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Geomorphology and hydrogeology of the karst spring from Coteţul Dobreştilor (Bihor Mountains)

*Liviu VĂLENAŞ¹, Jarek KUR², Sami PAAKKARINEN³,
Adrian PERET⁴, Vlad GHERGHICEANU⁵*

¹ Speleological Club „Z“, Wanderer Str. 27, 9041 Nürnberg, Germany,
liviu.valenas@gmail.com

² Empty Spaces Research, Poland, jarek.kur@gmail.com

³ AKPP Finland, sami.paakkariinen@gmail.com

⁴ AKPP Finland, adrian.peret@gmail.com

⁵ Speleological Club „Z“, sculpturica@yahoo.com

Summary. The karst spring from Coteţul Dobreştilor is one of the most important caves in the Bihor Mountains, with an interesting fossil phreatic maze at the entrance and especially with a length and deep sump. From a very beautiful entrance lake, a 520 m length sump starts, which still could not be forced to its end. However, so far it might be the longest sump in the Bihor Mountains and the second longest in Romania, after the longest sump in the Izverna Cave in Mehedinţi Mountains.

Research history

The spring from Cotețul Dobreștilor (Fig. 1) has been known to specialists since the 19th century. In 1847 A. Szirtfi mentions for the first time the somewhat neighboring cave, Ghețarul de la Scărișoara. He probably also saw the karst spring from Cotețul Dobreștilor. In 1921 it was visited by René Jeannel and Emil Racoviță. In 1973 Liviu Vălenaș and Ioan Bele undertook a first exploration of its entrance sector. In 1978 and 1980 Florin Păroiu (supported by Liviu Vălenaș, Dorel Pop, Nicolae Sasu and Nicolae Paul) dived for the first time in the entrance sump (Păroiu & Vălenaș, 1981). In 1978 he only advanced 10 m and in 1980 he went down 30 m to a depth of -15 m. In September 1980 Liviu Vălenaș and Vlad Gherghiceanu made a detailed exploration and topography of the entrance sector, discovering an ascending fossil maze, with a development of 262 m. In a chimney the maximum ascending elevation of the network, +22 m, was reached, and at +20 m the second, impenetrable, entrance was discovered (Goran, 1982). In 1982, in the organization of the caving clubs "Z" and "Cristal" from Oradea, Lázsló Czako managed to advance further and stopped at the base of a sunken shaft at a depth of 45 m, but he could not find the continuation either (Vălenaș et al, 1982). However, it was found in 1993 by J.-J. Bolanz from Switzerland and Y. Guennec from France, who reached a depth of -67 m and a topography of 294 m (Onac et al., 2010). This point is also reached by Jarek Kur from Poland in 2012, who draws up a more detailed topography for 320 m. In 2016 Sami Paakarinen and Patrik Grönqvist from Finland, supported by Adrian Pereț and Călin Drăgan, manage to go well beyond this point. After another 200 m, they emerge into an airy chamber, unfortunately closed everywhere. The continuation is deep down, with water coming up between large blocks. The relatively bulky equipment of the Finns did not allow further penetration at that time. In principle, the same team wants to resume exploration in this sump in the future (Vălenaș, 2022).