

The studies the oldest part of our history are focused mainly on detailed description of the stone artefacts, which provides the basis for subsequent attempts to trace the changes taking place in Paleolithic communities. Studies of animal remains, which were discovered together with stone artefacts, are extremely valuable complement of archeological information. They provide a valuable source for determine, which animal species were the main source of food or raw materials for making tools, ornaments for Paleolithic societies and which species were only a supplement to the primary sources. Based on the signs on animal remains left by tools of Paleolithic hunters it is possible to reconstruct their behavior, for example, which parts of bodies were transported to the site, how killed animals were skinned, dismembered and filleted, etc.

Between 30,000 and 20,000 years ago, rapid climatic changes occurred as the Scandinavian ice sheet expanded. Not only did palaeoenvironments change, but human societies also transformed themselves. A considerable cultural unification occurred in Europe, which resulted in the origin of the Gravettian technocomplex. Throughout the next millennia, Gravettian hunters occupied a huge part of Europe, in an area covering several million square kilometers, stretching from the Atlantic Ocean to the Russian plains. Gravettian is one of the most important periods in modern human development. On whole area of Gravettian culture people used very similar tools with very characteristic shouldered points and backed blades, made characteristic and famous female sculptures so called "Paleolithic Venuses" (with most famous "Venus of Willendorf"). During this period people for the first time in history of mankind stay in semi permanent sites by long time – even years (e.g., Pavlov I, Dolní Věstonice I and II (Czech Republic) sites). They not afraid hunting the "Ice Age beasts" – woolly mammoths (sometimes in huge number), cave lions and cave bears.

One of the main objective of this project is to complete zooarchaeological and taxonomic studies of mammal remains discovered at Pavlov I (Czech Republic) - an early Gravettian site, dating back to about 29-27 thousand years BP. Connection of zooarchaeological data collected earlier during studies of osteological materials from other sites located near Pavlov I such as Pavlov VI, Dolni Vestonice I and II will enable creation of hunting strategy model and hunting preferences for hunter-gatherers societies from early stage of Gravettian culture. There will be possible reconstruct hunter behaviors during processing killed animals. We can not exclude that on based on knowledge of the exact location of mammals remains and the results of taxonomic and zooarchaeological studies it will be possible to reconstruct the spatial organization of Pavlov I site.

Kraków Spadzista is one of the most famous and important Gravettian sites in Poland and the rest of Europe. Fieldwork there started in 1968 and continued with few stops until 2013. For 45 years, 10 trenches covering an area of about few hundred square meters were excavated. During the field work there were discovered few dozen thousands of stone artefacts and nearly thirty thousand mammals remains. Most of bones and teeth belong to a minimum of 92 mammoths that have been killed and dismembered directly at the site. Hypotheses explaining the creation of this site changed during years when there were collected of data from studies of archeological and paleontological materials. New information allow state us that the archaeological excavations were located in different parts of one large (of nearly hectare) site. Despite more than 45 years of excavations, the exact extent of this site is unknown. It is known for its southern and northern border however nothing is known about its eastern and western range. It should be noted that also unknown is the size of the mammoth bones accumulation located in the northern part of the site. If the border of the site will be found it allows more precise reconstruction of spatial organization of this site. It will be also possible more accurately determine the number of dead mammoths if mammoth bones accumulation will be precise identified. Mentioned above information allow to answer question how long stayed at the site groups of hunter-gatherers as well as the probable size of these groups. At the same time based on a series of geological drilling will be performed reconstruction paleorelief of this site, which will help better understand how it worked in the past.

The proposed study significantly make wider our knowledge about Gravettian societies in Central Europe. They contribute to a better understanding of the spatial organization Pavlov I and Krakow Spadzista sites. Results of zooarchaeological studies will determine which kind of activities were made at the sites.

The data collected in the project will have an impact on the learning hunting preferences of Gravettian communities, determine which species were the main source of food, raw materials for making tools and ornaments for hunter-gatherers. This will allow complement, expand and verify the status of our knowledge on the use of animal species by hunters of Gravettian culture in a time of rapid environmental changes associated with a significant cooling of the climate during the Last Glacial Maximum (LGM).