

Cataloging of Kapova Cave rock art

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Abstract

Kapova cave is a well-known decorated cave in the South Ural mountains. Studying this site has been on for 50 years. We prepare a publication that will sum up that study. In our work we use some new methods, which we believe can be very useful for rock art research.

Kapova cave is the Russian name for the only formally recognized Paleolithic decorated cave in Eastern Europe. It is situated in the Bashkortostan Republic, and the native people there call it Shulgan-Tash. It is one of the largest and most beautiful caves in the Ural mountains, which are the frontier between Europe and Asia. The total length of the cave's passages is about 3000m, with an amplitude of 160m. It has an underground river and lakes, 40m deep pits and 20m high ceilings. This cave is well-known between Bashkirs. The first published description of Kapova cave is dated to 1760. After that date at least 5 publications about the cave are known before 1959, when Alexander Rumin published his discovery of some paintings in Kapova, which he ascribed to a Paleolithic age. This date is the starting point of Kapova cave archeological research.

Today about 250 images have been found and described. The paintings were dated by V. Scelinski to $14,680 \pm 150$ years BP (Scelinskij & Sirokov 1999). Most of them are hard to read: just about 35% or 40% can be distinguished. All the known images are concentrated in five chambers: First Gallery, Cupol Hall, Signs Hall, Chaos Hall and Drawings Hall. All the halls, except for the Drawings Hall, are on the Middle level of the cave and easy to access, because this level is where the entrance to the cave is located. Drawings Hall is on the upper level and one must climb a 40m high pit to access this part of the cave.

Most of the images are just faint spots of ochre. Special techniques are thus necessary to try to make the images more distinct. In our research we only work with photos. We never touch the walls for any reasons. So, all of our techniques are absolutely safe for the Paleolithic pictures.

A few words about statistics. From the 40% images that can be read, about 40% are zoomorphic, about 10% can be read as anthropomorphic and about 45% are non-figurative signs. The zoomorphic images include about 10 horses, 8 mammoths and

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1 or 2 bison. For other zoomorphic figures it is impossible to distinguish the species. That statistic will be checked in our next expeditions and may be a little modified.

Anthropomorphs are very schematic in most cases, drawn with a few lines, and in very faint condition. Just one or two have some individual features and those are just in a specific “dancing” pose (Fig. 1).



Fig. 1. So called “Anthropomorph of Chaos Hall”.

Geometrical signs are trapezoids (Fig. 6), triangles (Fig. 2), tridents (Fig. 3) and several groups of lines with dots.



Fig. 2. Two triangles in Signs Hall.



Fig. 3. Trident in Signs Hall.

Many images are covered with calcite. There probably exist many more Paleolithic paintings on some walls covered with calcite.

Because of the cave having been known to native people and entering it was limited just a few years ago, lots of degradations have occurred. Many walls of the cave are thus covered with modern graffiti often on top of paintings (Fig. 4).



Fig. 4. Niche in Cupol Hall.

When I started my investigation at Kapova in 2001, approximately 50 red ochre drawings had been described (Scelinskij & Sirokov 1999), two books published (*ibid.*; Bader 1965) and a few articles.

Fragmentation of information led to think that further research would be impossible (Formozov 1987). In 2001 I couldn't get an overall view of the site from the publications available. Thus, my first purpose was to get as comprehensive information about Kapova as was possible. This took me eight years to complete, and today we are preparing a publication as a catalogue of Kapova cave.

Collecting the information and data about the puzzle that Kapova was at the time not only meant describing and photographing the Paleolithic drawings but also showing their natural and cultural context.

Yuri Liachnitsky, a geologist from Saint-Petersburg and one of the famous researchers of Kapova, has monitored the cave interior and exterior for the past ten years. The data collected by Liachnitski are an important part in the general research of the site. So we are going to publish a geological and speleological description of the cave and data of its microclimate in one book, together with the catalogue of its Paleolithic paintings. Under Liachnitsky management other studies were carried out, such as microbiological research. All should find their place in the publication.

Also in the book there should be published a paleontological overview of the Ural region and some concerning Kapova.

Four archeologists, have been studying Kapova cave from 1960 onwards. They are Otto Bader (Moscow), Viacheslav Schelinski (Leningrad), Viacheslav Kotov (Ufa) and Viacheslav Zitenev (Moscow). All of them made their own discoveries and collected

specific data. The archeological context is one of the most important and interesting lines of research in the cave and should be presented at length in the catalogue. For example, the dating of the paintings is based on Scelinski's research. There was an ochre painted boulder found in his excavation in the 1980-s, so the use of ochre in the cave can be chronologically assessed. Very impressive findings were also made by Kotov and Zitenev in the last years.

The Burziansky region of Bashkortostan, where the cave is situated, is one of the wildest regions in Europe. People there have a quite original and rich culture. Though nowadays most are Muslim, the people there still keep their pagan beliefs and mythology. One of the archeologists (Viacheslav Kotov), while going on with his study of the cave, also gathered those traces of ancient beliefs, and his studies are very important for understanding the cultural context of Kapova (Kotov & Bashkirski 2006).

Thus, Kapova cave catalogue will not just be a photo-album, presenting some pictures. It is prepared as a comprehensive result of 50 years studies of the site in all their diversity. That book, in our opinion, should be an Encyclopedia of Kapova, though its structure will not be that of a dictionary.

The same principles guided our research. We refused to judge which paintings were worth to retain and study and which were not. We were afraid of doing a fragmented work, because we think that the scientific weight of a fragmented publication is quite low. It was accepted that the only criteria available to discard a painting for not being Paleolithic, is when it consists of an inscription in any of the modern languages. We got plenty of modern inscriptions in the cave, especially in Russian, though some are also in Arabic and others with Latin letters. Thus, we think that any pictures that cannot be read as a set of modern letters should be described in our catalogue. And even more: there are some drawings, that can be read as separate letters of different alphabets, for example the letter "X", that can also be read as a cross, or "O" as a circle, and so on. In this case we also include them in the overview, because we cannot be sure what exactly was drawn.

Before we started our work in the cave, it was accepted by scientists that there only red painted pictures could be ascribed to the Paleolithic. We question this statement. There are a number of black pictures in the cave. In general, they can hardly be distinguished and you cannot tell what is pictured. Usually they look like symbols of an unknown type, sometimes they are alike some unclear letters of unknown scripts. Some scientists said they were not worth talking about. In our opinion, as far as we cannot ascribe them to any language, they should be inventoried.

We also found some 3-dimension figures, one of them during my studies of Alexander Rumin's archive publications.

Thus, there are six types of pictures known in Kapova cave:

1. Red ochre paintings. They have a strong red component and sometimes a light yellow one. This is the most numerous group in the cave.
2. Polychrome pictures have a strong red component, a yellow one of almost the same intensity or a little lighter. Also there can be some other tinges in the pigment.
3. Clay bas-relief were made with clay and sometimes afterwards painted with ochre. In some places we can see the ochre residues on the clay remains. This is the most destroyed group of images.
4. Black images. I cannot tell now if they were made with charcoal or oxide manganese. They are quite numerous.

5. Bas-reliefs are natural forms. Their dimensions vary from several centimeters to several meters. The largest is about six meters long. The smaller ones can sometimes be prepared to be more suitable for the painters' tasks.
6. Engravings. Only one or two, recently discovered in the cave, are still disputable.

Another part of our concepts for the catalogue is to allow no interpretations. We try not to interpret what is pictured on the wall. Sure, there are some images that are well-known and paleontologists we've been working with can easily define the species. But no more than 20 animals can be identified. And there are lots of problems with other images. Here we got a specificity of Kapova, as compared to well-known decorated caves in Franco-Cantabria. The percentage of well-identifiable pictures is quite low. From about 250 registered images in the cave not more than 40% can be read. And even in that "can be read" group the subject is often debatable. Otherwise, during our study we had to review some statements from previous researchers and we found some obvious mistakes. So, not to narrow the opinion of future researchers we tried not to interpret the images. We decided that interpretation is not the subject of our work and all our thoughts about "what is painted there" are left for future publications.

The technical details of our work were described before in my *INORA* publication (Solodeynikov 2005). Here I had rather to talk about more abstract questions which, I believe, are more important.

Nowadays we know three methods to publish rock art. First is the researcher's drawing of the image. Second his photography. The third, brand new, became available in the last decade: the result of digital processing. If we demand an objective representation of the material, it is obvious that the first type of publication should be minimized. Some examples show its shortcomings (Fig. 5). It is obvious that we can draw just what we can see. And before we start to draw we have to *know* what we are going to draw.

Behind this characteristic of the human mind, too many factors make the copyist's work not objective. Physical condition is case in point: he can be more or less tired, hungry, h ill and so on. Then, with different types of lighting we obtain different results – and this is also a point where objectivity can be at fault. Everybody knows how one image can differ if we illuminate it with a candle, different types of electrical lamps or with a flashlight. And there is more: even the direction of the illumination can produce different images for one original. Two images made with different lightings are obviously different (Fig. 6). Even photography –the second way to publish rock art– can distort the perception. This results depend on the skills of the photographer, the quality of his apparatus and some others factors, human or technical.

The third way of publishing, described in my *INORA* publication (Solodeynikov 2005), helps to solve the problem of objective representation. Of course, the qualification of the researcher is still very important, as an apparatus demands. But we do not depend any more on lighting direction, for example. Also we can reinforce our eyes capability (Fig. 7).



Fig. 5. Upper, publication of an image in Bader 1965 (*Drawing by K. Nikachristo*).
Middle, photo. **Lower**, the same photo, digitally processed.



Fig. 6. Trapezoid in Signs Hall. Variation of lighting.



Fig. 7. Barely seen Mammoth in Drawings Hall.

That does not mean that this digital method of processing should always be preferable, as, despite its advantages, it also has its weak points. For example, it doesn't allow us to view the painted image in relief, which is very important for its perception. Also, it only works well so far with colored images, because I have almost no experience in working with black images and engravings, for we have none we can be sure are Paleolithic.

The great advantage of this method is that we can work with the pigment only. That means we can separate the image from the wall relief or sometimes from modern graffiti. Also we can distinguish different types of pigments and then tell about palimpsest and the relative time of painting creation.

In spite of the method's limitations, I am sure that nowadays it should be used in every serious publication, accompanying the photos of rock art samples, whereas I can only see one reason to use drawings nowadays –as an interpretation of palimpsests.

And as long as we decided not to allow any interpretations in our catalogue, there is no place in it for the re-drawings of images. But we work carefully with photos. Every painting we publish was photographed many times, in different microclimatic conditions, during different seasons. We used several angles of lighting and of camera disposition in relation to the wall. Tens of photos were made for every image catalogued. Sometimes we used different photos to obtain a kind of movie –animated pictures, which cannot be printed, but are very useful to find the best lighting conditions.

Thus in our catalogue we print at least three pictures for every image: one that represents the original at its best, second –digitally processed– which allows to view the pigment allocation on the wall, and the third –a photo which best shows the relief of the wall.

Every picture in the catalogue is topographically assigned. We use its coordinates relative to the cave landmarks and its coordinates relative to the nearest pictures. We also provide a topographic map for every picture. So, it will be easy to find their precise location in the cave.

One more important point is to make the publication useable by researchers who cannot read Russian. As a rule, European scientists cannot read Russian publications and our scientists cannot read European ones. And this is very often used by both as an excuse for ignorance. Thus, every picture will be described using Russian and English, to make it a little bit easier to work with. If possible, some text materials will also be bilingual.

Thus, the “*Catalogue of Kapova cave*” is going to be a comprehensive, all-embracing publication of 50 years studies at the sit, aimed at professional researchers of rock art and meant to provide them with a maximum of information about the cave and its paintings.

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SOLODEYNIKOV A. 2012. — Cataloging of Kapova Cave rock art. *In*: CLOTTE J. (dir.), *L'art pléistocène dans le monde / Pleistocene art of the world / Arte pleistoceno en el mundo*, Actes du Congrès IFRAO, Tarascon-sur-Ariège, septembre 2010, Symposium « Art pléistocène en Europe ». N° spécial de *Préhistoire, Art et Sociétés, Bulletin de la Société Préhistorique Ariège-Pyrénées*, LXV-LXVI, 2010-2011, CD: p. 529-538.