

The main objective of the proposed project is to reconstruct the history of Epigravettian settlement in southern Poland between 19,000 and 15,500 cal BP. This is a very important period following the Last Glaciation Maximum (LGM), occurring between the disappearance of a very visible mammoth hunting culture (Gravettian) and the earliest Magdalenian hunters. This span of time is poorly known, with only a small number of publications about it. The specific objectives of the project are:

- define the time frame of Epigravettian settlement in Poland, specifically the dates of its first appearance and of its end as well as describe the palaeoenvironmental conditions prevailing in southern Poland;
- determine the functional diversity of Epigravettian sites and uncover evidence to indicate whether site functions changed over time or individual localities were contemporary;
- describe the hunting strategies and supply of lithic raw materials;
- specify changes within the typology and technology of lithic materials.

These studies will be implemented on the basis of interdisciplinary research in the fields of archeology, geology, paleontology, palynology, anthracology, and physical and physico-chemical research, including radiocarbon dating. Implementation of the project and achievement of the set goals will allow reconstruction of the Epigravettian recolonization of southern Poland. The project's outcomes will include details about material culture, and address issues related to paleoecology. These outcomes will also help clarify the process of the disappearance of Epigravettian settlement in the context of the Magdalenian culture appearing in Poland. The final results of the planned project will initiate new approaches to studies of the Epigravettian, and, to a certain extent, Magdalenian settlement in Poland.

The unspectacular materials of this culture did not attract many Polish researchers, in comparison with the earlier Gravettian and later Magdalenian inventories. This is directly reflected in the small number of publications concerning Epigravettian settlement in Poland. This problem is more than just a lack of comprehensive syntheses, but above all it is associated with a small amount of detailed material studies. To sum up, it seems necessary not only to study the already existing Epigravettian inventories, but also especially to conduct new field studies at selected sites, namely Piekary IIa, Przegorzały II, Targowisko, and Brzoskwinia. The intent of the new work is not only to acquire new materials, but above all to carry out comprehensive geological and paleoecological studies and enlarge the list of radiometric dates, which is needed to clarify the chronology of this settlement. What is particularly important is determining if large flint workshops located in the Kraków area (Piekary IIa and Kraków Spadzista B + B1) coexisted with smaller hunting camps such as Sowin and Targowisko. The new studies will also define prevailing paleoclimatic conditions, and verify previous ambiguous assignments of cultural affiliation at certain locations, such as Brzoskwinia, which in the current literature is considered an example of a Magdalenian flint workshop

The planned fieldworks will be carried out using contemporary research techniques which were not applied in the older excavation. This pertains especially to three sites; Piekary IIa, Przegorzały II, and Brzoskwinia. The use of other new research techniques, such as the dating of loess samples using optically stimulated luminescence (OSL), will allow the determination of ages of loess sequences, which is particularly important in the case of sites where organic material is poorly preserved or does not occur at all, such as at Przegorzały II and Brzoskwinia. To reconstruct the natural background, samples for palaeobotanical, palynological, and malacological analysis will be collected and studied. The project will also perform use-wear analysis of lithic tools from Epigravettian sites. This work will be done not only to determine the function of the artefacts themselves, but also to reconstruct the spatial organization of different functions at individual sites.

The planned field and laboratory studies will be of fundamental importance for the furtherance of knowledge about Epigravettian settlement in Poland. The research work proposed here is the first comprehensive and interdisciplinary project focusing on this major part of Polish prehistory, and will significantly help in reconstructing the process of cultural changes occurring between 19 – 15 ka cal B.P., ending with the replacement of Epigravettian foraging societies by Magdalenian people. The current state of knowledge does not allow a determination of the pace at which these changes took place, or even their nature.