

Shishkino Drawings. Engineering-Geological Features of the Unique Monument of Rock Paintings

¹DEMYANOVICH, N.I., ¹LITVIN, V.M. and ¹MELNIKOVA L.V.

¹Institute of Earth's Crust SD RAS, Irkutsk, Russia; Technical University, Irkutsk, Russia

In Siberia there is a plethora of monuments of petroglyphic paintings. "Rock drawings... are like a window on the vanished world, affording a view of the ancient culture of mankind in its most concealed and intimate manifestations" (A.P.Okladnikov). The best known example are the Shishkino drawings - a huge (over 3.5 thousand drawings) "collection" of petroglyphs on walls of a rock massif over 2 km in length.

Planes suitable for drawings had their origins in the landslide process evolving on the slope of the Lena river valley. This explains the step-like arrangement of blocks and the circle-wise distribution of drawings. The massif is divided into blocks following a latitudinal pattern of vertical tectonic fractures. Landslide displacements, caused probably by deformations of deep-seated creeping, were evolving in the central part of the bend almost devoid of floodplain and are not observed on the massif's flanks with extensive portions of floodplain. Judging by the formation of scree, the slope is in the stabilization stage. The scree is continually cut by the motor road and undermined by the Lena waters. Further factors disturbing the stability of blocks are: downward movement of sandstone strata along clay interlayers due to their periodical atmospheric humidification; and selective weathering caused by interlayering of rocks with different stability.

The preservation of blocks and drawings is jeopardized by the cutting of the slope by the motor road, associated dynamic loads and destruction of scree, unorganized visitors, and acts of vandalism. It is appropriate to create here a nature sanctuary with organized visitation, and to remove the section of the motor road beyond the rock massif.