

Science Explorations of Ovcarska Cave from 1928 till Today

Les Explorations de Science de Grotte Ovcarska de 1928 jusqu'à Aujourd'hui

M.Sc. Biljana GICHEVSKI; Macedonian speleological federation
11 Oktomvri str. 42a 1000 Skopje, Republic of Macedonia
www.speleomacedonia.org.mk
e-mail: biljana_speleo@yahoo.com
Key words: Ovcarska Cave, speleological exploration

Abstract

There is a large number of karst areas on the territory of the Republic of Macedonia among which is also the Porecki Basin. It is located in the north-west part of the Republic of Macedonia, that is to say in the middle part of the junction of the river Treska. There have been researched more than 20 caves till now in the Basin. One among them is the Ovcarska Cave which is built in dolomite marbles with precambrium age. The first research is done in 1928 from the Serbian geomorphologist Petar S. Jovanovich. He had made a research on one cave hall. In 2000 two cave levels are researched by the Speleological Federation of Macedonia. On the lower level there have been recorded archeological findings too.

Résumé

Il y a un grand nombre de karst régions sur le territoire de la République de la Macédoine parmi lesquelles est aussi la Cuvette Porecki. Elle est trouvée dans la partie nord-ouest de la République de la Macédoine, c'est-à-dire dans la partie du milieu de la jonction du Treska - rivière. Là, ont été exploré plus de 20 grottes jusqu'à present ,dans la Cuvette. Un parmi eux est la Grotte Ovtcharska qui est construite de marbres de dolomie avec l'âge précambrien. La première recherche est faite en 1928 de géomorphologiste Serbe Petar S. Jovanovitch. Il avait fait une recherche sur un hall de grotte. En 2000, deux niveaux de grotte sont explorés par la Fédération Spéléologique de la Macédoine. Sur le niveau plus bas , ont été enregistrés les conclusions archéologiques aussi.

Introduction

The karst area in the Porecki Basin occupies 584.5 km² or 61.69 % of the whole area. The carbonate surfaces whose thickness is 3000-4000 meters are represented by different types of marbles, dolomite and limestone with different age. The ones that can be found the most are: the white-grey small-grained dolomite, (240 km²), the calcite-dolomite marbles (240 km²), the marble white-grey limestone (45.75 km²), all of them with precambrium age.

The first data about the cave are brought by Jovanovich (1928). He gives this cave the name Second Slatinska Cave, but since the local people call the cave Ovcarska, it is used the name Ovcarska Cave.

Ovcarska Cave is situated in the left valley side of the Slatinska River at an elevation of 580 meters. This cave is on dolomite marbles of precambrium age. In point-blank range on approximately the same elevation are located also the Gorna Slatinska and Slatinska II cave.

Materials and Methods

There is a very small number of printed materials about the Ovcarska Cave. The first printed data is from 1928 under the title "*Карсне појаве у Поречу*" written by Petar S. Jovanovich. In 2007 in the Master's thesis which is under the topic „The Subterranean karst forms in the Porecki Basin and their valorization for the need of spacial planning”, its author Biljana Gichevski (Petreska) states the

most recent speleological research about The Ovcarska Cave. The data about the draft of the cave are taken by the Exploring society „Ursus Speleos” from Skopje and PSK „Zlatovrv” from Prilep.

The method of terrain observation is used in the process of gathering information about the cave and the same is used as a basis for a testing of the accuracy of the data and gained form the previous research. The comparative method enables a comparison between the processes and the occurrence taken into consideration from time and spatial aspect. This method is used while treating the cave in terms of the first and the most recent research. The cartographic method is used in the process of carting of the cave and this method is applied with the rationalisation of the gathered material.

Results

In the expertise about the Ovcarska cave for the first time are presented the morphometrical characteristics by P.S. Jovanovich in 1928. The refer to the entrance and the first hall of the cave. The entrance of the cave looks like rock shelter, because it seems as if it was polished by the corrosive influence of the atmospheric water. The dimensions are 8*7 meters. The first cave hall has a circle form with dimensions 13*8.5 meters and a height of 4.5 meters.

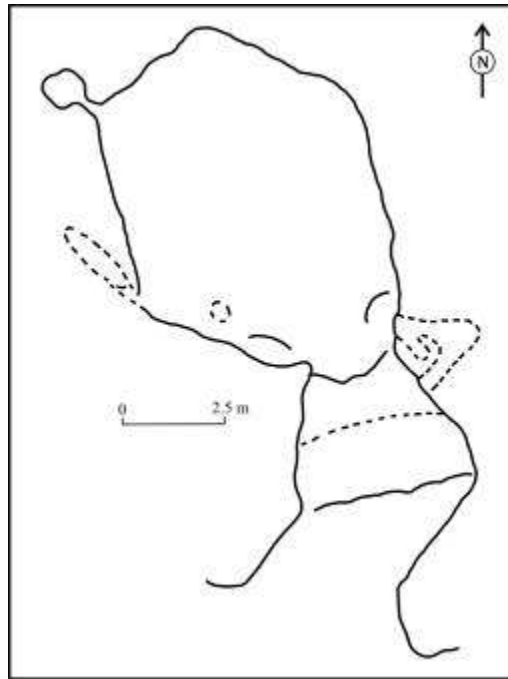


Fig. 1: Plan of Ovcarska Cave, according to Jovanovich (1928)

The cave was marginalised as a result of its dimensions from 1928 till 2000. In 2000, by the research carried out by the speleological Federation of Macedonia, it was opened a passage with dimensions 1.5*0.5 meters and in this way there was an entrance into a new cave hall. The speleologists Mihail Oktavijan Kiua, Oliver Gichevski, Cvetan Bogeski i Dragan Bruskovski paved the way using „the current of the air” and carried out the first reseach of the new part of the cave.

The second cave has approximately a circular form with dimensions 10*13 meters and maximum height of 6 meters. This is followed by a canal 30 meters long. Through his length it can be noticed a fossilised riverbed whose bottom is flaten and of carst, with height of 0.5 meters and there are traces of river terrace. On the bottom of the canal there is a crack with dimensions 2*1 meters and depth of 14 meters which connects the higher and the lower level of this cave. The direction of the straching of the higher level is in the north-west.

One part of the lower level of the cave has a direction of stretching as the higher level and that is the part where can be noticed traces of subterranean water flow. The cave branches into three canals. The first is a smaller circular hall with dimensions 4.5*8, and height of 5.5 meters. Here is noticed a material from ceramics and bones brought by the water flow. The second cave canal has an east-north-east direction. The maximum width is 2 meters and the height is 1- 1.5 meters. The bottom is flat and the inclination is small with a value of 3 Celsius. The length of the whole canal is 67 meters. This cave canal was formed with water erosion. The bottom of the riverbed is flat and the subterranean river flow formed two meanders. Today, most of the canal is covered with travertine basins with a maximum depth of 0.2 meters. The first cave canal is with direction south-west, and then south-east and then it branches into two forks, and the one to have direction in south and the other in north. Through the whole canal there are attachments of cave halls which are among each other separated with sections. The height of the ceiling part is two meters and the maximum height is 11.5 meters. The total length of this canal is 80 meters.

The total length of the cave canals is 268 meters, and the difference in height between the lowest and the highest part is 28 meters.

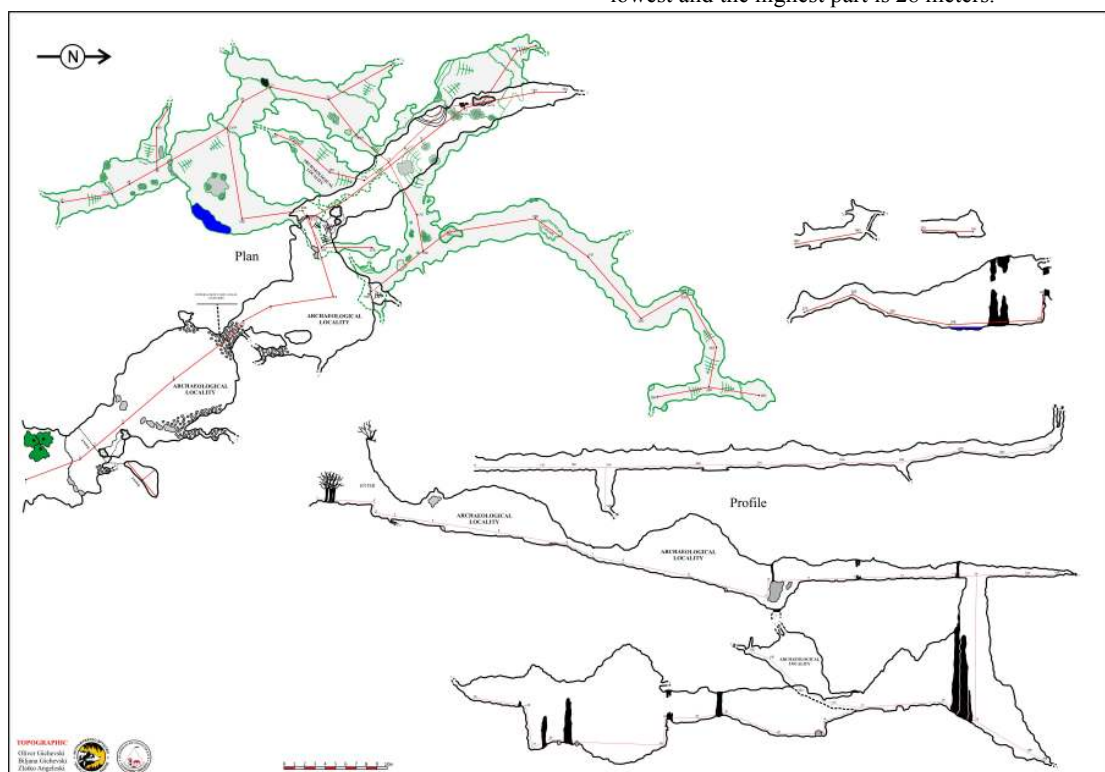


Fig. 2: Plan of Ovcarska Cave (2000)

The cave ornaments on the upper part are represented by small number of stalactites, stalagmites, cave pillars. The most beautiful ornaments are on the upper level and are represented with stalactites, stalagmites, pillars, draperies, basins, and travertine basins. The biggest cave pillars with height of 14 meters are placed in the vertical canal which connects the two levels. Next to it there is a stalagmite with height of 7 meters. The biggest part of the accumulative forms are fossil. Most of them are black, but there are also reddish, yellowish and whitish.



Fig. 3. Cave ornaments in Ovcarska cave



Fig.4. Remains with bones and ceramics in the lower cave level

Evolving of the cave

The entrance of the cave does not show traces of river erosion, unlike the rest of the cave, which does. The evolution of the cave can be separated into four stages. In the first stage there is a flowing of water through the leaks which are widening. In the second, a subterranean river flow is formed on a level of evidenced river terraces in the cave, while in the next stage there is a sidelong

widening of the riverbed on the level of its bottom. In the last stage the cave becomes dry, while in the ceiling and in the sidelong a water is leaking, and thus accumulative forms are made, and in this way there is a partial damage on the ceiling.

The geological age of the cave corresponds to the age of Gorna Slatinska cave and Slatinska II, which are situated in near closeness of the analysed cave, and whose entrances are approximately the same height as of Ovcarska Cave. The age of the caves is determined by Jovanovich (1928), above the cave there is plain Baba (751 meters), which is covered with neogene sediments. Slatinska river valley was going through this neogene part which shows that it is younger than neogene. The cave is cut through the left valley side in height of 50-60 metres. In the valley of the river Treska there is a germinated terrace. In the same height, near the village Gorna Belica, near the river Belesnica, there is a wide gravel, freestone, fluvial-glacial terrace, for which is confirmed that it is from the glacial period Virm. Connecting these two levels we can say that the main cave hall on the higher level is the same as these fluvial-glacial Virm terraces. The lower level is younger and matches with the growing through the valley after the glacial Virm.

Conclusion

When a speleological object (cave) is researched, it does not mean that there will not be any information in future. Such is the example with Ovcarska Cave, whose first research had been carried out in 1928. The information from that period shows that it is about a small cave which looks like rock shelter. There is new information about the cave in 2000. With the breaking through of a small leak, the cave got new dimensions and gave a new moment for research. Namely, Ovcarska cave according to the genetic classification belongs to the type of real caves, and according to the branching of the cave canals, it is among the group of „complex caves”.

The record of the material of ceramics and bones on both cave levels (point 9-higher level and canal 17-20 Celsius-lower level) makes it easier for speleological research in future i.e. to be confirmed the age of this material and its origin.

Bibliografy

ГИЧЕВСКИ Б. (2007) Подземни карстни форми во Поречкиот Басен и нивна валоризација за потребите на просторното планирање-магистарски труд,213:116-121 стр, Скопје.

ЈОВАНОВИЋ П.С.(1928) Карсне појаве у Поречу. Гласник Скопског научног друштва, књ. IV , 1-46,Скопје.

Exploring society "Ursus speleos"-Skopje and Mountain sport club "Zlatovrv"-Prilep, plan of Ovcharska cave.