

Navalishinskaya

Summary in Liubin (1989). A karst cave on the right bank of the canyon formed by the river Kudepsta, at the locality known as Shirokii Pokos, south of the village of Krasnovol'sk in the Sochi region of the Krasnodar district. 10-12 km from the sea. 200 metres above sea level, about 100 metres relative height. Two entrances, two parallel 30 metre long galleries, joined by a stalactite passage 8x8 metres in extent. The northern main entrance and the southern small entrance both face east. The main gallery at the front is 4 metres high and 5 metres wide. The maximum thickness of deposits in this gallery is 2.5 metres.

The site was discovered by M. Z. Panichkina in 1936. She put down a test pit at the entrance to the main gallery. Also in 1936 S. N. Zamyatnin dug in two places in the main gallery. (1) a test pit (1x2 metres) in the mid part. (2) a trench (22 square metres) in the entrance part. In 1965 V. P. Liubin excavated 5.5 square metres adjoining the western wall of Zamyatnin's trench. The entire excavated area amounts to 29.5 square metres.

The situation of the trenches in the main gallery is shown in the attached diagram (A). Liubin's stratigraphy is also shown here (top right and B). Reports on the site quoted are Zamyatnin (1940, 1950, 1961), Liubin (1966, 1968), and Liubin and Shchelinskii (1967). In addition, further information is provided by Chistyakov (1996, 95-98), and he quotes two more articles which are relevant, Grichuk *et al.* (1970) and Muratov and Fridenberg (1974).

Stratigraphy

According to Zamyatnin the succession was as follows.

- (1) Black-brown clay with rubble. 50-90 cm.
 - (2) Brown clay with rubble, divided by three ash lenses (a-b-c). 70cm-1.1 m. The lower part of lens b was heavily brecciated, and the bones were dark and mineralised.
- Layer 1 was Upper Palaeolithic, layer 2 Middle Palaeolithic.

According to Liubin the succession was as follows.

- (1) and (1a) grey-brown loams with sharp-edged rubble. Up to 95 cm. (No mention is made of the uppermost deposits, labelled BC, probably means 'upper levels', non-palaeolithic).
- (2) Greenish-grey loam with a yellowish tinge, and slightly weathered rubble. 5-20 cm.
- (3) Yellowish-greenish loam, with somewhat more weathered rubble. 15-40 cm.
- (4) Light brown loam, with rubble. 15-47 cm.
- (5) Dark brown loam, with rubble. 5-20 cm.
- (6) Yellow loam, eluvial limestone horizon. Up to 10cm.

The rubble in layers 4 and 5 is more corroded, and is sometimes covered with a phosphate crust. At the base of layers 3, 4, and 5 there are black ashy lenses.

Layers 1, 1a, and 2 are Upper Palaeolithic. Layers 3, 4, and 5 are Middle Palaeolithic.

Not mentioned by Liubin is a conclusion come to by Grichuk *et al.* (quoted in Chistyakov, 1996) that (unlike the situation in Akhshtyr and Malaya Vorontsovskaya) there was no significant water action in this cave. The proof of this is taken to be the good preservation of ash lenses in both the Upper and the Middle Palaeolithic layers.

Fauna

Determined by V.I.Gromov and N.M. Yermolova. There is an absolute predominance of cave bear throughout, 98.3%. In the Upper Palaeolithic levels, there are a few remains of *Cricetus cricetus*, *Alces machlis*, *Capra sp.*, and *Canis lupus*. In the Middle Palaeolithic there is *Canis lupus*, *Alopex lagopus* (?), and *Capra sp.* The presence of cold loving species in Upper Palaeolithic layer 2 is not considered to be surprising in view of the pollen data from the same level, indicating a cold damp climate with an abundance of open spaces.

Palynology

Described in a report by Klapchuk (1970). Seven samples, one each from layers 1, 1a, 2, 4 and 5, two from layer 3. Pollen grains are abundant but poorly preserved. The pollen spectra indicate fluctuating climatic conditions.

Layer 5. Coniferous forests. AP: *Pinus* 60%, *Picea* 25%, *Abies* 13.5%. NAP: small areas were occupied by Gramineae 20%, Chenopodiaceae 10%, and *Sonchus* 30%.

Layer 4. Warmer and moister. Predominant taiga. AP: *Abies* 72.3 %, *Picea* 10.5%. Increased alder and hazel. NAP: reduced role of Gramineae 12.8%, increased role of Compositae (*Sonchus*, *Cirsium*, *Artemisia*, etc.).

Layer 3. Warmer, relatively dry. Area occupied by taiga somewhat reduced. AP: deciduous trees appear (oak 2.1-7.8%, hornbeam 3.9-6.2%, lime 10.4-13.7%). NAP: open areas occupied by Compositae, rare Caryophyllaceae.

Layer 2. Moister and colder. AP: indicated by peaks of *Abies* and *Picea*, and disappearance of deciduous species. NAP: Compositae.

Layers 1 and 1a. Cold and dry. No AP (*Pinus* grains could be brought in from far away) NAP represented by *Sonchus*.

Archaeology

Poor assemblages in all layers. Indicates short lived occupations. Middle Palaeolithic can be preliminarily described as Denticulate Mousterian. The large number of denticulates in the Upper Palaeolithic requires examination, to determine whether these are due to cultural or natural factors.

Chronology and palaeogeography

Liubin suggests that there is a significant chronological gap between the Middle and Upper Palaeolithic layers. This is indicated by the existence of pockets at the top of layer 3, the lens-like interrupted nature of layer 2, and the rounding of the rubble in layer 2. The pollen diagrams indicate perhaps two cold maxima in the last glaciation, during which the vegetation zones in the Sochi Black Sea coast area were lowered by 1200-1400 metres (the Picea-Abies woods at present are at a height of 1200-1900 metres). The abundance of exfoliated rubble in all levels can be explained by the instability of the local slab-like limestone, the passage-like character of the cave, and the climatic conditions prevailing during the last glacial period, when there was intense frost weathering of the roof and walls of the cave. In Liubin's view, the hostile environment of the last glacial period is also indicated by the thin ash lenses which (he agrees) were present at the base of all the Middle Palaeolithic layers. The cave was visited briefly from time to time, as shown by the poverty of the lithic assemblages. These were temporary camps of cave bear hunters, and when they were present the people were obliged to keep fires going all the while.

Liubin makes no mention of a radiocarbon date for layer 3 of 20,600 \pm 650 BP (from the IIMK RAN laboratory) (Muratov and Fridenberg 1974, quoted in Chistyakov 1996), presumably because he believes it must be too young.

2004 sampling strategy in relation to stratigraphy

In 2004 a new section was prepared at the back of the cave, corresponding to part of the line Q-Z as excavated by Liubin in 1965. The layer numbering used was as in Liubin's summary (1989).

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Navalishinskaya plan and section

A. Top left. This shows the plan of the entrance to the main northern gallery.
W = Zamyatnin's excavation of 1936. N-Q-Z-L-R-D-S = Liubin's excavation of 1965. Top right = A transverse view of the main gallery at the point where the excavations of 1936 were carried out (i.e. facing west).

B. Transverse section along the lines S-N and Q-Z of Liubin's excavation of 1965 (i.e. facing west).