A similar supposition about the stratigraphic position of the vessel from feature 1149B has been presented to us during consultations by Professor Genadiy N. Toshev, outstanding expert in catacomb graves of the Northern Black Sea region, for which we extend our sincere gratitude.



Fig. 3. Bone samples from grave 1149A. On the left side: material dated in 2011 and re-dated in 2019. On the right side: material dated through the Poz-90884 measurement

re-examination of bone substance from feature 1149A [Koško *et al.* 2012: 73-74; Włodarczak 2018: Table 1].

a. One analysis (Poz-42368) was done that yielded the result 3710 ± 35 BP (1.6‰N; 5.2‰C), which, when calibrated (with version 4.1.5 of the OxCal program of C. Bronk-Ramsey from 2010), with the significance level of 68.2% gave the following ranges: 2191–2181 BC (5.3%); 2141–2113 BC (18.2%); 2102–2036 BC (44.7%), thus suggesting the time frame of 2191–2036 BC.

b. As part of an initial study, two attempts were made to date the charred residue (Poz-42369; Poz-42590), which, regrettably, failed to yield reliable results: 5330 ± 60 BP and 4700 ± 40 BP (with the same significance level of 68.2% = 4145–4053 BC and 3605–3377 BC). The failure to do so should be attributed to the origination of the substance being dated, i.e. charred residue, which is complex and poorly understood as far as analysis of chronometric results is concerned.

c. Radiocarbon re-determination on human bones from grave 1149A (Poz-90884) yielded the result 2473–2348 BC (68,2%; version 4.3.2 of the OxCal program) that significantly differed from all of the dates above and, at the same time, corroborated findings relating to the dating of niche graves in south-eastern Poland [Włodarczak 2014a: 21-27; 2018].

The last of the date ranges mentioned herein above falls within twelve date ranges obtained for three sites within the ceremonial centre at Świąte, and sets

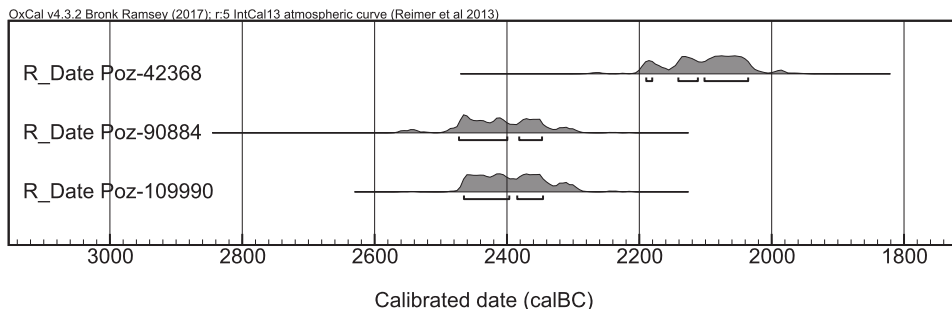


Fig. 4. Calibration of radiocarbon datings of human bones from grave no. 1149A at Święte (OxCal program v4.3.2)

a broad time range of approx. 2600-2200 BC⁴ for the sites. As far as the features from Święte 11 are concerned, an older ritual level is limited by the date range determined for grave 1134, i.e. ca. 2575-2470 BC. Falling within the range of ca. 2434-2324 BC, the younger level links graves 1149A, 876 and 1290. A chronometric approach, whereby 'time range for occupation of a site is narrowed to a single short phase' has been accepted as methodically sound, yielding the range 2530-2374 BC [Włodarczak 2018].

d. Commented upon above, the dating result, which is 'aligned with typochronological determinations' (=Poz-90884), triggered the re-analysis of the initial dating result from 2011. The initial date range was determined by analysing ¹⁴C in collagen whose extraction efficiency, contrary to the promising results of bone nitrogen and carbon content determinations (1.6‰N, 5.2‰C), did not exceed 0.2% (comparatively, extraction efficiency for collagen dated through Poz-90884 was 5.0%).

With low extraction efficiency levels, extracted collagen is largely degraded with an extract being contaminated with younger carbon whose atoms attach, replacing broken bonds between amino acids of original collagen. Comparison of the sample dated in 2011 through Poz-42368 (mainly fragments of long bones) and the sample dated through Poz-90884 (cranial fragments) shows (Fig. 3) a diversified degree of diagenesis for various fragments of long bones (manifesting itself in a different surface colour), as opposed to cranial fragments which appear to be homogenous in respect of this. With this in mind, collagen was once again extracted from the sample originally dated in 2011, or, more specifically, from the

⁴ Radiocarbon dates for CWC cemeteries at Święte have been obtained as part of the 'Final Neolithic Communities of South-eastern Poland in the Light of Archeological Research and Interdisciplinary Analysis' project led by Professor Anita Szczepanek (OPUS grant no. 2015/19/B/HS3/02149 awarded by the National Science Centre).

bone fragment whose colour was similar to the colour as the cranial fragments. The efficiency level for the re-extraction was quite good (2.0%), while the result of ^{14}C analysis (Poz-109990: 3905±30 BP, calibrated date range: 2466-2397 BC /43.2%, 2385-2346 BC /25.0%/) fully corroborated the dating result for the cranial bones, obtained in 2018 (Fig. 4).

At present, it is by no means possible to determine which fragment of the bone sample was taken for unsuccessful collagen extraction in 2011; most likely, however, and regrettably, it was the one with very low collagen preservations levels⁵.

4. FUNDAMENTALS OF TAXONOMIC AND TOPOGENETIC IDENTIFICATION

Diagnostic elements for an analysis of topogenesis of the outlined ‘ceremonial cycle’ attested by features 1149A and 1149B include:

- (a) niche and catacomb structure of the burial pit,
- (b) formal classification of the body deposition ritual,
- (c) composition of ‘offerings’ accompanying the deceased individual,
- (d) location of ‘the offering point’ or *trizna*,
- (e) composition of ‘offerings’ in ‘the offering point’ or *trizna*,
- (e) ritual and topogenetic status of vessels with ‘pointed-shaped/oval base and short rim’ (from the technological and stylistic perspective).

a. For a long time, Polish literature on the CWC did not consider niche (catacomb) graves to be an identifier of exogenous traditions from the Black Sea region. The prevailing view saw them as structures convergently developed in the Baltic drainage basin [Machnik 1966; 1979]. With the most recent discoveries on the Sokal Ridge, Włodarczak does not rule out a possible revision of that view, highlighting prospective diagnostic value of the most recent fieldwork results for the ‘Dniester CWC’ [Włodarczak 2006: 135; 2014a: 21-27] as well as identified correlations with the Middle Dnieper culture [Włodarczak 2018]. What should be emphasized here is that topogenetic determinants driving various enclaves practicing the discussed ritual in the Near East and Europe have been poorly understood so far [Klejn 1967; Bratchenko 2001: 21-24; Ślusarska 2006]. The problem of ‘niche structures’ in Lesser Poland having been developed in dependence on external factors requires first a detailed analysis of their typological, chronometric, ritual and symbolic correlations with the area of the CC, or, broadly speaking, the YC and CC [Klochko, Koško 2009; Koško 2011]. Herein noted correspondence among ‘Cor-

⁵ This correction was included already at the editorial stage of work on *Baltic-Pontic Studies*, vol. 23.

ded Ware', 'Catacomb' and 'Yamnaya' traits fuels several important avenues of research into the typogenesis of syncretic cultures of a border region between west and east Europe in the third millennium BC, including specifically the 2nd half.

b. The body deposition ritual practiced by the CWC communities in Lesser Poland has been described based on materials gathered for the Kraków and Sandomierz region [Włodarczak 2006: 59-63]. Data overviewed by Włodarczak may be considered representative of entire Lesser Poland on evidence coming from new discoveries made in other regions (including primarily: Lublin area and Rzeszów Foothills) [Włodarczak 2014a: 27-31; 2014b]. The prevalence of niche grave structures was coupled with the specific way bodies were placed within graves: in supine position with legs contracted to the side, face looking to the entrance of the grave and upper limbs repeatedly arranged in a similar manner, with one hand placed over a pelvis/waistline. What is also important here is that legs were intentionally bent to a side, which was determined by the gender of a deceased individual. These body placement principles, all of which were observed in grave 1149A, are also found binding in graves attributable to the older (barrow) phase of the CWC. They were not, however, followed in the older phase of the Globular Amphorae culture or Złota culture, whose burial rituals tended to be less standardized. When compared with the burial ritual of the Black Sea people, the ritual recorded in Lesser Poland comes close to that of the late YC, and early as well as classic CC (variant with bodies in a contracted position), in terms of body placement [Włodarczak 2017: 256], with the only difference being the lack of sex-related determinants in the body arrangement. However, the scarcity of data (particularly for the CC) hinders any comparison with the burial ritual practiced on that part of the Northwest Pontic region, which is located closest to Lesser Poland (upper Prut and middle Dniester areas).

c. The grave goods discovered in feature 1149A consist of two vessels and stone axe. In terms of quality and typological properties, they constitute standard equipment of an adult male, although the lack of tools, such as various types of flint knife inserts which are usually found, is somewhat atypical. The presence of both the large bipartite beaker, and the axe type that is only found with male burials, is characteristic of Lesser Poland graves. The axe is thick and has traits assigned to flint axes of type GS ('thick, medium-sized') [Budziszewski, Włodarczak 2011: 58, Fig. 4]. What is also striking is the fact of the axe having been made of Carpathian rock, which is a local phenomenon unique to Polish foothills and the southern Sandomierz Basin [Jarosz 2017: 27].

d. In his comparative study, Włodarczak writes: 'Sacrificial deposits located outside a feature holding the body are only rarely found in south-eastern Poland. Finds of single vessels in small pits were recorded in several western Lesser Poland barrows (Koniusza, Malżyce and Pałecznicza). Whereas in Carpathian Foothill barrows, vessels were recorded above the burial level [in graves in Średnia, Dynów Foothills – Machnik, Sosnowska 1996; 1998]. Moreover, in CWC cemeteries,

besides graves, there are also other structures (including hearths and simple furnaces), related to some unspecified funerary rites' [Włodarczak 2014a: 43]. Interpreted as *triznas*, small single pits containing vessels were also found at Święte: both at the herein discussed site 11 [feature 1284; Olszewski, Włodarczak 2018: 42, Fig. 31], and at nearby site 15 [feature 426; Janczewski *et al.* 2018: Fig. 22]. It should be, however, emphasized that efforts to document offering rituals at Lesser Poland sites are by no means facilitated by the flat nature of cemeteries that are usually considerably disturbed by erosion and a still small number of archaeologically excavated barrows with an intact mound. When compared to rituals of the Eastern Black Sea region or eastern CWC groups, *triznas* are, therefore, rarely recorded and, as such, lead to erroneous estimations.

As far as the 'barrow cultures' of the Black Sea region are concerned, the Northwest Black Sea Coast, which is relatively well documented archaeometrically for its YC and CC [Merpert 1974; Yarovoy 1985; Ivanova *et al.* 2011; Toshev 2013; Ivanova 2013; Ivanova, Toshev 2015a; 2015b], is expected to have particular diagnostic value for a topogenetic analysis (see *south-western variant of the Yamnaya Cultural-Historical Area*). In the Northwest Black Sea Coast, however, no broader or immediate parallels can be found for the *trizna rite* in the form recorded at Święte 11, including specifically both the location of the 'offering point', which is our focus here and other diagnostic elements (see items *e* and *f*). According to Ivanova (verbal expert opinion)⁶, a flat-base vessel associated with (?) sheep/goat meat (8 bone fragments) dug into the perimeter of the niche of CC grave no. 4/20 at the site of Vapniarka, Kominternivske *raion*, Odessa *oblast*, remains the only relatively close parallel [Ivanova *et al.* 2011: 135-136, 148, Fig. 24].

Ivanova's observations are relating to the ceremonial centre (9 barrows, including 4 archaeologically excavated ones) located at the eastern outskirts of the Budzhak group/culture territory [Ivanova, Toshev 2015b: 379, Fig. 28]. Grave 4/20 was dug into an Eneolithic barrow (central grave 4/4 dated to: Ki-15013 – 4100±60 BP = 1σ 2870-2800, 2760-2560 BC). In the Bronze Age, a mound over the barrow at Vapniarka 4 was then used for funerary purposes by YC (graves 4/16 and 4/18, dated to: Ki-15014 and 15015 – 4050±60 and 3880±60 BP = 1σ 2630-2470 and 2470-2280 BC), CC (grave 4/3, dated to: Ki-15230 – 3960±70 BP = 1σ 2580-2340 BC) and Babyno peoples (grave 4/6, dated to: Ki-15016 – 3470±60 BP = 1σ 1880-1730 BC) [Ivanova *et al.* 2011: 122, 140, Table 1, 145, Fig. 13: 16]. What should be highlighted here is the correspondence of radiocarbon dates for Święte 11/1149A (section 3) and Vapniarka 4/3 (which is a taxonomical equivalent of grave 4/20), pointing to the turn of the 1st to the 2nd half or to the prologue of the 2nd half of the third millennium BC.

⁶ We extend our sincere gratitude to Professor Svetlana V. Ivanova for her inspiring advice on source material, adding inestimable research value to the discussion.

It is also essential to compare the analysed ritual practices with the eastern ritual of the broadly understood CWC circle. Various types of offering ('remembrance') pits are frequently found at cemeteries of the Middle Dnieper [Krywalczewicz 2007: 78] and Fatyanovo [Kraynov 1972: 199-200] cultures, with three attested cases of a vessel having been deposited immediately above a burial pit [Kraynov 1972: 195].

e. On the aforementioned areas of the *Lesser Poland CWC* and *south-western variant* of YC (continuation of YC/CC), no close parallel can be found for the array of tangible identifiers of the ritual from feature 1149B at Święte 11. To some extent, this may be due to post-depositional devastation of Black-Sea barrow mounds (including specifically ceilings of graves, including CC graves, sitting 'on mounds') or systemic archaeometric limitations of the presently employed 'mechanical' method for mound exploration [Koško, Razumow 2014]. Analytical uncertainties are also associated with the need for the topogenetic picture to be broadened to include *ritual centres* of nomadic peoples from the Black Sea region, located further east, along the lower Southern Bug and the Ingul, the Dnieper and the Don, or the middle Dnieper, where well-investigated parallels for vessels with 'pointed/oval-shaped base and short rim', similar to the vessel found in feature 1149B at Święte 11 (see item f), can be found. For objective reasons, the identified need for a broader overview has not been satisfied due to temporary difficulties.

f. After having seen the pointed-shaped vessel of the 'Yamnaya' type (Fig. 2: 1) [Shaposhnikova 1985: Fig. 98] from feature 1149B, Ukrainian scholars (V.I. Klochko, M. Potupchuk, and S. Razumov) highlight its taxonomic unambiguity in morphological or, broadly speaking, stylistic terms, as well as 'regional innovation' identified in its production technology and manifesting itself in the mineral additive containing crushed stone (which is atypical of the 'classic' YC or CC). The scholars pointed to the need to incorporate parallels from the forest zone borderland and, generally, from settlement pottery assemblages that have been much less investigated (from the Dnieper area of Cherkasy *oblast*). Essential for the recommended analysis is our present knowledge about the syncretic 'western area of the CC' (from the Southern Bug up to the Danube/Prut), including specifically the 'late CC horizon of the Black Sea steppe' [see research achievements outlined in: Toshev 1991a; 1991b; 2013; Ivanova, Toshev 2015a; 2015b].

Despite corroborating the general development line: YC → CC → Babyno culture (formerly: Mnogovalikova culture), the cited studies, however, find this line by no means universal and point to the attested coexistence of YC, CC and Babyno communities [Ivanova *et al.* 2011: 158; Ivanova, Toshev 2015b: 382]. Infiltration of the right bank of Southern Bug → the Dniester by the CC began already at 'the early stage'; however 'mass-scale domestication' of the region as part of the western area of the YC (=South-Western Variant) [Merpert 1974; Rassamakin, Nikolova 2008: Fig. 1] did not occur until 'the late stage'. Toshev sees the YC as a 'barrier' to this process. A certain number of YC groups 'continued to inhabit

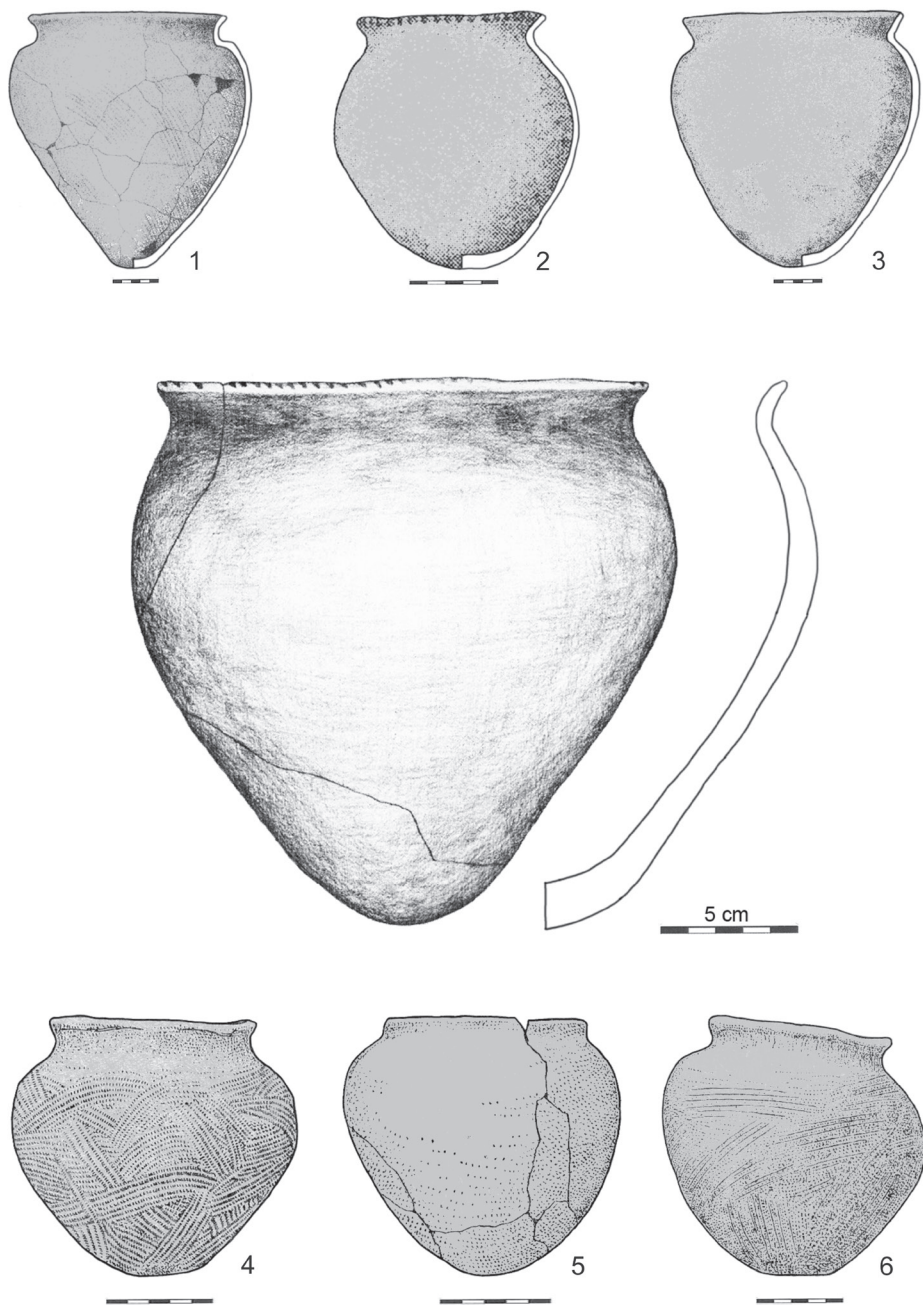


Fig. 5. Vessel from the feature no. 1149B in Święte 11 and its analogies from graves of the late Yamnaya culture. 1-3 – Dobrovodi, 4 – Novogrigorevka, 5 – Kovalevka, 6 – Otradnyi. *After* Shaposhnikova *et al.* 1986; Bunyatyan, Nikolova 2010

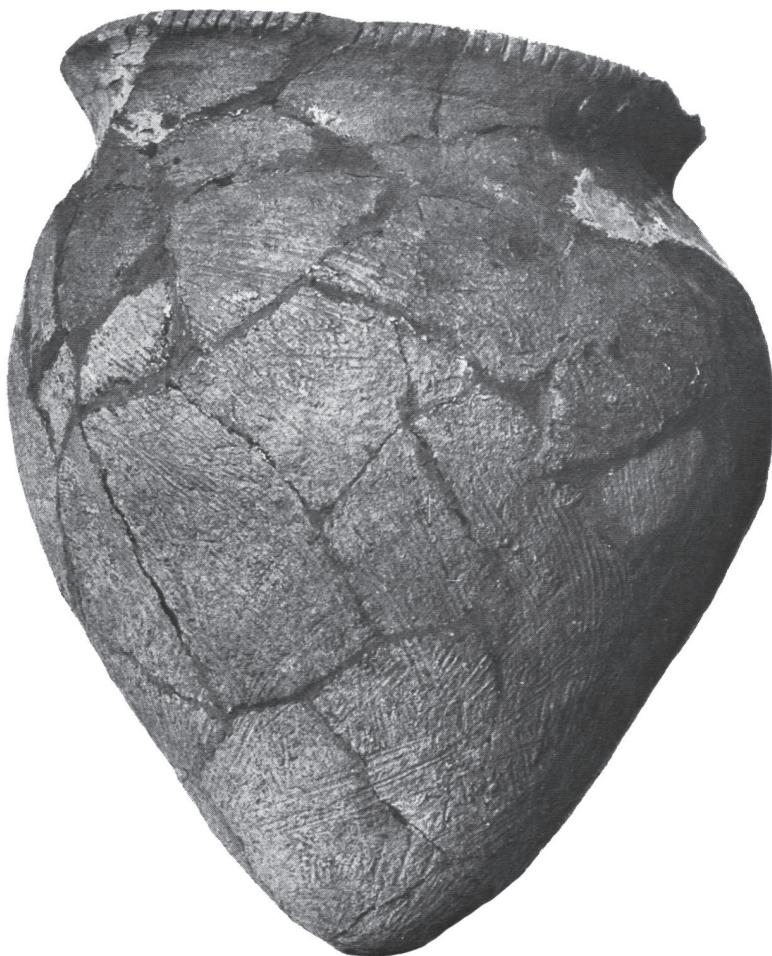


Fig. 6. Vessel from barrow no. 61 at Jackowica (nowadays Dolynka), Cherkasy *oblast*, basin of Southern Bug. *After* Bydłowski 1905

specified isolated places also after completion of the process, contributing to the formation of the Babyno culture' [Toshev 1991b: 96-97]. As sources, which underlie the opinions cited above, are insufficiently published, they cannot be concretised for the moment.

So the questions are from where and when the community, which created ritual places recorded as feature 1149A – 1149B, arrived at the San. Despite 'the east Galician gap in the sources', the most likely route should have led, at least in its essential part, along the Dniester and San valleys (Fig. 7). Given Toshev's chronological determinations for the Dniester infiltration process [Ivanova, Toshev



Fig. 7. Credentials of Western (Baltic) influences of Catacomb culture. 1 – geographical boundary between east and west of Europe, 2 – range of CC, 3 – CC sites, 4 – area where the graves of metallurgists were registered, 5 – MDC graves, 6 – routes Dniester – San, Southern Bug – Bug and Southern Bug – Siniukha, 7 – clusters of cemeteries with niche graves and other traces of ‘eastern’ influences in Lesser Poland: KSG – Kraków-Sandomierz group, LG – Lublin group, SG – Sokal group, LUG – Lubaczów group, ŚG – Święte and Rzeszów Foothills group

2015b: 382-386; Koško, Klochko, Olszewski 2012, with further references; Ivanova *et al.* 2011: 151] as referred above, the infiltration should be dated to the turn of the 1st to the 2nd half or to the prologue of the 2nd half of third millennium BC.

What we should be aware of is, therefore, the fact that, basically, neither the YC grave assemblages [Yarovoy 1985: 76; Ivanova, Toshev 2015b: 373, Fig. 26] or their early CC counterparts, nor YC/CC syncretic features [Ivanova, Toshev 2015b: 383-384, Fig. 30, 31] of the Dniester steppe/forest-steppe yielded any vessel with a pointed/oval-shaped base and a short rim decorated with diagonal lines on the edge. The same conclusion can be drawn from the analysis of sources from the Yampil centre [Harat *et al.* 2014]. The abundance of parallels is observed in *ritual centres* of nomadic people from the Black Sea region, located further east, along the lower Southern Bug and the Ingul, and the Dnieper and the Don [Shaposhnikova 1985: Fig. 98; Shaposhnikova *et al.* 1986: Fig. 15], or the middle Southern Bug basin in the Uman region (Fig. 5: 1-3; 6) [Bydłowski 1905: Table 5; Bunyatyan, Nikolova 2010]. The presence of such vessels in that area is crucial

for two reasons: (1) the area is located closest to the CWC settlement zone, and (2) the presence of such vessels in barrows found in the area constitutes evidence for the YC graves having been succeeded by graves of the Middle Dnieper culture [Bunyatyan 2008: 7-8].

In her most recent paper summarizing the topic at issue, Bunyatyan links burials of the Middle Dnieper culture to the horizon of CC influences [Bunyatyan 2005] reflected in things such as burials in an extended position ('Ingul' ones) or parallels for pottery forms. Given an eastward expansion of the Middle Dnieper culture, the 'catacomb' element is particularly noteworthy as it is a link between the forest-steppe zone and Lesser Poland. Therefore, an option of linking the (late YC/CC) vessel from Świąte with the emergence of elements of the Middle Dnieper culture (including primarily: pottery, probably also inclusion of specific tool-sets and numerous flint arrowheads among grave goods accompanying male burials) would be appealing. A main transmission route for these elements would be through the northern forest-steppe zone and Podolia to the Lublin region and Subcarpathia. As far as Subcarpathia is concerned, vessels found at the sites of Świąte and Rzeszów Foothills exhibit Middle Dnieper influences [Machnik 2014: 100; Olszewski, Włodarczak 2018; Janczewski *et al.* 2018; Machnik *et al.* 2019: 111]. Not far away, i.e. in the Roztocze region, there is a grave discovered at Młodów with grave goods being solely vessels of the Middle Dnieper culture [Machnik, Pilch 1997]. This Middle Dnieper cultural trend dates from the turn of the 1st to the 2nd half of the 2nd half of third millennium BC.

A certain indication, which supports the claim that the long-distance transmission of ideas did take place, may be the fact that the oldest CC migrants among those we know from the Middle Dniester area have been topogenetically identified with a very distant region of 'Bakhmut sites in eastern Ukraine' [Manzura *et al.* 1992: 92; Ivanova, Toshev 2015b: 382]. G.M. Toshev believes that the CC graves from the north-western Black Sea region are chronologically diversified, including older features with burials in a contracted position, and younger features with burials in an extended position [Toshev 2013]. Generally, the older burials offer close parallels for niche graves in Lesser Poland. Regrettably, there is still no absolute date available to confirm their earlier chronological position within the CC.

5. CONCLUSIONS

The hypothetic penetration of the Polish Subcarpathia between the San and Wisłok rivers by the Early Bronze communities of the Black Sea region used to be corroborated by sources coming down to copper or bronze axes of the Pidlissya

type, attributable to the YC/CC that have been found at Rudna Mała and Munina [Klochko, Koško 2009: 287, with references to older literature] and recently also in the niche grave no. 4 at Szczytna, site 6 [Hozer *et al.* 2017: 43, 45, Fig. 25: 11]. A discovery of a ceremonial cannellure mace at Vivnya, Stryi *raion* [Klochko, Koško 2009: Fig. 17], and a censer in barrow VII at Balice, Mostyska *raion* [Jarosz, Machnik 2000: 114], may be considered similarly meaningful.

The group of finds referred to above, which are drivers of science in the field, includes also feature 1149B from Święte, site 11, which, in terms of its quality and significance, constitutes yet another type of evidence attesting processes at issue [Hozer *et al.* 2017: 117]. Chronological correlation between the artefacts, which are present at the niche grave cemeteries in Lesser Poland and exhibit traits of the late YC/early CC and Middle Dnieper culture, constitutes an important assertion. Barely signalled here, this topic is more broadly addressed in a paper that recapitulates topogenetic findings from research studies on the *ceremonial centre* at Święte [Koško, Włodarczak 2018].

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