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PLEISTOCENE ART OF THE WORLD

Short articles



TECHNOLOGICAL STUDIES OF SIBERIAN PETROGLYPHS (SITE OF SHALOBOLINO, KRASNOYARSK REGION)

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This paper presents some results of technological research to understand the petroglyphs on the Shalabolino site, attributed to the Neolithic and more recent periods. The technology used played an important role in the expressive system of rock art.

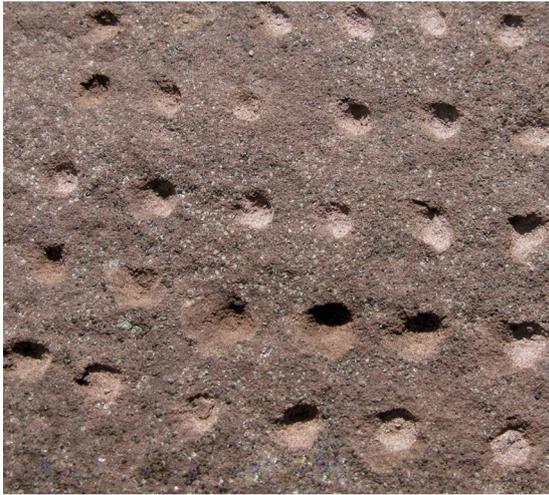
The fundamental question is how the information about technology can be useful for achieving the main goals of archaeological studies, i.e. how this data can help us in dating petroglyphs. So we propose a new approach which considers technology as one of the possibilities in rock art to give a necessary shape and special visual qualities to the image. This characteristics could be accepted by ancient people as one of the attributes of the image (or of the sign). But for a complete vision it must be remembered that this approach is not applicable for a few petroglyphs and the extensive materials must be attracted in the research.

The aim of our study is to test these approach on the materials of big site which includes much good examples of petroglyphs which could be studied with technological viewpoint. Here we present the first results of our technological studies of Siberian petroglyphs. In our experimental study we used different sorts of stones: flint which is not a local rock material, but which gives good results, and the local material which is practically not appropriate for making tools. We also used different sorts of metal: bronze, brass and iron. The local rocks consist of blocks of solid Devonian sandstone. In every experiment we used indirect percussion technique.

The first experimental series shows the difference between the images made by stone tools and metal tools. In the first case the borders of cupules are uneven and torn because the working edge of the stone tool gradually gets destroyed so that on the rock surface the cupules will have different shapes and an uneven periphery. It is noticeable in every part of the image. With metal tools we produced every time cupules of the same shape. As a rule the form of cupules is roundish because of the blunting of the working edge of the metal tool during the work.

Experimental research shows that it is practically impossible to use the tools made out of local rock for the petroglyphs because of its fragility. Every tool in local rock used for experimentation broke after a few strokes. And it was inappropriate for further percussion or its working edge was so massive that the cupules after its application were too large and we didn't find similar cupules on the site.

In this phase of research we just studied some of the most expressive petroglyphs of the site to show how traceological and experimental methods can be useful for technological study of the rock art. And we can see some results and perspectives:



the cupules of metal tool



the image created by metal tool



the cupules of stone tool



the image created by stone tool

The cupules made by different instruments.

1. the combined method of experiment and traceology lets us identify the material of instruments used for the creation of petroglyphs. It is possible to recognize the difference between stone and metal tools used for the creation of images;
2. one of the fundamental aspects in technological studies of rock art is the methodological role of technology in the system of means of expression in rock art. The frequency of repetition of one technological complex perhaps reveal that these signs compose a tradition in rock art. An information about the technology of rock art must detail and renew our way of thinking about cultural and chronological attribution of Siberian petroglyphs;
3. the direction of new research is the experimental and traceological studies of cupules made by different metal instruments and the detection of traceological indicators of their impact.





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