

MATERIAŁY I SPRAWOZDANIA



RZESZOWSKIEGO
OŚRODKA
ARCHEOLOGICZNEGO

XXXV

Muzeum Okręgowe w Rzeszowie
Instytut Archeologii Uniwersytetu Rzeszowskiego
Fundacja Rzeszowskiego Ośrodka Archeologicznego

MATERIAŁY I SPRAWOZDANIA
Rzeszowskiego Ośrodka Archeologicznego

Tom XXXV

Rzeszów
2014

Komitet Redakcyjny:
Sylwester Czopek, Václav Furmánek (Słowacja), Diana Gergova (Bułgaria),
Sławomir Kadrow, Michał Parczewski, Aleksandr Sytnyk (Ukraina)

Zespół stałych recenzentów:
Jan Chochorowski, Igor Chrapunov (Krym), Wojciech Chudziak, Eduard Droberjar (Czechy),
Lubomira Kaminská (Słowacja), Przemysław Makarowicz, Anna Zakościelna

Pozostali recenzenci tomu XXXV:
Wojciech Blajer, Andrzej Kokowski, Maria Łanczont, Michał Parczewski, Janusz Rieger,
Marcin Wołoszyn, Paweł Valde-Nowak, Jarosław Żrałka

Redaktor
Sylwester Czopek
(sycz@archeologia.rzeszow.pl)

Sekretarze Redakcji:
Joanna Ligoda, Joanna Podgórska-Czopek
(archo@muzeum.rzeszow.pl)

Strona internetowa czasopisma:
www.archeologia.univ.rzeszow.pl/?page_id=337

Tłumaczenia
Barbara Jachym – język niemiecki
Beata Kizowska-Lepiejza – język angielski

Zdjęcie na okładce:
Naczynie kultury Chimú (fot. Maria Szewczuk, Marek Kosior)

© Copyright by Muzeum Okręgowe w Rzeszowie
© Copyright by Instytut Archeologii UR
© Copyright by Fundacja Rzeszowskiego Ośrodka Archeologicznego
© Copyright by Oficyna Wydawnicza „Zimowit”

ISSN 0137-5725

WYDAWCA



Muzeum Okręgowe
w Rzeszowie
35-030 Rzeszów
ul. 3 Maja 19
tel. 17 853 52 78



Instytut Archeologii
Uniwersytetu Rzeszowskiego
35-015 Rzeszów
ul. Moniuszki 10
tel. 17 872 15 90

FUNDACJA



RZESZOWSKIEGO OŚRODKA
ARCHEOLOGICZNEGO
Fundacja Rzeszowskiego
Ośrodka Archeologicznego
35-015 Rzeszów
ul. Moniuszki 10
tel. 17 872 15 81



Oficyna Wydawnicza
„Zimowit”
35-604 Rzeszów
ul. Zimowita 6/5
oficyna.zimowit@gmail.com



*W 2014 roku
Profesor Tibor Kemenczei
obchodzi jubileusz 75-lecia urodzin.
Z tej okazji wybitnemu badaczowi
epoki brązu i wczesnej epoki żelaza
ten tom poświęcamy*

Redakcja

SPIS TREŚCI

Tibor Kemenczei – 75	7
----------------------------	---

STUDIA I MATERIAŁY

Jan Chochorowski , Scytowie a Europa Środkowa – historyczna interpretacja archeologicznej rzeczywistości	9
Janusz Kowalski-Bilokrylyy , Pochodzenie kolczyków typu Kłyżów	59
Josyp J. Kobał , Scheibengedrehte graue Keramik der Kuštanovice Kultur aus Transkarpatien (Ukraine)	65
Sylwester Czopek, Andrzej Pelisiak , Remarks on the Tarnobrzeg Lusatian culture flintworking with particular emphasis on settlement materials	77
Monika Kuraś, Tomasz Tokarczyk , Osada tarnobrzegskiej kultury łużyckiej na stanowisku numer 26 w Sarzynie, pow. leżajski	87
Anna Bajda-Wesołowska, Tomasz Bochnak, Monika Hozer , Bogaty grób kobiety z wczesnej epoki żelaza odkryty w miejscowości Zabłotce, pow. jarosławski, stan. 27	105
Agnieszka Reszczyńska , Nowe materiały do poznania włókiennictwa kultury przeworskiej z obszaru południowo-wschodniej Polski	127
Юрий А. Пуголов, Сергей А. Горбаненко , Печь как культовое место в жилище северян: археологические данные	141
Tomasz Dzieńkowski , Stan, potrzeby i perspektywy badań archeologicznych nad wczesnym średniowieczem zachodniej części ziemi chełmskiej	151
Marek Florek , Czy „grodzisko” to dawny, zniszczony gród? O niebezpieczeństwach korzystania ze źródeł topomastycznych	171
Wojciech Krukar , Uwagi historyczno-geograficzne do hydronimii wschodniej części Karpat polskich	189

SPRAWOZDANIA I KOMUNIKATY

Piotr Gębica, Sławomir Superson, Monika Hozer, Anna Bajda-Wesołowska , Geoarcheologiczny zapis ewolucji doliny Wisłoka na przykładzie stanowiska nr 19 w Białobrzegach	217
Sławomir Superson , Znaczenie datowań archeologicznych i radiowęglowych w określaniu wieku współczesnych aluwii powodziowych na stanowisku Budy Łańcuckie III	227
Marta Połtowicz-Bobak, Dariusz Bobak, Piotr Gębica , Nowy ślad osadnictwa magdaleńskiego w Polsce południowo-wschodniej. Stanowisko Łąka 11–16 w powiecie rzeszowskim	237
Michał Dobrzyński, Michał Parczewski, Katarzyna Piątkowska, Małgorzata Rybicka , Zabytki kultury pucharów lejkowatych w miejscowości Jasienica Sufczyńska, stan. 5, na Pogórzu Przemyskim	249
Elżbieta M. Kłosińska , Nieznana szpila brązowa z miejscowości Pasieki, pow. Tomaszów Lubelski	259
Elżbieta M. Kłosińska , Unikatowa fibula brązowa z terenu Lubelszczyzny	263
Piotr N. Kotowicz , Ostroga żelazna z okresu wpływów rzymskich z Międzybrodzia, pow. Sanok	269
Magdalena H. Rusek, Kamil Karski , The double-chambered vessel of the Chimú culture in the Castle Museum in Łańcut	273
Oksana Adamyszyn , Działalność archeologiczna Jurija Zacharuka na zachodzie Ukrainy (z okazji 100-lecia urodzin)	281

RECENZJE

Tadeusz Malinowski , (rec.) Alina Jaszewska, Sławomir Kałagate (red.), <i>Wicina. Badania archeologiczne w latach 2008–2012 oraz skarb przedmiotów pochodzących z Wiciny</i> , wyd. Stowarzyszenie Naukowe Archeologów Polskich Oddział Lubuski, Fundacja Archeologiczna, Zielona Góra 2013, 593 strony, ilustracje, ISBN 978-83-938557-0-4	285
Edyta A. Marek , (rec.) Leszek Gardeła, Kamil Kajkowski (red.), <i>Motywy przez wieki. Tom 1. Motyw głowy w dawnych kulturach w perspektywie porównawczej</i> , Bytów 2013, 303 strony	291

„AAASC”	– „Acta Archaeologica Academiae Scientiarum Hungaricae”, Budapest
„AAC”	– „Acta Archaeologica Carpathica”, Kraków
„AAR”	– „Analecta Archaeologica Ressoviensia”, Rzeszów
„AHP”	– „Archaeologia Historica Polona”, Toruń
„AMM”	– „Acta Militaria Mediaevalia”, Kraków – Sanok
„APolski”	– „Archeologia Polski”, Warszawa
„APŚ”	– „Archeologia Polski Środkowowschodniej”, Lublin
„AR”	– „Archeologické Rozhledy”, Praha
„FAP”	– „Fontes Archaeologici Posnanienses”, Poznań
„IA”	– „Informator Archeologiczny”, Warszawa
„Kwartalnik HKM”	– „Kwartalnik Historii Kultury Materialnej”, Warszawa
„MA”	– „Materiały Archeologiczne”, Kraków
„Mat. Star.”	– „Materiały Starożytne”, Warszawa
„Mat. Star. Wcz.”	– „Materiały Starożytne i Wczesnośredniowieczne”, Warszawa
„Mat. Wcz.”	– „Materiały Wczesnośredniowieczne”, Warszawa
„(M)SROA”	– „(Materiały) i Sprawozdania Rzeszowskiego Ośrodka Archeologicznego”, Rzeszów
„PamatkyA.”	– „Památky Archeologické”, Praha
„PBF”	– „Prähistorische Bronzefunde”, München
„PMMAiE”	– „Prace i Materiały Muzeum Archeologicznego i Etnograficznego w Łodzi”, Łódź
„Pom. Ant.”	– „Pomorania Antiqua”, Gdańsk
„Prz. Arch.”	– „Przegląd Archeologiczny”, (Poznań, Wrocław – Poznań)
„RChełmski”	– „Rocznik Chełmski”, Chełm
„RPrzemyski”	– „Rocznik Przemyski”, Przemysł
„Sil. Ant.”	– „Silesia Antiqua”, Wrocław
„Slav. Ant.”	– „Slavia Antiqua”, Poznań
„Spr. Arch.”	– „Sprawozdania Archeologiczne”, Kraków
„WA”	– „Wiadomości Archeologiczne”, Warszawa
„ZOW”	– „Z otchłani wieków”, Warszawa

*Sylwester Czopek**, *Andrzej Pelisiak***

Remarks on the Tarnobrzeg Lusatian culture flintworking with particular emphasis on settlement materials

Remarks on the Tarnobrzeg Lusatian culture flintworking with particular emphasis on settlement materials

This article is an attempt to view flint materials which are linked with the Urnfield cultures in Europe, and with the Lusatian culture in Poland in a different way. In the current discussion researchers include the materials originating from graves or from near-mine workshops. The authors of the paper suggest considering settlement materials. They come to the conclusion that despite excavating large areas of settlements, we have very little flint finds affiliated with the Late Bronze Age or Early Iron Age. They indicated different kinds of conditions, inconsistencies, and even mistakes in sources which influence the whole discussion about the Lusatian culture flint knapping.

KEY WORDS: chipped industry, Lusatian Culture, Bronze Age, Central Europe

Flintworking and the use of artefacts made by means of knapping techniques by the communities reflected in the archaeological dimension the Urnfield cultures still generate interest and provoke lively discussions. It is not the subject permanently seen and discussed in the studies of these periods. These issues have not been raised until recently or their place was deposited on the periphery of studies regarding the Urnfield cultures (M. Gedl 1975, p. 63–64). The growing interest considering flint knapping of the Late Bronze Age and Early Iron Age comes from the early 90's of the last century. It was the period when numerous works appeared relevant to the discussion about chipping and use of objects from siliceous rocks during younger phases of the Bronze Age and Early Iron Age (see e.g. J. Dąbrowski 1996; J. Lech, D. Piotrowska 1997; T. Malinowski 2000). The spectacular response to the need for the presentation of research results and current discussion was the conference *Z badań nad krzemieniarstwem epoki brązu i wczesnej epoki żelaza (Research on flint knapping in the Bronze Age and Early Iron Age)*, in Warsaw in 1994 (J. Lech, D. Piotrowska 1997). The base for further discussion on the Late Bronze Age and Early Iron Age was another conference *Krzemieniarstwo wspólnot kultur pól popielnicowych i współczesnych im cywilizacji świata starożytnego (około 1300–400 lat p.n.e.) (Flint knapping of the Urnfield communities, and the contemporary civilizations of the ancient world (ca. 1300–400 BC))*, organized in 2005 in Warsaw. An expression of great interest regarding flintworking of these periods are also numerous works published in the last decade (e.g. J. Bronowicki, M. Masojć 2008a, 2008b, 2010; J. Bronowicki, J. Małecka-Kukawka, J. Masojć 2006;

E. Kłosińska 2012; J. Libera 2006a, 2006b, 2010; M. Masojć, J.-H. Bech 2011; P. Valde-Nowak 2003).

During the second conference which was mentioned above, the authors of this paper presented (unfortunately still unpublished) the results of their analyses of settlement flint materials considering various spatial, chronological and cultural contexts noticed at the sites of the Tarnobrzeg Lusatian culture (S. Czopek, A. Pelisiak in print). These studies will be the starting point of the considerations presented below. Their significant additions may be made after taking into account the results of extensive “motorway” excavations, which included, among others, very large areas of settlements.

With regard to the consideration about flint knapping of the Late Bronze Age and Early Iron Age, the Tarnobrzeg Lusatian culture occupies a special place. It is necessary to begin with the first monograph about the Lusatian culture in south-eastern Poland where a significant role of objects made from siliceous rocks in the lives of these communities was mentioned, but the researcher did not determine whether it was their own manufacture (in this area there were some doubts), or the use of products from older periods took place (K. Moskwa 1976, p. 130). As for the literature regarding the discussed culture, the scholars have also formulated more explicit statements about the existence of the “Lusatian” flint knapping. Such opinions were presented for example by Sławomir Kadrow (1989), Karol Kruk (1994) or Stefan Karol Kozłowski and Elżbieta Sachse-Kozłowska (1997). Features of the “Tarnobrzeg” flint knapping have been articulated in the fullest way by Jerzy Libera by means of introducing a scientific term “Kosin industry”

* Instytut Archeologii UR, ul. Moniuszki 10, 35-015 Rzeszów, sycz@archeologia.rzeszow.pl

** Instytut Archeologii UR, ul. Moniuszki 10, 35-015 Rzeszów, a.pelisiak@gmail.com

coming from the inventory excavated at the site 10 in Kosin (J. Libera 2005). Its characteristics would have affected the techniques of receiving preforms (preparation of cores by the use of hammer flaking technique, exploiting cores by means of “the Clactonian technique”), characteristic forms of tools (axes, sickle knives, bifacial points, arrowheads, segments, tools made of parablades, flakes, chunks and pieces of raw material) and methods of forming tools (different flat and edge retouching and special treatments). Scientific achievements in research on flint knapping of the Late Bronze Age and Early Iron Age, which are significantly quantitative and factually undisputed, show a wide field of discussion, need supplementing as well as correcting some theses. Our discussion will refer to the materials from settlements, including those that have been excavated systematically on a large scale.

The results of studies in respect of settlements of the Tarnobrzeg Lusatian culture have provided many and varied sources of movable and immovable archaeological and natural items. These materials are successively analyzed and published (e.g. S. Czopek 1997, 2003b, 2007, 2014; A. Karnas 2003; J. Ligoda, 2005; J. Ligoda et al. 2005; J. Adamik, M. Burghardt 2012). Despite the unquestionable progress, there are still current demands formulated by the researchers including unsatisfactory state of the research, as well as a great potential in various studies. The last statement refers mainly to products made by means of flint knapping techniques and results in important questions relating to several issues of major importance:

1. How many flint artefacts are there found at the settlements?
2. Which products can be combined with other phases of land occupation and have nothing to do with the activity of the people of the Lusatian culture?
3. Which part of them are the products made by the community of the Tarnobrzeg Lusatian culture?
4. Which products were used by people of the Tarnobrzeg Lusatian culture, but they were not produced (re-used objects made in earlier periods of prehistory)?
5. Are there any differences between the settlements of the Tarnobrzeg Lusatian culture as for the use of objects from the siliceous rocks?
6. Is there any source evidence (if so, what?) to define the specificity of the flint knapping of the Tarnobrzeg Lusatian culture in relation to other groups of the Late Bronze Age and Early Iron Age in the circle of Urnfield cultures?
7. To what extent the definition of the Kosin industry (J. Libera 2005) is valid?

The studies include materials from 30 settlement sites, and 25 of them have recorded materials made by knapping techniques (table 1). It is a representative series in terms of quantity, extend of examination and placement in different physical-geographical regions (cf. S. Czopek 2004b). The results of the analyzes can be (as we regard) the foundation for formulated generalizations, the more that they take into account the results of “motorway” excavations, during which the settlements were studied on a large scale.

The information included in Table 1 cannot be left without any critical comments. It refers to the actual cultural affiliation and chronology of these flint materials. It is necessary to emphasize that many sites mentioned above contained the remains of settlements coming from different prehistoric periods, starting from the Final Paleolithic period, while the

flint materials were recorded in ambiguous spatial context in the sense of chronology and culture. As a result of typological analyzes and analyzes of deposition context of these materials, it was found that only in two features, we can link flint products with the Tarnobrzeg Lusatian culture with high probability. As for the other studied sites, flint materials are clearly older: they are connected with the Stone Age (Mesolithic, Neolithic) and early or older period of the Bronze Age.

Hints concerning the settlements studied earlier (Babicha, Grodzisko Dolne, Białobrzegi 1, Rzeszów 54, Trzęsówka, Tarnobrzeg-Zakrzów, Czarna, Kliszów), we have included elsewhere (S. Czopek A. Pelisiak, in print). For individual sites we have significant additions. This applies for example the site No. 5 in Białobrzegi, where the resumed studies confirmed the connection of flint materials with cultures such as the Funnel Beaker, Mierzanowice and possibly Trzciniec (J. Adamik, M. Burghardt 2012; A. Dzierżanowska, D. Król, P. Rząsa, M. Rybicka 2010).

Here, let us focus on newer material, the more valuable due to the fact that it comes from the sites studied at unprecedented scale before.

The most extensive settlement is currently the site 11–16 in Łąka (it was originally a selection of separate sites that have been joined together as the results of extended excavations). The researchers have examined there 1400 ares, discovering 1282 features of the Tarnobrzeg Lusatian culture. Moreover, 570 items of flint artefacts have been uncovered, which have been assigned to the older periods (Palaeolithic cultures – Magdalenian and Sviderian, Mesolithic, Neolithic periods – D. Bobak, M. Połtowicz-Bobak 2013a). 43 artefacts do not have unambiguous identification features, and they include in this group for instance 2 splintered core and 3 retouched flakes. As for these objects, it is necessary to added at least 85 artefacts with a wide range of dating from the Stone Age to the Bronze Age (in Table 1 they are included in the group of materials older than the “Tarnobrzeg” artefacts). Two items (a splintered core and retouched blade) have been ranked among the Tarnobrzeg Lusatian culture.

Examined and large in space (228 ares) refers to the site complex No. 4–5 in Terliczka. It relates to a large extend (though not entirely) the Tarnobrzeg Lusatian settlement (192 features – M. Hozer 2009). There was no material here that we can be uniquely combine with the discussed unit. Although the two artefacts have been assigned to the Bronze Age (M. Połtowicz 2007), but probably they are linked with the Trzciniec horizon. It is worth noting that the researchers have differentiated at the site 4–5 in Terliczka at least a few Paleolithic and Mesolithic horizons of settlement and the presence of Neolithic and Early Bronze Age cultures.

A large settlement uncovered at another site (No. 26) is in Łąka, examined on the surface of 477 ares, which has brought, among others, 223 features of the Tarnobrzeg Lusatian culture (I. Wnuczek, M. Burghardt 2012). As for the movable artefacts there were (among others) 113 flint items, of which 30 can be attributed to the older periods (from Palaeolithic to Early Bronze Age), and 83 do not have clear specifications that allow for detailed and reliable chronological qualification, hence the researches adopted for them wide dating within the range the Stone Age – the Bronze Age. They contain the selection of flakes and technical forms, but there were also 3 end scrap-

Table 1

Summary of used sources and the results of chronological and cultural analyses regarding flint knapping materials discovered at settlements of the Tarnobrzeg Lusatian culture

Tabela 1

Zestawienie wykorzystanych źródeł oraz analiza chronologiczno-kulturowa materiału krzemienego, odkrytego na osadach tarnobrzegskiej kultury łużyckiej

Settlement	Excavated area in m ²	Flint artefact			
		Older	“Lusatian”	Undetermined	Total
Łąka, site 11–16, dist. Rzeszów	140.090	525	2	43	570
Rozbórz, site 27, dist. Przeworsk	68.300	16	0	0	16
Rozbórz, site 28, dist. Przeworsk	56.680	80	2	41	123
Terliczka, site 4–5, dist. Rzeszów	52.800	367	0	47	414*
Łąka, site 26, dist. Rzeszów	47.719	30	0	83	113
Zabłotce, site 2, dist. Jarosław	41.350	0	2	0	2
Gorliczyna, site 19/20, dist. Przeworsk	40.200	66	0?	5	71
Zamiechów, site 18, dist. Jarosław	30.685	4	7	0	11
Chłopice, site 16, dist. Jarosław	24.867	5	0	0	5
Białobrzegi, site 2, dist. Łańcut	23.200	57	0	6	63
Nowa Wieś 3+4, dist. Rzeszów	20.800	211	0	0	211
Jarosław, site 158, dist. Jarosław	19.200	148	0	0	148
Budy Łańcuckie, site 7, dist. Łańcut	16.550	159	1	0	160
Rzeszów, site 117, dist. Rzeszów	11.700				273
Grodzisko Dolne, site 22, dist. Leżajsk	2.700	66	0	44	110
Białobrzegi, site 1, dist. Łańcut	1.700	177	0	0	177
Rzeszów, site 54, dist. Rzeszów	1.700	203	0	0	203
Trzęsówka, site 2, dist. Kolbuszowa	1.650	15	0	15	30
Tarnobrzeg-Zakrzów, site 1, dist. Tarnobrzeg	900	3	0	0	3
Białobrzegi, site 5, dist. Łańcut	752	54	0	0	54
Czarna, site 6, dist. Łańcut	730	7	0	3	10
Babicha, site 6, dist. Mielec	690	25	9	78	112
Kliszów, site 3, dist. Mielec	600	17	0	0	17
Mielec, site 16, dist. Mielec	594	46	0	15	61
Wola Mała, site 1, dist. Łańcut	500	0	0	0	0
Ostrowy Tuszowskie, site 1, dist. Kolbuszowa	260	0	0	0	0
Jarosław, site 6 (156), dist. Jarosław	250	0	0	0	0
Cisów Las, site 6, dist. Stalowa Wola	200	0	0	0	0
Rudnik, site 10, dist. Nisko	75	5	7	5	17
Jasionka, site 1, dist. Rzeszów	50	0	0	0	0

* Only the artefacts from the site 5 were taken into account. The site 4 contained numerous series of Palaeolithic flints.

ers, 2 splintered cores, 1 burin and 1 side-scraper (I. Wnuczek, M. Burghardt 2012).

Considering the site No. 2 in Zabłotce, excavated at the area of over 413 ares, the Tarnobrzeg Lusatian culture has been recognized in 250 features. In two of them (No. 256 and 850) there was a nonspecific flake made of erratic flint and a residual core of Volyn flint. These two objects were the only relicts made by the use of chipping technique found at this site. Probably this fact and the context where these artefacts were uncovered caused that they have been affiliated to the discussed

cultural unit (J. Lepiejza 2013). However, this raises reasonable doubt, because at the same site there were isolated fragments of Neolithic pottery, considered as being in a secondary deposit. Therefore, there is no obstacles to qualify these artefacts in the same way. It is all the more important that in one case, we are speaking about the core made of Volyn flint, very often used by Neolithic communities in the south-eastern Poland.

The site No. 18 in Zamiechów (J. Bronowicki, S. Czopek, J. Podgórska-Czopek 2012) is another large, examined almost entirely, Tarnobrzeg Lusatian settlement. In some “Lusatian”

features there were flint artefacts which technological characteristics which allow us to extend the thesis of their affiliation just for this phase of the settlement. They have been found in the fills of 6 pits (496, 531, 597, 754, 759, 779). In addition, an artefact with such characteristics is coming from the feature of the Roman period (No. 629). In view of the fact that it was found "Lusatian" ceramics there (i.e. in a secondary deposit), it should also be associated with this chronological range.

On the basis of this very poor flint inventory (7 pieces), little can be said. In the collection there was only one core (feature 531). Unfortunately, it is a small and amorphous beginning form, but it is worth mentioning that it was made of black menilite hornstone. Other relics are small flakes, some partially cortical, obtained only from amorphous flint cores. All are made from Baltic erratic flint. Moreover, it is necessary to add that there is no splinter forms at all. Baltic raw material is predominant (in 6 cases).

At site 19/20 in Gorliczyna (M. Szeliga 2012), even though there were flint artefacts in the Tarnobrzeg Lusatian features, but in most cases they were clearly of older typology, and so it was assumed that they have been uncovered in a secondary deposit. As an additional argument it was mentioned their raw material – e.g. obsidian and chocolate flint.

The site at Białobrzegi 2 (G. Płoskoń 2012) provided a straightforward examples of inventories of undoubtedly Late Palaeolithic, Neolithic and early Bronze Age provenience. However, small but different is a group of unspecified artefacts (a residual single platform core, a splintered core, flakes, scales). Though their relationship with broad representation of the Tarnobrzeg Lusatian culture at the site is possible, but it cannot be proven. An interesting was the feature No. 1023 (similar to Tarnobrzeg Lusatian pits due to its typological and metric characteristics) containing only movable material such as 6 flakes and chunks of flint with virtually no distinctive features.

In Budy Łańcuckie, site 7, in the context of the Tarnobrzeg Lusatian culture, there was one flint item discovered there (it should be added that it was a flake, which can be a remain of an older settlement at the multi-cultural site).

Regarding the sites in Jarosław, Rozbórz (site 27 – D. Bobak, M. Połowicz-Bobak 2012b), Budy Łańcuckie, Chłopice, Nowa Wieś (site 4+3), there was no evidence to connect any of the flint remains with the Tarnobrzeg Lusatian culture.

In view of the discussed matters, it is necessary to mention two sites which has been described in the literature as "distinctive" inventory of the Tarnobrzeg Lusatian culture. It is difficult to agree with the unambiguous interpretation of part of the flint materials coming from the settlement in Zawada near Połaniec (S. K. Kozłowski, E. Sachse-Kozłowska 1997). Our doubts have raised owing to the multi-cultural nature of that site – apart from the remains of the Lusatian culture settlement the researchers also recorded there the Final Palaeolithic, Mesolithic, Neolithic and early and older Bronze Age materials. In view of numerous, chronologically different phases of human activity, linking splintered cores or flakes discovered there with the Tarnobrzeg Lusatian culture must be met with scepticism, and bifacial forms (which is even more likely) may have been perceived as the remains of settlement coming from the Early Bronze Age.

A separate discussion, despite the already stated similar observations (S. Czopek, A. Pelisiak, in print), needs to be held

about the frequently cited site 10 in Rudnik, and to be more precise the 7 flint artefacts from the pit No. 2 (S. Kadrow 1989, p. 101–102; K. Kruk 1994, p. 134–136). This set, known as a tool store (J. Libera 2005, p. 123) is recognized as one of the most spectacular examples of flint knapping produced by the population of the Tarnobrzeg Lusatian culture. Holding so far, without any restrictions, the conviction of its "Lusatian" provenience can be considered somewhat surprising because these items were not previously analyzed in the context of ceramics found in this feature.

Pit No. 2 on was oval in the layout with dimensions 60×100 cm and 30 cm deep. Apart from the collection of flint objects, there were 11 small pieces of pottery, including 4 items that can be combined with the Trzciniec culture, 5 ones can be dated to the Bronze Age with no clear indication of cultural affiliation, and 2 are re-burn, which also makes it difficult to determine their cultural affiliation. The above chronological findings result in important conclusion – the data collected after the analysis of the ceramic context regarding flint materials in the pit No. 2 do not permit us to link them unambiguously with the Tarnobrzeg Lusatian culture, and what is more, more clearly is seen their relationship with the Trzciniec culture.

Interpretation of the flint collection coming from the pit No. 2 in Rudnik can lead to the following conclusions (S. Czopek, A. Pelisiak, in print):

1. All flint items from the pit No. 2 are tools.
2. Each artefact, apart from one tool made from "para-blade", has clear traces of use that are presented by means of gloss on working edges.
3. Form and manner of their production is far different from Neolithic knapping.
4. These materials do not have distinct features of the Mierzanowice knapping.
5. Close equivalents of objects from the pit 2 at the site 10 in Rudnik are present at the sites of the Bronze Age in vast areas of Central Europe, as well as in the north-western Anatolia (I. Gatsov 1998; I. Gatsov, P. Nedelcheva 2008). Tools produced from preforms of blade proportion were made and used by the community of the Věteřov cultures (e.g. J. Kopacz 2001, Table. XLV, J. Kopacz, L. Šebela 2006, Table. XIII: 4; XXVIII: 5, 5, 6; XXXII: 8; XLII: 3–14), Otomani, Vatine and Verbicioara cultures (A. Păunescu 1970, p. 324, 325), Wietenberg and Tei cultures (J. Kopacz 2001, Table. XVI; A. Păunescu 1970, p. 326–329) and Noua culture (A. Păunescu 1970, p. 330, 331). Particularly important may be the last one in the face of commonly known fact of its infiltration into the south-eastern Poland during the period BD/HaA1 (S. Czopek 2003).
6. Even though the opinion that the Trzciniec flint knapping has not been sufficiently defined yet, was formulated many years ago, it is still present (e.g. J. Budziszewski, 1998a, 1998b; Kopacz 1987; P. Makarowicz 2010). The complex from Rudnik, site 10, recognizing its relationship with the Trzciniec culture, would be an important element determining the "Trzciniec" flint knapping. On the other hand, this complex due to its nature (it has quite clear characteristics of intentional deposit) would have participated in the study on social issues in the older period of the Bronze Age. The remarks taken from the analysis of flint materials from the pit 2 in Rudnik, site 10 in the context of pottery discovered

there may be a basis of other (than repeated in the literature) dating and cultural affiliation of this complex. Without a doubt, it can be assumed that these materials have the characteristics of the Bronze Age flint knapping. We suggest to clarify the dating locating it within the range of the second and third period of the Bronze Age (Bronze BB and BC/BD by Reinecke). Linking these materials with the Tarnobrzeg Lusatian culture we consider unlikely. Despite still unsatisfactory knowledge of flintworking of the Trzciniec culture, credible evidence suggests its relationship with the people of that culture. For this cultural affiliation appeal also references (cited earlier) to materials of different cultures of Central Europe, where dating is similar to the period of the Trzciniec culture. Our arguments apparently might have been weakened by means of many references to the materials discussed here which were recorded at a slightly younger sites of Central Europe. However, it should be highlighted that consideration of the possible relationship with the Lusatian culture would be justified only if the dating of material coming from the pit 2 was located in the third or fourth period of the Bronze Age and the pit is the settlement remains of the population of the Tarnobrzeg Lusatian culture of that time. There are no grounds for such dating. What is more, other ceramic materials discovered in Rudnik at site 10 are within the third phase III of the Tarnobrzeg Lusatian culture – they are already dated to the Early Iron Age.

The sites discussed above are significantly different from the settlements mentioned by J. Libera (2005) in Kopiec or Kosin (B. Bargieł, J. Libera 1995; M. Florek, J. Libera 1994; J. Libera, A. Zakościelna 2002). These sites are located directly in the vicinity to deposits of Turonian flint – researchers have recorded there the places of gaining raw materials and flint workshops. Numerous flint materials, also discovered on the above-mentioned settlements are ranked by Jerzy Libera to Kosin industry (the Tarnobrzeg Lusatian culture) (J. Libera 2005). In the light of the “Lusatian” flintworking issues, it is important the context of ceramic materials as well as chronology of the sites. Unfortunately, information on the subject is still insufficient. It should be emphasized that both the settlements such as in Kosin or Kopiec and the whole area of flint mining and processing contain a great potential, also as for younger periods of the Bronze Age and Early Iron Age. The need is great to prepare **complete** development of the materials from the region and to clarify the chronology. It becomes the crucial postulate of the research.

The above review of the Tarnobrzeg Lusatian culture settlements results in surprising observations – it is possible to distinguish two groups of sites. The first one includes the settlements, where practically there were no objects made by flint techniques. The second group contains the sites where the presence of flint materials have been recorded. These differences can be explained in various ways, especially different distance from the flint deposits, and probably different nature of settlements. It should be noted that the Lusatian culture can also be linked with some mining places of Turonian siliceous rocks and flint workshops. Particularly important is the mine of chocolate flint in Wierzbiica “Zeł”. Radiocarbon measurements obtained for some studied mining units (shafts 17, 19, 28) (J. Ambrs, K. Matthews, S. Bowman in 1987; H and J. Lech 1995) correspond to the older and younger Bronze Age period and they link quite clearly the places of chocolate flint mining also with the communities of the Lusatian culture.

While discussing flint artefacts connected hypothetically or surely with the Tarnobrzeg Lusatian culture, it is necessary to pay attention to the problem of tools. It should be noted that the settlements included in the study did not deliver any bronze tools. Moreover, such artefacts were very rare also in the cemeteries. As for the burial places, we know only one bronze knife from Bachórz-Chodorówka (grave 95 – M. Gedl 1994, p. 99, Table XVI). Considering several thousand graves, there are no bronze sickles or axes in their inventory, which does not mean they are absent completely, because a source gap is filled by means of presence of hoards and stray finds. Furthermore, an unusual discovery of a bronze sickle has been made on the settlement in Tarnobrzeg (M. Florek, J. Gurba 1993, p. 15, Fig. 3: 1).

The situation changes somewhat in the Early Iron Age, probably from HaD when iron knives and razors (?) become more numerous both in grave inventory, and in the settlements. We cannot exclude that popularisation of this new (and probably cheaper) metal had something to do with reduction or complete end of flintworking.

An interesting summary can be quantitative comparison of known metal and flint (stone) tools from all the sites of the Tarnobrzeg Lusatian culture (and even more broadly – the whole south-eastern Poland). This is included in table 2.

Taking into account the review presented in table 2, it is possible to formulate very important conclusions such as:

1. Quantitative set of tools in the Tarnobrzeg Lusatian culture is very poor, and this is particularly true considering bronze tools.
2. Small collection of bronze tools does not necessarily speak for the parallel use of flint.
3. The vast majority of tools comes from the hoards and stray finds, and they are not present at cemeteries and settlements. If you accept the thesis about the predominant (or large) role of flintworking in the Late Bronze Age and Early Iron Age, the functionally similar flint tools should probably be also present among the stray finds and “hoards”, but not among grave inventory or the material from settlements.
4. We can notice distinct change in the Early Iron Age, when there are many more iron knives, including grave goods. However, it is difficult to indicate the category of artefacts (we cannot include such items that are individual and problematic somehow flint finds), which would be replaced by them.

It is worth noting that as for tool instrumentation in the Bronze Age (and Early Iron Age) there are also present items from organic materials (bone, horn, wood), which mostly did not preserve due to the characteristic location of the “Lusatian” sites on sandy rises, terraces or even dunes. It should also be mentioned that iron tools can be considered as a succession of bronze artefacts, which obviously consider such artefacts as e.g. axes, sickles and knives. It is difficult to find among them the items replacing the flint scrapers needed so much in the course of leather working. Taking everything into account, we can see the greatest potential opportunities to preserve traditional flint working in this area.

The Tarnobrzeg Lusatian population is estimated at an average of several thousand people (S. Czopek 1996, p. 102–103: from 7 to 17 thousand people), that is probably about 1,000–3,000 families. Each of them must have had at least one axe,

sickle and knife. In general, it can be estimated that these tools should give a total of several thousand items existing in one generation. Therefore, in the course of lasting the entire Tarnobrzeg Lusatian culture, this community should have provided at least several thousand of tools (the duration of this cultural unit is even 900–1,000 years, so about 40 generations). The data presented in table II show a small percentage of tools that we know. Unfortunately, the shortage of bronze is not supplemented by flint items.

A separate issue is linked with the presence of flint objects in graves and their possible role in the funeral rites of the Tarnobrzeg Lusatian culture community. It does not look clear. Moreover, in the case of many sites it leads to the discussion with the views presented in the literature. It concerns the nature and actual chronology of the artefacts discovered in graves and outside graves within the cemeteries, often analyzed in the context of the multicultural nature of the sites on which the “Tarnobrzeg” graves are also located. Comfortable is the fact that the discussion can be carried out on the ground built by a satisfactory level of knowledge both about the cemeteries and funeral rites of these communities.

Among the cemeteries it is possible to distinguish quite clearly two groups of sites. The first one includes those where the relatively numerous flint materials have been registered (Pysznica, Paluchy). The second group consists of the cemeteries where the tools have been recorded incidentally or they have not been found at all (e.g. Grodzisko Dolne, Kosin, Krzemienica, Knapy, Zbydniów). Bearing in mind the uniformity of burial rites performed by these communities, such differentiation may be considered surprising. At the same time, it leads to the question whether we are dealing with prehistoric representation of reality, or is it the result of other factors. This question leads to a careful analysis of flint artefacts discovered in the cemeteries of these communities because, as in the case of many settlements we are dealing with completely separate cultural facts present at the sites located mainly on sandy areas, as well on the dunes. A good example is the cemetery in Knapy (S. Czopek 2004a). Only one grave was discovered with a flint blade, and it has the distinct features of definitely older flintworking. What is more, there were 137 flint artefacts recorded outside the graves. If we add that this site contained also the materials from the Final Paleolithic, Mesolithic, Funnel Beaker culture, Early and Older Bronze Age, the caution and critical approach to cultural qualifications of flint materials, particularly in relation to the Lusatian culture, is the most reasonable (the blade discovered in the grave can be a “mechanical admixture”, but it cannot be excluded that it was made much earlier and secondarily it was used by the people of the Lusatian culture). Another example which requires critical analysis are the objects made by knapping techniques recorded in the graves of the Lusatian culture in Perespa site 54, dist. Tomaszów Lubelski (E. Kłosińska 2012) although, as it was stated by the researcher, some of them are older (a tool with the Mesolithic features in the grave No. 5; E. Kłosińska 2012, Fig. 4: 4). An excellent example of cited here doubts is the site in Pysznica (P. Mitura 2001). Flint materials were recorded there on a much larger area than the Tarnobrzeg Lusatian culture graves. The most spectacular artefacts (fragments of two axes and a arrowhead) were discovered outside the graves. Additionally, the remains of the Neolithic settlement were uncovered.

The above observations tend to a few general conclusions: (1) there are rarely tools made from siliceous rocks in graves, and uncharacteristic flakes or scales are more often, (2) it is difficult to speak about the presence of a fixed custom of giving flint tools to the graves, (3) more significant could be symbolic understanding of such gifts. However, it would be difficult to explain in the face of such large differences between the various cemeteries that do not arise from a different chronology.

The analysis allows us to draw the following conclusions:

1. The finds of flint products (tools and preforms) coming from the sites of the Tarnobrzeg Lusatian culture should always be carefully analyzed. We would like to draw attention to the need to maintain extreme caution in interpreting flint sources. Flintworking linked with the Bronze Age is in fact represented in numerous and diverse in terms of function sites.
2. At many sites, including settlements, there are also evidently older artefacts (Final Palaeolithic, Mesolithic, Neolithic, Early Bronze Age), which are the remains in situ of earlier phases of the settlement.
3. We cannot exclude the idea of using by the people of the Tarnobrzeg Lusatian culture some objects made from siliceous rocks made in the older periods of prehistory discovered on the settlements of these communities.
4. Probably there are differences between the settlements of the Tarnobrzeg Lusatian culture in the use of objects from the siliceous rocks. Due to their frequency it is possible to indicate two groups of them. The first includes the settlements, where there were no actually such artefacts (settlements in long distance from the flint deposits). The second group are the sites where flint materials are present, sometimes quite numerous (but mainly in the vicinity of flint deposits).
5. Knowledge of the Tarnobrzeg Lusatian settlements, which is clearly better than a few years ago, evidently shows that only in a few cases, and without any doubts we can talk about flint objects made (or used) by the people of that culture. The vast majority of known cases – including the sites studied on a large scale – does not provide such materials. However, as for many sites we can notice the presence of older flint products in a secondary deposit in younger features or layers, including the ones affiliated to the Tarnobrzeg Lusatian culture.
6. Assuming that the flint artefacts fill an important gap in the knowledge regarding the material culture of the communities left by the Tarnobrzeg Lusatian culture, we should have accepted the existence of a separate model of production, distribution and utility than the one known from earlier cultures (i.e. the cultures in which such artefacts are quite numerous within the settlement inventories in stratigraphic contexts where there are not any doubts in interpretation). Therefore, it is necessary to prompt also methodical and methodological reflection. On the basis of the known schemes, it is difficult to prove the importance of flint knapping.
7. Regarding flint materials from the pit 2 at the site 10 in Rudnik as one of the typical inventories of the Tarnobrzeg Lusatian culture does not handle criticism.
8. The term “industry” in relation to flint knapping of Neolithic and Early Bronze Age has a long tradition (S. Kru-

kowski 1939–1948, p. 98–101; B. Balcer 1983). Bearing in mind the diversity of the Tarnobrzeg Lusatian culture sites (mines, workshops, materials from the settlements located in the vicinity of siliceous deposits, materials from the settlements located outside such zones, the materials from graves), the re-definition of so-called Kosin industry (and actually considering whether this term is correct for very diverse nature of flint knapping of the Tarnobrzeg Lusatian culture) becomes one of the basic postulates as for the research on the Late Bronze Age and Early Iron Age.

9. Taking into account the graves of the Tarnobrzeg Lusatian culture, there are rarely tools made from siliceous rocks, and uncharacteristic flakes or scales are more often (K. Fronczek 2009). It is difficult to speak about the presence of a fixed custom of giving certain flint tools to graves. Recorded facts can be interpreted either as a deposition of older products in the secondary deposit (similar to settlements), or they can be associated only with the symbolic meaning of flint (and not a specific object) as grave goods.
10. A separate group of sites consists of individual flint objects discovered in the Carpathian Mountains, outside the zones of permanently occupied areas by the com-

munities of the Lusatian culture, though not necessarily its Tarnobrzeg variant. It is not easy to qualify these items regarding their chronology and cultural reference (cf. A. Pelisiak 2013). The suggestion that some of them may be the remains of human activity in these areas in the Late Bronze Age and Early Iron Age can be accepted (P. Valde-Nowak 2003). We have also here not doubtful inventories of declining characteristics, well dated (P. Valde-Nowak 2008), but their relationship with the Tarnobrzeg Lusatian culture is rather excluded (S. Czopek, W. Poradyło 2008).

11. The current question remains whether there are any indications, and if so what, to define the specificity of the Tarnobrzeg Lusatian culture flintworking in relation to other groups of the Late Bronze Age and Early Iron Age in a circle of the Urnfield cultures.
12. The state of the knowledge presenting acquiring, processing and using siliceous rocks by Lusatian culture, and more broadly by the communities of the Late Bronze Age and Early Iron Age in Central Europe is far from satisfactory. At the same time, this issue contains enormous research capacity.

REFERENCES

- Adamik J., Burghardt M.
2012 Osada tarnobrzesckiej kultury luzyckiej w Bialobrzegach, pow. Lancut, stanowisko 5, w swietle ostatnich badan, „MSROA”, t. 32, s. 117–167.
- Ambers J., Matthews K., Bowman S.
1987 British Muzeum natural radiocarbon measurements XX, „Radiocarbon”, t. 29(2), s. 177–196.
- Balcer B.
1983 *Wytworczosc narzedzi krzemienych w neolicie ziem Polski*, Wroclaw.
- Bargiel B., Libera J.
1995 Drugi sezon badan pracowni przykopalnianych kultury luzyckiej w Kopcu, „Sprawozdania z badan terenowych Katedry Archeologii UMCS w 1994 roku”, s. 13–16.
- Bobak D., Poltowicz-Bobak M.
2013a Materiały krzemienne, [w:] Opracowanie ratowniczych badan wykopaliskowych na stanowisku 11–16 (A4/68–73) w Łące, gm. Trzebowniko, Rzeszów, (opracowanie inwestorskie w Archiwum Fundacji Rzeszowskiego Ośrodka Archeologicznego, dalej FROA).
- 2013b Materiały krzemienne ze stanowiska Rozbórz 28, woj. Rzeszów, [w:] Opracowanie ratowniczych badan wykopaliskowych na stanowisku 28 w Rozborzu, gm. Przeworsk, Rzeszów (opracowanie inwestorskie w Archiwum FROA).
- Bronowicki J., Masojc M.
2008a Krzemieniarstwo ludności kultury luzyckiej na Śląsku na przykladzie stanowiska Zakrzów 41, pow. krapkowicki, „Sil. Ant.”, t. 44, s. 23–45
- 2008b Przemysł krzemienny z osady ludności kultury luzyckiej na stanowisku Zakrzów 41, pow. Krapkowice, [w:] Gediga B. (red.), *Archeologiczne Zeszyty Autostradowe Instytutu Archeologii i Etnologii PAN, Zeszyt 7. Badania na autostradzie A4. Część 5*, Wroclaw, s. 157–200.
- 2010 Lusatian Flint Industries in Silesia, SW Poland, [w:] Erikssen B. V. (red.), *Lithic technology in metal using societies*, Jutland Archaeological Society Publications 67, Højbjerg, s. 107–127.
- Bronowicki J., Czopek S., Podgórska-Czopek J.
2012 Opracowanie materiałów ze stanowiska nr 18 w Zamiechowie, pow. jaroslowski, Rzeszów (opracowanie inwestorskie w Archiwum FROA).
- Bronowicki J., Małeczka-Kukawka J., Masojc M.
2006 The Flint Industry of the Lausitz Culture Societies (SW Poland), Lithic technology in metal using societies, Session WS11, XV Congress UISPP 4–9 September 2006, Lisbonne, Book of Abstracts, vol. 2, s. 604–605.
- Budziszewski J.
1998a Świątokrzyski Okręg Pradziejowej Eksploatacji Krzemieni w dobie kultury trzcinieckiej, [w:] Koško A., Czebreszuk J. (red.), „Trzciniec” – system kulturowy czy interkulturowy proces, Poznań, s. 285–299.
- 1998b Krzemieniarstwo społeczności kultury trzcinieckiej z Wyżyny Środkowomałopolskiej, [w:] Koško A., Czebreszuk J. (red.), „Trzciniec” – system kulturowy czy interkulturowy proces, Poznań, s. 301–328.
- Czopek S.
1996 *Grupa tarnobrzescka nad środkowym Sanem i dolnym Wisłokiem*, Rzeszów.
- 1997 Osada grupy tarnobrzesckiej na stanowisku 5 w Bialobrzegach, woj. rzeszowskie, „MSROA”, t. 18, s. 29–75.
- 2003a Między Południem i Wschodem – importy i naśladownictwa ceramiki w materiałach grupy tarnobrzesckiej, [w:] Gancarski J. (red.), *Epoka brązu i wczesna epoka żelaza w Karpatach*, Krosno, s. 387–395.
- 2003b Wielokulturowa osada na stanowisku nr 3 w Kliszowie, pow. Mielec, „MSROA”, t. 24, s. 55–82.

- 2004a *Cmentarzysko ciałopalne z wczesnej epoki żelaza w Knapach, Rzeszów.*
- 2004b Osady tarnobrzeskiej kultury łużyckiej – wielkość, struktura, funkcjonowanie, [w:] Libera J., Zakościelna A. (red.), *Przez pradzieje i wczesne średniowiecze*, Lublin, s. 221–238.
- 2007 *Grodzisko Dolne, stanowisko 22 – wielokulturowe stanowisko nad dolnym Wisłokiem. Część I. Od epoki kamienia do wczesnej epoki brązu*, Rzeszów.
- Czopek S., Pelisiak A.
w druku Uwagi o krzemieniarstwie tarnobrzeskiej kultury łużyckiej ze szczególnym uwzględnieniem materiałów osadowych, [w:] Małecka-Kukawka J., Libera J. (red.), *Krzemieniarstwo wspólnot kultur pół popielnicowych i współczesnych im cywilizacji świata starożytnego (około 1300–400 lat p.n.e.)*, Warszawa.
- Czopek S., Poradyło W.
2008 *Warzyce, pow. Jasło, stan. 17 – osada z epoki brązu i wczesnej epoki żelaza*, Rzeszów.
- Dąbrowski J.
1996 Odtworzenie pełnego zestawu źródeł do poznania kultury łużyckiej, [w:] Chochorowski J. (red.), *Problemy epoki brązu i wczesnej epoki żelaza w Europie Środkowej. Księga Jubileuszowa poświęcona Markowi Gedłowi*, Kraków, s. 175–186.
- Dzierżanowska A., Król D., Rząsa P., Rybicka M.
2010 Kilka uwag na temat badań wykopaliskowych przeprowadzonych w 2009 roku w Białobrzegach, stan. 5, woj. podkarpackie, „RPrzemyski”, t. 46, z. 2, „Archeologia”, s. 31–37.
- Florek M., Gurba J.
1993 Wyniki badań wykopaliskowych w Tarnobrzegu, „Sprawozdania z badań terenowych Katedry Archeologii UMCS w 1992 roku”, Lublin, s. 14–21.
- Florek M., Libera J.
1994 Pierwszy sezon badawczy przykopalnianych pracowni w rejonie wychodni krzemienia świeciechowskiego w Kopcu, „Sprawozdania z badań terenowych Katedry Archeologii UMCS w 1993 roku”, s. 3–14.
- Fronczek K.
2009 Krzemienie w grobach grupy tarnobrzeskiej kultury łużyckiej, [w:] Czopek S., Trybała-Zawislak K. (red.), *Tarnobrzeska kultura łużycka – źródła i interpretacje*, Rzeszów, s. 265–287.
- Gatsov I.
1998 Technical and typological analysis of the chipped stone assemblages from Troia, „Studia Troica”, t. 8, s. 116–140.
- Gatsov I., Nedelcheva P.
2008 Some observations about the chipped stone artefacts from Early Bronze Age II – settlement at Küllüoba, Eşkisehir Region, Northwestern Anatolia, [w:] Slavchev V. (red.), *Studia in Memerian Ivani Ivanov. The Varna Necropolis and Problems of prehistory in southeast Europe*, Varna, s. 221–226.
- Gedl M.
1975 *Kultura łużycka*, Kraków.
1994 *Cmentarzysko z epoki brązu w Bachórze-Chodorówce*, Kraków.
- Hozer M.
2009 Materiały kultury łużyckiej ze stanowiska nr 4 i 5 w Terliczce, pow. Rzeszów, [w:] Czopek S., Trybała-Zawislak K. (red.), *Tarnobrzeska kultura łużycka – źródła i interpretacje*, (= Collectio Archeologica Resoviensis, t. 11), Rzeszów, s. 313–351.
- Kadrow S.
1989 Kilka uwag na temat krzemieniarstwa grupy tarnobrzeskiej kultury łużyckiej, [w:] Barłowska A., Szałapata E. (red.), *Grupa tarnobrzeska kultury łużyckiej*, Rzeszów, s. 91–109.
- Karnas A.
2003 Osada grupy tarnobrzeskiej w Ostrowach Tuszowskich, pow. Kolbuszowa, „MSROA”, t. 24, s. 83–114.
- Kłosińska E.
2012 Przyczynek do badań nad występowaniem przedmiotów krzemiennych, kamieni i skamielin w grobach ludności kultury łużyckiej na Lubelszczyźnie, „MSROA”, t. 33, s. 135–154.
- Kopacz J.
1987 Krzemieniarstwo kultury trzcinieckiej na podstawie wybranych inwentarzy krzemiennych z terenu Krakowa-Nowej Huty, [w:] *Kultura trzciniecka w Polsce*, Kraków, s. 171–181.
2001 *Początki epoki brązu w strefie karpackiej w świetle materiałów kamiennych*, Kraków.
- Kopacz J., Šebela L.
2006 *Kultura unietycka i grupa wietrzowska na Morawach na podstawie materiałów krzemieniarstkich*, Kraków–Brno.
- Kozłowski S.K., Sachse-Kozłowska E.
1997 Halsztacko-lateński krzemieniany przemysł „łużycki” w miejscowości Zawada w woj. tarnobrzeskim, [w:] Lech J. (red.), *Z badań nad krzemieniarstwem epoki brązu i wczesnej epoki żelaza*, Warszawa, s. 319–335.
- Kruk K.
1994 Przemysł krzemieniany ludności grupy tarnobrzeskiej kultury łużyckiej, „Woliński Informator Muzealny”, z. 1, s. 3–226.
- Krukowski S.
1939–1948 Paleolit, [w:] *Encyklopedia polska PAU*, t. 4, nr 1: *Prehistoria ziem polskich*, Kraków, s. 1–117.
- Lech H. i J.
1995 PL3 Wierzbica „Zeł”, Radom prowincje, „Archaeologia Polonia”, t. 33, s. 465–480.
- Lech J., Piotrowska D. (red.)
1997 *Z badań nad krzemieniarstwem epoki brązu i wczesnej epoki żelaza*, Prace Komitetu Nauk Pra- i Protohistorycznych PAN, t. 2, Warszawa.
- Lepiejza J.
2013 Opracowanie wyników badań wykopaliskowych na stanowisku nr 2 w Zabłotcach, Rzeszów (opracowanie inwestorskie w Archiwum FROA).
- Libera J.
2005 Z badań nad krzemieniarstwem wczesnej epoki żelaza w dorzeczu Sanu – podstawy wydzielenia przemysłu kosińskiego, [w:] Czopek S. (red.), *Problemy kultury wysockiej*, Rzeszów, s. 119–160.
2006a Analiza inwentarzy krzemiennych uzyskanych w trakcie badań wykopaliskowych stanowiska 2 kultury łużyckiej w Siedliszczu, pow. chełmski, „APŚ”, t. 8, s. 293–305.
2006b Late flint industries-flint production of Lusatian culture people in SE Poland, [w:] Wiśniewski A., Płonka T., Burdukiewicz J.M. (red.), *The stone: technique and technology*, Wrocław, s. 199–205.
2010 Zabytki krzemienne znalezione na stanowisku kultury łużyckiej w Opoczce Małej, pow. kraśnicki, „APŚ”, t. 10, s. 233–236.
- Libera J., Zakościelna A.
2002 Złoże krzemieni turońskich w przełomowym odcinku Wisły, [w:] Matraszek B., Sałaciński S. (red.), *Krzemień świeciechowski w pradziejach*, Warszawa, s.93–109.
- Ligoda J.
2005 Osada grupy tarnobrzeskiej na stanowisku 6 w Czarnej, pow. Łańcut, „MSROA”, t. 26, s. 207–262.
- Ligoda J., Mitura P., Zych R.
2005 Materiały z wielokulturowego stanowiska 6 w Babisze, gm. Tuszów Narodowy, pow. Mielec, „MSROA”, t. 26, s. 65–109.

- Makarowicz P.
2010 *Trzciniecki krąg kulturowy – wspólnota pogranicza Wschodu i Zachodu Europy*, Poznań.
- Malinowski T.
2000 O roli krzemienia u niektórych społeczności epok metali, „Prz. Arch.”, t. 48, s. 127–139.
- Masojć M., Bech J.-H.
2011 Cult houses & flint knapping in the Scandinavian Late Bronze Age, „Acta Archaeologica”, t. 82, s. 203–226.
- Mitura P.
2001 Materiały krzemienne z cmentarzyska w Pyszniczy – analiza, [w:] Czopek S., *Pysznicza, pow. Stalowa Wola, stanowiska 1 – cmentarzysko ciałopalne z przełomu epoki brązu i żelaza*, Rzeszów, s. 215–217.
- Moskwa K.
1976 *Kultura łużycka w południowo-wschodniej Polsce*, Rzeszów.
- Păunescu A.
1970 *Evoluția uneltelor și armelor de piatră cioplită descoperite pe teritoriul României*, (= „Biblioteca de Arheologie”, t. 15), București.
- Pelisiak A.
2013 Pojedyncze przedmioty kamienne a strefy aktywności osadniczej i gospodarczej w neolicie we wschodniej części Karpat Polskich, „MSROA”, t. 34, s. 19–33.
- Płoskoń G.
2012 Materiały krzemienne i kamienne, [w:] Opracowanie ratowniczych badań archeologicznych na stan. 2 w Białobrzegach, Rzeszów (opracowanie inwestorskie w Archiwum MOR).
- Połowicz M.
2007 Zabytki krzemienne ze stanowiska 5, [w:] Czopek S. (red.), *Opracowanie wyników badań wykopaliskowych na stanowisku Terliczka 4 i 5 (A4 / 64, 65)*, Rzeszów (opracowanie inwestorskie w Archiwum FROA).
- Szeliga M.
2012 Materiały krzemienne, [w:] *Opracowanie materiałów z ratowniczych badań wykopaliskowych na stanowisku 19/20 w Gorliczynie, pow. Przeworsk, Rzeszów* (opracowanie inwestorskie w Archiwum FROA).
- Valde-Nowak P.
2003 Wyroby kamienne z epoki brązu w Karpatach, [w:] Gancarski J. (red.), *Epoka brązu i wczesna epoka żelaza w Karpatach Polskich*, Krosno, s. 43–53.
- 2008 Zabytki krzemienne ze stanowiska 17 w Warzycach, gm. Jasło, [w:] Czopek S., Poradyło W., *Warzyce, pow. jasło, stan. 17 – osada z epoki brązu i wczesnej epoki żelaza*, Rzeszów, s. 199–204.
- Wnuczek I., Burghardt M.
2012 Opracowanie ratowniczych badań wykopaliskowych na stanowisku 26 (74 – A4) w Łące, gm. Trzebownisko, Rzeszów (opracowanie inwestorskie w Archiwum FROA).

Sylwester Czopek, Andrzej Pelisiak

Uwagi o krzemieniarstwie tarnobrzeszkiej kultury łużyckiej ze szczególnym uwzględnieniem materiałów osadowych

Streszczenie

Artykuł jest próbą nieco innego spojrzenia na materiały krzemienne, łączone w Europie z kręgiem pól popielnicowych, a w Polsce z kulturą łużycką. W dotychczasowej dyskusji uwzględnia się albo materiały pochodzące z grobów, albo z pracowni przykopalnianych. Autorzy proponują tu perspektywę materiałów osadowych, dochodząc do następujących wniosków:

1. Znaleźiska wytworów krzemiennych (narzędzi i półsurowca) ze stanowisk tarnobrzeszkiej kultury łużyckiej powinny być każdorazowo dokładnie analizowane. Należy zwrócić uwagę na potrzebę zachowania dużej ostrożności w interpretacji źródeł krzemiennych. Wytwórczość krzemieniarstwa łączona z epoką brązu reprezentowana jest bowiem na licznych i zróżnicowanych pod względem funkcji stanowiskach.
2. Na wielu stanowiskach, w tym także osadach, spotyka się wytwory ewidentnie starsze (schyłkowopaleolityczne, mezolityczne, neolityczne, wczesnobrązowe), które są pozostałościami *in situ* wcześniejszych faz zasiedlenia.
3. Nie można wykluczyć wykorzystywania przez ludność tarnobrzeszkiej kultury łużyckiej niektórych, odkrywanych na osadach tych społeczności, przedmiotów ze skał krzemionkowych wykonanych w starszych okresach pradziejów.
4. Prawdopodobne są różnice między poszczególnymi osadami tarnobrzeszkiej kultury łużyckiej w zakresie wykorzystywania przedmiotów ze skał krzemionkowych. Ze względu na ich frekwencję można wskazać dwie ich grupy. Pierwsza obejmuje osiedla, gdzie praktycznie nie odnotowano takich przedmiotów (osady oddalone od złóż krzemieni). Drugą tworzą stanowiska, na których materiały krzemieniarstwa są obecne, niekiedy liczne (głównie jednak w sąsiedztwie złóż).
5. Znajomość osad tarnobrzeszkiej kultury łużyckiej, wyraźnie lepsza niż jeszcze kilka lat temu, wyraźnie wskazuje, że tylko w nielicznych i niebudzących wątpliwości przypadkach możemy mówić o wytworach krzemiennych wykonanych (lub użytkowanych) przez ludność tej kultury. Zdecydowana większość znanych przypadków – i to tych zbadanych na dużą skalę – nie dostarcza jednak takich materiałów. Na wielu stanowiskach obserwujemy natomiast występowanie ewidentnie starszych wytworów krzemiennych na wtórnym złożu w obiektach i warstwach młodszych, w tym także przypisywanych tarnobrzeszkiej kulturze łużyckiej.
6. Przy założeniu, że zabytki krzemienne wypełniają istotną lukę w znajomości kultury materialnej mieszkańców osad

tarnobrzeskiej kultury łużyckiej, musielibyśmy przyjąć istnienie jakiegoś odrębnego modelu produkcyjno-dystrybucyjnego i użytkowego niż znany nam z kultur wcześniejszych (czyli tych, w których inwentarzach osadowych zabytki takie spotyka się dość licznie w niebudzących wątpliwości kontekstach stratygraficznych). Konieczna jest zatem także refleksja metodyczna i metodologiczna. Na bazie znanych nam schematów trudno bowiem dowieść istotnego znaczenia krzemieniarstwa.

7. Uznanie materiałów krzemieniarskich z jamy 2 ze stanowiska 10 w Rudniku za jeden ze sztandarowych inwentarzy tarnobrzeskiej kultury łużyckiej nie wytrzymuje krytyki, wobec analogii i dokładnej (powtórnej) klasyfikacji materiału ceramicznego, łączącego się z kulturą trzciniecką.
8. Termin „przemysł” w odniesieniu do wytwórczości krzemieniarskiej neolitu i początków epoki brązu ma długą tradycję. Mając na uwadze różnicowanie stanowisk tarnobrzeskiej kultury łużyckiej (kopalnie, pracownie, materiały z osad ulokowanych w sąsiedztwie złóż skał krzemionkowych, materiały z osad ulokowanych poza takimi strefami, materiały z grobów), powtórne zdefiniowanie tzw. przemysłu kosińskiego, a właściwie zastanowienie się, czy ten termin jest zasadny dla charakterystyki bardzo różnicowanych przejawów krzemieniarstwa tarnobrzeskiej kultury łużyckiej, staje się jednym z podstawowych postulatów badań nad młodszą epoką brązu i wczesną epoką żelaza.
9. W grobach tarnobrzeskiej kultury łużyckiej rzadko spotykamy narzędzia wykonane ze skał krzemionkowych, częściej niecharakterystyczne odłupki lub łuski. Trud-

no mówić o obecności utrwalonego obyczaju dawania do grobów określonych narzędzi krzemiennych. Rejestrowane fakty dają się interpretować albo jako zaleganie starszych wytworów na wtórnym złożu (analogia do osad), albo można je wiązać jedynie z symbolicznym znaczeniem krzemienia (a nie konkretnego wytworu) jako daru grobowego.

10. Odrębną grupę stanowisk tworzą pojedyncze przedmioty krzemieniarskie odkrywane w Karpatach, poza strefami trwale zasiedlonymi przez społeczności kultury łużyckiej, choć nie konieczne jej tarnobrzeskiego wariantu. Przedmioty te nie poddają się łatwo kwalifikacji kulturowej i chronologicznej. Uzasadnione są sugestie, że część z nich może być pozostałością aktywności człowieka na tych terenach w młodszej epoce brązu i wczesnej epoce żelaza. Mamy tu także nie budzące wątpliwości inwentarze o cechach krzemieniarstwa schyłkowego, dobrze datowane, jednak ich związek z tarnobrzeską kulturą łużycką jest raczej wykluczony.
11. Aktualne pozostaje pytanie, czy istnieją źródłowe przesłanki, a jeśli tak to jakie, określenia specyfiki krzemieniarstwa tarnobrzeskiej kultury łużyckiej w stosunku do innych ugrupowań młodszej epoki brązu i wczesnej epoki żelaza w kręgu kultur pól popielnicowych.
12. Stan wiedzy o pozyskiwaniu, obróbce i wykorzystywaniu skał krzemionkowych w kulturze łużyckiej, a szerzej wśród społeczności młodszej epoki brązu i wczesnej epoki żelaza w Europie środkowej daleki jest od zadawalającego. Jednocześnie, problematyka ta kryje w sobie olbrzymi potencjał badawczy.

