The high-mountain rock art sites in Kyzyl Dara gorge in Uzbekistan

The aim of the project is to analyze rock engravings in the Kyzyl Dara gorge located in Uzbekistan, on the western foothills of the Tien Shan mountains. The group of sites was discovered in 2019 by members of the archeological expedition of the Institute of Archeology, University of Warsaw. Mentioned expedition has been conducting intensive research on prehistoric settlement in this mountain region for six years now. Research conducted so far has focused on Paleolithic sites in two neighboring valleys. However, during the survey between the vales, a few very rich clusters of rock engravings (so-called petroglyphs) were discovered. The petroglyphs are located on a mountain ridge halfway between the two valleys where archaeological work was conducted to date.

Preliminary documentation of the place, prepared so far, allows to estimate that at this previously unknown archaeological sites are several thousand depictions placed on vertical rocks at an altitude between 2600 and 3100 m a.s.l.

The project plan includes complete documentation and multidirectional analysis of this one of the highest located and at the same time one of the richest group of sites with rock art in Uzbekistan. The methods that will be used are not only analysis of depictions and typology, but also spatial and micromorphology of carvings analyses. or analyses necessary to date an absolute chronology using several methods. An important element of the project will be absolute dating of petroglyphs using several methods and comparing their results.

The first stage will be complete documentation of the main cluster and determining its exact range. For this purpose, photos of individual petroglyphs will be taken, as well as photoplanes of the entire site using a drone or a kite. This will allow spatial analyzes to be performed within the main concentration of petroglyphs. In addition, 3D models will be created for selected petroglyphs based on the photos taken, which will then allow the analysis of the micromorphology of the engravings themselves and determine the material of the tool with which they were made. This analysis is important because one of the most difficult aspects of analyzing rock engravings is determining their age. Recognition of the material may allow determining their approximate age.

The second stage of research will be the analysis of the performances themselves and their mutual relations. Both figural representations of animals, as well as abstract and symbolic representations, will be analyzed. An important aspect will also be a comparative analysis of performances from other known rock art sites from the area of Uzbekistan and all of Central Asia.

Several methods will be used to determine the age of the petroglyphs. The samples used for dating will come from the test trenches and the carvings themselves. To obtain the results of absolute dating of the layers at the sites test trenches will be made, and for direct dating of petroglyphs, manganese patina samples will be taken.

Spatial analyzes of the main cluster and its surroundings will also be carried out using the GIS environment. This will reveal the features that distinguish the place where this exceptionally numerous grouping of petroglyphs is located, as well as its relations with two valleys located west and east of the site, containing traces of settlement from the Middle Paleolithic to the modern period.

Petroglyphs located in the mountains of Uzbekistan are a gateway to looking into the ways of thinking of prehistoric communities. Their analysis can be not only the way to understand the evolution of human creativity and abstract thinking skills but also allows a unique experience to touch the most ancient past of the Indo-European peoples with whom some researchers connect the Bronze Age and Iron Age communities of Central Asia.

The summary of the presented project will be a picture of the archaeological sites fulfilling a specific role for a certain community, functioning in a specific period of time. The project will also be the first step to expand the range of analyses used in Central Asia with modern methods for dating petroglyphs. Using several methods will allow us to compare results and also verify their effectiveness in this type of sites.