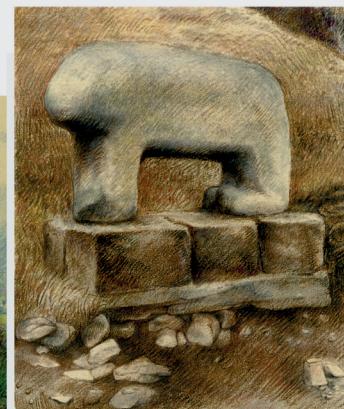
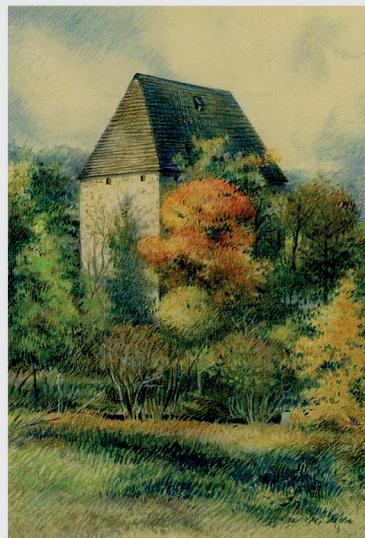


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# ŚLĄSKIE SPRAWOZDANIA ARCHEOLOGICZNE



INSTYTUT ARCHEOLOGII  
UNIWERSYTETU WROCŁAWSKIEGO

WROCŁAW 2020

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## NORTH-SOUTH AND SOUTH-NORTH. THE PASSES IN THE MAIN RIDGE OF THE EAST POLISH CARPATHIANS AND THE NATURAL ROUTES DURING THE NEOLITHIC IN LIGHT OF CHIPPED STONE MATERIAL

**Abstract** The topic addressed by this paper covers trans-Carpathian contacts during the early Neolithic, reflected both in the obsidian assemblages recovered on the Linear Pottery culture (LBK) settlement sites located in the Rzeszów-Przemyśl loess zone and the obsidian finds registered within the eastern part of the Polish Carpathians. There will be discussed routes that are alternative to the "Dukla Pass", running through mountain passes in the eastern part of the Polish Carpathians. These will be suggested based on the distribution of obsidian finds within the East Polish Carpathians in the context of the availability of natural elements of mountain landscape that facilitated communication. This paper proposes three possible routes connecting the LBK area of inhabitation in the Rzeszów-Przemyśl loess zone and the Zone where obsidian sources were exploited in the Tokay and Zemplin Mountains: A1 – along the San, Osława and Osławka Rivers, across the Łupków Pass, along the Vyrava and Laborec Rivers; A2 – along the San and Solinka Rivers, across the Nad Roztokami Pass, and along the Cirocha, Laborec and Ondava Rivers; and A3 – along the San River and the Wołosaty Stream, across the Beskid Pass, and along the Uh, Latorica and Bodrog Rivers.

**Keywords:** Carpathians, contacts, Neolithic, obsidian, lithic artefacts

The issue of the Carpathian passes as natural routes of various contacts and movement of people has been presented in archaeological publications for a long time and has referred to all the periods of prehistory: from the Palaeolithic (Valde-Nowak 2010), through the Neolithic (Czopek, Kadrow 2001; Kaczanowska, Lech 1977; Kulczycka-Leciejewiczowa 1979; Valde-Nowak 1988; 2001), the Bronze Age (Gancarski 1999; Gedl 1989; 1998; Przybyła 2009), to the La Tène period (Olędzki 2004, 126) and the Roman period (Madyda-Legutko 1996; Tyszler 2004; Wielowiejski 1981; 1981a). Moreover, monographic studies have been dedicated to these questions as well (e.g. Gancarski 2010). The problems discussed in this paper refer to the early Neolithic in south-eastern Poland (Fig. 1). The analysis of the probable routes of trans-Carpathian contacts will be based on several groups of information. The first group contains

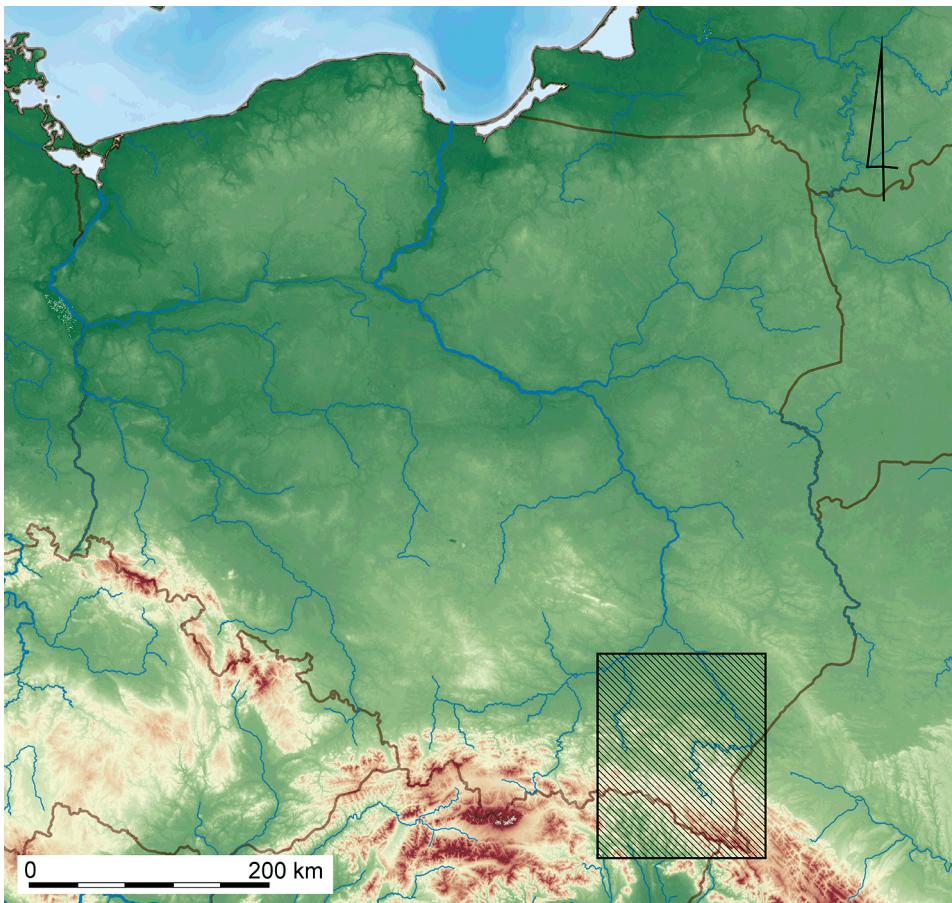


Fig. 1. An area of research

the general characteristics of the spatial organisation of settlements of the Linear Pottery culture (LBK; Fig. 2) and the Malice culture in south-eastern Poland, with particular attention paid to the area of the northern outskirts of the eastern part of the Polish Carpathians. The second one refers to non-local elements in the chipped stone inventories distinguished on the sites of the early Neolithic cultures in the Rzeszów-Przemyśl loess zone (elements of the “southern” origin), as opposed to the elements of the “northern” origin present in the chipped stone assemblages on sites contemporaneous cultures from eastern Slovakia and the adjacent territories of Hungary (Kaczanowska 1985). Obsidian items discovered in the area north of the main ridge of the eastern Polish Carpathians, including numerous artefacts found during surface surveys carried out within the Archaeological Record of Poland project, will constitute the archaeological basis of the presented deliberations. An important group of information refers to the landscape of the eastern part of the Polish Carpathians:

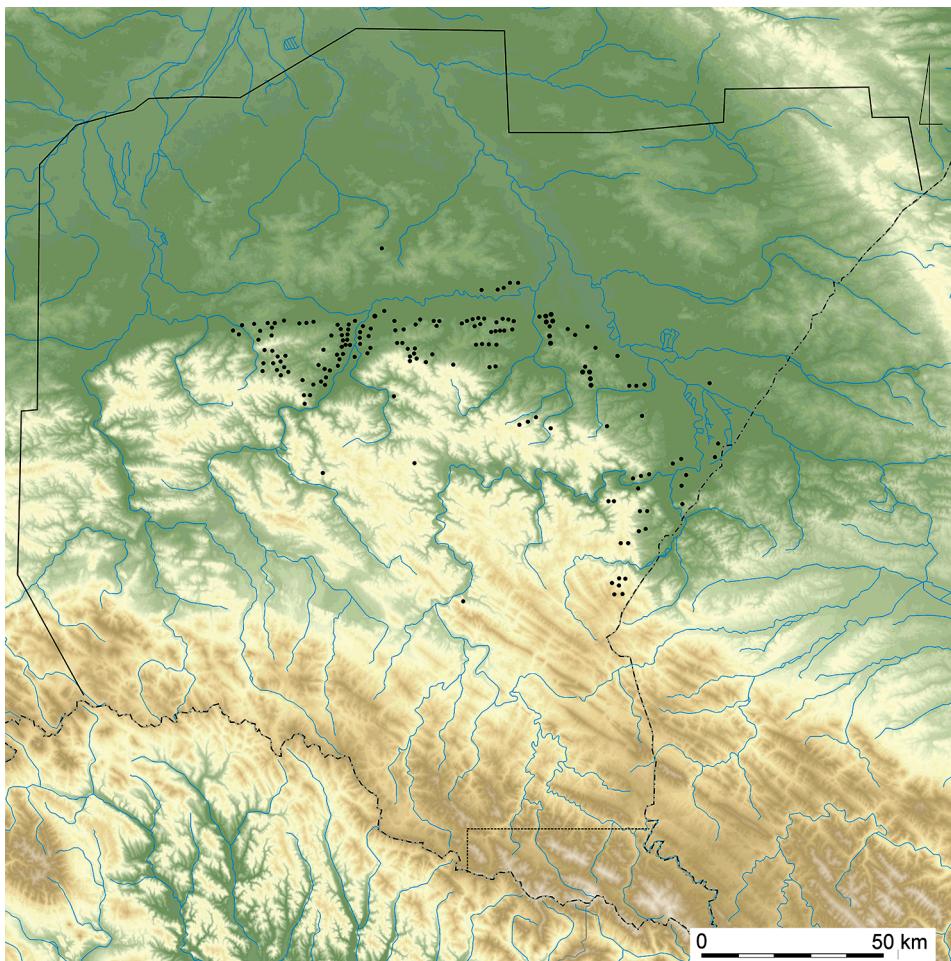
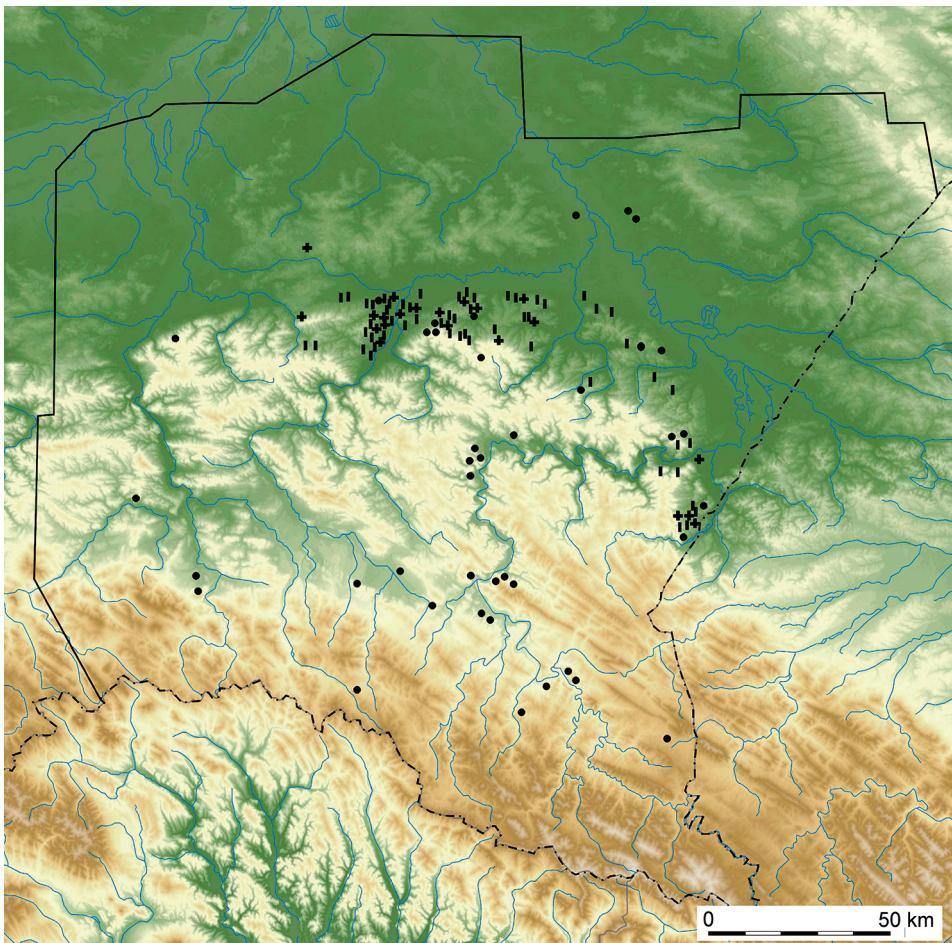


Fig. 2. LBK settlement-sites on the Rzeszów-Przemyśl loess belt

potentially suitable natural tracts, fords on Carpathian rivers and passes on the main ridge of the Carpathians. I will analyse the south-north routes used in “historical” times, some of which are still used today. At least some of them may be similar to the natural tracts used in prehistory, and may have a very long tradition dating back to the early Neolithic.

An essential group of chipped artefacts used in this study consists of items made of obsidian (Fig. 3). Obsidian was one of the most important raw materials used by the LBK communities which inhabited the Rzeszów-Przemyśl loess zone (Szeliga 2009). The artefacts made of obsidian were registered at all the excavated sites of this culture: for example, at Albigowa, sites 1 and 38 (Blajer 2003; Czopek 1999; Kadrow 1988; 1992; Moskwa 1963; Kozłowski 1974); Boguchwała, sites 1 and 2 (Aksamit



**Fig. 3.** Distribution of artefacts made of obsidian. LBK settlement-sites – vertical scars; Malice culture settlement-sites – sharps; single finds of obsidian artefacts – round spots.

1962; Dzieduszycka-Machnikowa 1958; 1959; 1960; Kozłowski 1974; Moskwa 1964); Fredropol, site 2 (Aksamit 1968; Kozłowski 1974); Husów, site 11 (Aksamit 1963; Gruszczyńska 1968); Kormanice, sites 1 and 2 (Aksamit 1966; 1971; 1971a; 1974; Kaczanowska 1985; Kozłowski 1974); Kosina, site 35 (Czopek, Florek, Ginalski, Koperski, Szpunar 1996; Kadrow 1992a.); Kraczkowa, site 1 (Aksamit 1964; Kozłowski 1974; Kaczanowska 1985); Łanicut, site 3 (Gruszczyńska 1983; 1985; 1986; 1987; 1988; 1991; 1992; 1993); Olchowa, site 20 (Mitura 2007; Mitura, Zych 1999); Rzeszów, sites 13 (Aksamit 1966a; Kaczanowska 1985), 16 (Kaczanowska 1985; Kadrow 1990), 34 (Barłowski 1973; Kozłowski 1971; Talar 1971), and 55 (Mitura 2006); and Zwięczyca, sites 3 (Dębiec, Dzbyński 2007; Dębiec, Dzbyński, Pelisiak 2006) and 4 (Dębowski 1968; Kozłowski 1974). The artefacts made of obsidian form one of the most commonly represented

groups of lithic assemblages e.g. Rzeszów, site 16 (Kadrow 1990). This raw material is present in all typological groups. Moreover, at the LBK site 3 in Zwięczyca, single platform initial blade cores, pre-cores and natural blocks of raw material were registered too.<sup>1</sup> The composition of this chipped assemblage confirms the supposition that both blades and tools, as well as cores and unprepared pieces of obsidian raw material were imported by the LBK people living in the Rzeszów-Przemyśl loess zone. It is also an indirect confirmation of a mass-scale use of obsidian by these communities. Moreover, within a zone settled by the LBK communities, numerous single artefacts made of obsidian were registered too. It should also be noted that apart from the artefacts made of obsidian, also pottery fragments of the Bükk culture were found on the LBK sites in the Rzeszów-Przemyśl loess zone (Kaczanowska, Godłowska 2009). They are the second group of items of the “southern” origin present at the LBK sites located in this region. Stray finds of items made of obsidian were also registered outside the zone inhabited by the LBK communities: for example, within the Carpathian Foothills and in the higher parts of the eastern Polish Carpathians (Fig. 3). Their distribution will be one of important arguments for the reconstruction of the possible ways of trans-Carpathian relations during the early Neolithic. Obsidian chipped artifacts were also discovered in the relation to the Malice culture assemblages, e.g. in Husów, site 17 (Przybyła 2004); Rzeszów, site 20 (Kadrow 1990a); or Rzeszów, site 117 (Czopek, Niemasik, Pasterkiewicz 2007). However, the obsidian finds registered within these sites are significantly less frequent than those found on the LBK settlement-sites.

Respecting the early Neolithic, obsidian was a desirable raw material, widely used by the communities inhabiting the Rzeszów-Przemyśl loess belt. A relatively high frequency of artefacts in the chipped assemblages, mainly in the LBK context, shows that this raw material was commonly used and could have been imported permanently and on a mass scale. This observation allows for the assumption to be made that its import may have been connected with fixed routes.

In the eastern part of the Polish Carpathians and in the loess part of the Sandomierz Basin, obsidian artifacts are connected with two general groups of sites. The first one comprises settlement-sites. As has previously been mentioned, artefacts made of obsidian were found within all the excavated settlements (the majority of which were the LBK sites) located in these regions. The second group consists of stray finds of obsidian artefacts. They were registered within the Rzeszów-Przemyśl loess zone permanently inhabited by the early Neolithic communities. There are virtually no such finds to the north of this loess zone, i.e. on the para-lowland part of the Sandomierz Basin. On the other hand, they were found in the area located south of the concentrations of the early Neolithic settlements in the Rzeszów-Przemyśl loess belt. These are mainly single finds of blades and flakes discovered during systematic

<sup>1</sup> I would like to thank Maciej Dębiec for his permission to elaborate on the unpublished material from Zwięczyca, site 3.

surface surveys carried out within the Archaeological Record of Poland project. These finds were also registered far away from the zones permanently settled by Neolithic communities. The finds of obsidian artefacts in this zone are not numerous, but their spatial distribution shows distinct regularities. Most of the finds were located within the San River basin. They were arranged in a chain along the course of the upper reaches of the San and Solinka Rivers. Several finds were registered along the Jasiołka River in the zone of its upper reaches and along the upper reaches of the Wiślka River. There are no finds of obsidian artefacts along the upper and middle courses of the Wiślka River and its tributaries in this part of its basin (except for the zone covered by loess). Furthermore, no such finds were also registered in the zones of the lower and a large part of the upper parts of the Jasiołka River course.

The distribution of stray finds of obsidian artefacts in the eastern Polish Carpathians is shaped in semi-rows, conditioned by the course of rivers. These rows (obsidian finds located within the San River Basin) had their beginning in areas permanently settled by the early Neolithic communities (Rzeszów–Przemyśl loess belt) and finished ended in the high parts of the Lower Beskid, mainly in the Bieszczady Mountains. I suppose that these finds may indicate the routes of trans-Carpathian relations in the early Neolithic. Taking into consideration the distribution of obsidian artefacts in the eastern part of the Polish Carpathians, the most convenient routes of movement, convenient fords to cross the Carpathian rivers and places enabling easy crossing of the main Carpathian ridge (passes), it appears possible to indicate several likely routes of trans-Carpathian communication during the early Neolithic. The suggested routes could lead from the main Carpathian Ridge towards the south as far as the areas rich in obsidian located in south-eastern Slovakia and Hungary (Fig. 4).

The first route (A) was connected with the course of the San River and its several tributaries within the upper part of the basin. It began in the area inhabited by the LBK community near present-day Rzeszów. It ran along the Strug River (a convenient area for travelling) and joined the main course of the San near the bend of the river. Its eastern branch ran along the San River to the area of inhabitation of the LBK slightly to the east of present-day Przemyśl and Kormanice. A possibility cannot be excluded that another branch of this route might have led north. There are several convenient routes which could have joined the “San route” with the LBK settlements near Przemyśl. The main course of Route A was of meridian orientation and ran along the San River. Its first branch (A1), as is suggested by the finds of obsidian artefacts, could have run along the Osława and Osławka Rivers, across the Łupków Pass, then along the Vyrava and Laborec Rivers towards the natural deposits of obsidian. The second branch of Route A (A2) could have run from the San River towards the south, along the Solinka River (a tributary of the Solina River) towards the Nad Roztokami Pass, and along the Cirocha and Laborec Rivers, towards the zone of the natural deposits of obsidian. These routes on the northern side of the main Carpathian ridge could have also been used during the younger periods of prehistory. This supposition is confirmed, for example, by the finds of Roman coins from Cisna (Madyda-Legutko

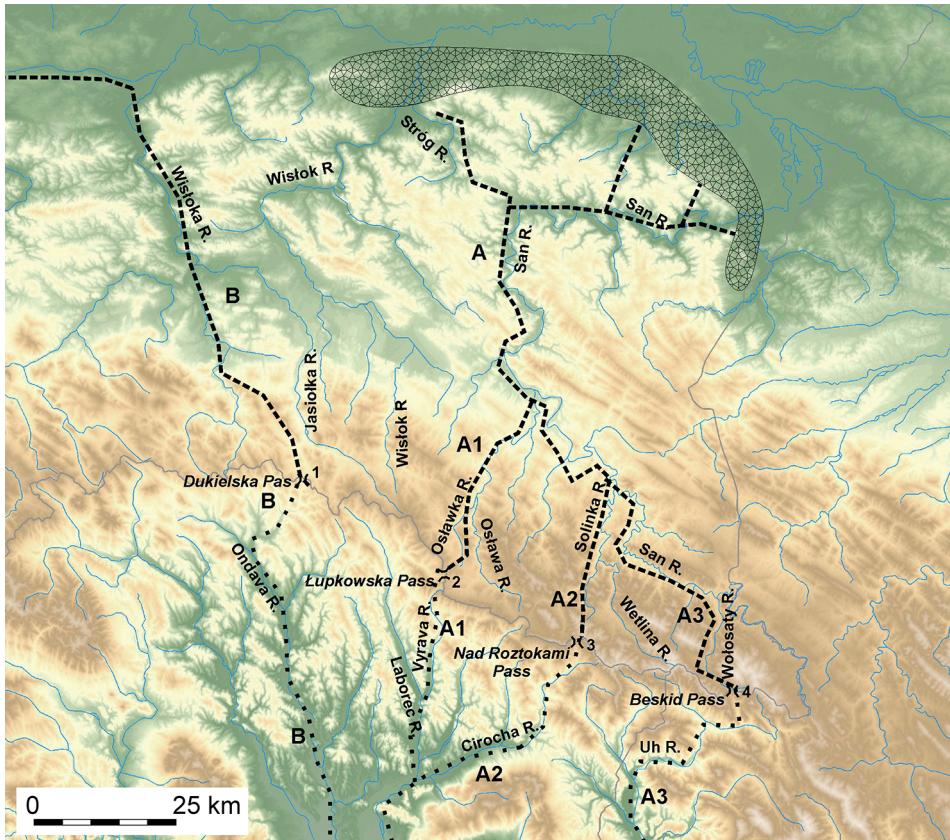


Fig. 4. Proposed possible routes of trans-Carpathian contacts defined by finds of obsidian artefacts

1995, inventory no. 95), Kalnica Góra (Madyda-Legutko 1995, inventory no. 259) and Prełuki (Bodzek, Fedyk, Kotowicz 2019). Finally, the third branch (A<sub>3</sub>) could have run along the San River and the Wołosaty Stream, across the Beskid Pass, and further along the Uh, Latorica and Bodrog Rivers towards the deposits of obsidian.

The finds of obsidian artefacts registered along the Wisłoka River indicate the route which ran through the Dukla Pass and further to the south along the Ondawa River towards the deposits of obsidian. This route did not directly lead to the area occupied by the Early Neolithic communities in the Rzeszów-Przemyśl loess zone. Moreover, it distinctly omits the area from the west. Regarding the distribution of finds of obsidian artefacts in the eastern part of Polish Carpathians (Route A and its branches: A<sub>1</sub>, A<sub>2</sub> and A<sub>3</sub>), it can be supposed that this route did not play an important role in the contacts between the early Neolithic communities which inhabited the Rzeszów-Przemyśl loess belt and the Neolithic people living in the northern part of the Carpathian Basin.

A general analysis of the dispersion of single finds of obsidian artefacts in the eastern part of the Polish Carpathians clearly shows that these finds were registered mainly in the San River basin. The location of these sites clearly suggests that probable routes of contacts between the early Neolithic communities occupying the Rzeszów–Przemyśl loess belt and those from eastern Slovakia and Hungary ran mainly across the passes of the Bieszczady Mountains. The route through the Dukla Pass used to be of secondary importance, providing it was used at all, by the early Neolithic people from the Rzeszów–Przemyśl area. Their course (routes A, A<sub>1</sub>, A<sub>2</sub>, and A<sub>3</sub>), as suggested above, was convenient for a number of reasons. An important piece of evidence to support supporting the suggested the course of the proposed routes takes into consideration natural conditions which enabled to travel along those ways. Moreover, the routes which joined the zone of the early Neolithic occupation in the Rzeszów–Przemyśl loess belt and the area of natural deposits of obsidian in the Tokay and Zemplin Mountains, the routes which crossed the Bieszczady Mountains passes were several tens of kilometres shorter than the alternative route via the Dukla Pass. Consequently, by using the trails across the Łupków, Nad Roztokami and Beskid Passes the journey could be shortened by several days.

Furthermore, the transportation of obsidian through these routes required much less effort than it was the case when using the roundabout route along the Ondava River, via the Dukla Pass and along the Wisłoka River (there is also no archaeological evidence confirming the use of this route by the Neolithic people living in the Rzeszów–Przemyśl region).

The suggestion presented above refers to the general patterns of the early Neolithic settlement on the loess upland of southern Poland. There were two main concentrations of the LBK settlements in this area (Czekaj-Zastawny 2008). The western one covered the loess uplands of the western Little Poland, and the eastern concentration was connected with the Rzeszów–Przemyśl loess belt. The concentrations were separated from each other by a zone of several tens of kilometres in breadth which was not occupied by the LBK communities. Within the settlements of both concentrations of the LBK sites, there were registered obsidian artefacts and pottery fragments of the Bükk culture (Kaczanowska, Godłowska 2009). The propositions presented above may lead to the conclusion that each of the LBK agglomerations in Little Poland was linked to the zones of the natural deposits of obsidian and the areas inhabited by the Bükk culture communities by means of different routes. In the case of the LBK sites located in the Rzeszów–Przemyśl loess belt, the main route of trans-Carpathian contacts ran along the San River and along the previously mentioned tributaries of the upper part of its basin, across the Łupków Pass and along the Vyrava and Laborec Rivers (A<sub>1</sub>); through the Nad Roztokami Pass and along the Cirocha, Laborec and Ondava rivers (A<sub>2</sub>); through the Beskid Pass and along the Uh, Latorica and Bodrog Rivers.

The route along the Wisłoka River, through the Dukla Pass and along the Ondava River (and probably also other routes crossing the main ridge of the Carpathians to the west of the Dukla Pass) could have been used by the LBK communities that inhabited the loess zone of western Little Poland.

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ISSN 0520-9250  
ISBN 978-83-61416-69-2