## Cemeteries with chamberless barrows: eastern and south-eastern group of funnel beaker culture. differentiation, chronology and origin

## **ENGLISH SUMMARY**

This elaboration is an example of a multi-aspect data analysis of funeral rites of funnel beaker culture (FBC) societies in eastern and south-eastern group. The main research objects are cemeteries of chamberless barrows as well as flat graves. Their morphological character and different context of their occurrence raise a numer of many important questions. Why were not they uniform? What is their chronology and origin? Why were they situated in specific natural and cultural landscapes? What were their functions and social significances? A large variety of analyses were conducted in order to give answers to these questions, *e.g.* statistical analyses and analyses based on Geographic Information System (GIS)

As a result of in-depth morphological observations of barrows several basic types as well as subtypes of these objects have been distinguished. They include structures equipped with a huge stone kerb (Type A), structures with a timber palisade (Type B), structures containing a small stone kerb and/or a stone pavement (Type C) and mixed stone-wooden structures (Type D). In the case of Lesser Poland Type E have been additionally determined. This type of barrows contained neither stone nor wooden components. It should be noted that actual ratio of barrows in two aforementioned territories is difficult to estimate due to their different state of preservation.

Some interesting facts are provided by the chronological analysis employing radiocarbon and relative data (stratygrapy and artifacts). Based on the broad data analysis it seems that cemeteries of chamberless barrows probably appeared not earlier than *ca.* 4000 BC and *ca.* 3800 BC in eastern and south-eastern group, respectively. Nowadays it is difficult to ascertain their time of "active" functioning. Nevertheless, it seems that they were not built at the end of the 4<sup>th</sup> millennium BC. It is still an arguable issue whether they were built from the beginning of FBC or they appeared a little bit later in the context of larger stability and spatial success of this cultural unit?

The next part of our study is focused on *stricte* funeral issues. A basic anthropological parameters (sex and age) have been analyzed in the context of their relations to the grave equipment. Unfortunately, parameters of many remains of bodies have been never elaborated. Moreover, only ½ graves have been equipped. Therefore, it is difficult to show in a statistical

way whether sex and age of the dead entailed the content of the graves pits. Nevertheless, it seems that some of artifacts (collared flasks, blades and retouched Volhynian blades) were more readily introduced to the men graves than to the women graves.

A possible non-funeral role of chamberless barrows is of high relevance. Based on the statistical and GIS methods it was attempted to establish where and why cemeterires of chamberless barrows were located. This type of sites were preferably (with some exceptions) located in topographically impornat niches. It applies to eastern as well as south-eastern group of FBC. In Kuyavia territory barrows were placed typically on the sandy dunes, *e.g.* in Wietrzychowice, site 1 or Sarnów, site. 1 and Opatowice, site 1. Likewise, cemeteries in Lesser Poland were placed on the terrian with great exposure. This knowledge in combination with a symbolic role of "water" in FBC societies was a foundation of the hypothesis about a communication role of barrows in both territories. To verify this hypothesis, a few arbitrary extracted sectors of FBC cemeteries were tested by Viewshed method. The results imply that visibility relations might have existed between many chamberless barrows as long as local area were deforestated. This holds true for FBC economy in Kuavia as well as in Lesser Poland (M. J. Dąbrowski 1971; J. Kruk 1980; M. Makohonienko i in. 2006).

Furthermore, in the course of spatial analyses a lot of attention was focused on the internal relations within the cemeteries, *i.e.* a different distribution of barrows with regard to other barrows as well as other structures (graves). In the Middle Pommern cemeteries with linear distributions of barrows are well-known. Very similar situation has been observed in Flintbek on the Schleswig-Holstein penisula (e.g. D. Mischka 2012). On the other hand, another type of barrows placement was discovered in Sarnów, site 1 or Wietrzychowice, site 1, where chamberless barrows were placed in rows. Morover, some barrows were built on the forms towering above the others or in other microtopographically relevant places. This kind of relations is ideally illustrated by Sarnowo site 1.

Undoubtedly, many results presented herein are of high significance. Some questions remain still open but it seems that they should be addressed in the future as long as the source database is improved. In particular, it applies to the chronology of the phenomena – its duration, which is impornant for the study of its origin and origin of FBC societies. Different genetic interpretratios of funnel beaker culture cemeteries are well-known (M. S. Midgley 1985; L. Czerniak 1994; S. Rzepecki 2004; 2011). Some of them are very attractive and refer to the issues of social transformations in the Paris Basin area, which triggered a parallel migration leading to the "beakerisation" of Kuyavia territory (already since 4400 BC). However, many radiocarbon and relative chronology data are in contrast to this theory.

Furthemore, it is difficult to accept the theory of Brześć-Kujawy group of the Lengyel culture transformations into the FBC barrows/cemeteries.