

Israeli cave explorers return from record-breaking expedition of 'Everest of the caves'

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Boaz Langford of the Israeli cave exploration delegation at a depth of 2,080 meters in the Krubera-Voronya cave in Abkhazia. Credit: Hebrew University

Cavers from the cave research unit of the Hebrew University of Jerusalem have just returned from exploring the deepest cave in the world. The cave, known as Krubera-Voronya, is considered the "Everest of the caves" and is in Abkhazia in the south of Russia near the Black Sea.

The cavers, Boaz Langford, Leonid Fagin, Vladimir Buslov and Yuval Elmaliach, went on the [exploration mission](#) as part of an international delegation organized by the Ukrainian Speleological Association. Cave explorers from nine countries were part of the mission, including those from Russia, Spain, Britain and Lebanon.

Prof. Amos Frumkin, of the Department of Geography at the Hebrew University, who heads the university's cave research unit, said the purpose of the venture was to break the world's record for cave exploration – an achievement reached when a Ukrainian researcher reached a depth of 2,196 meters beneath the earth's surface, five meters deeper than the previous record.

The approach to the [extreme depths](#) of the cave was accomplished, using ropes, through a complex of pathways determined on the basis of water streaming through the cave. Some of the spelunkers had to dive through frigid water (two degrees Celsius) in order to reach the deepest sections of the cave.

While they were in the cave, the explorers were subject to some unexpected developments: a flash underground flood, forcing them to remain isolated from any contacts for about 30 hours. In a nearby cave, a complex evacuation of an explorer from another team took place. He was killed during the expedition.

The Israeli explorers worked at depths of from 500 to 2,080 meters before the earth's surface. In doing so, they broke a number of Israeli records for cave exploration. The 2,080 figure is the deepest any Israeli spelunkers have ever achieved. This was also the deepest point ever reached in the world without having to resort to technical diving techniques.

Leonid Fagin of the Israeli delegation was in the cave for 24 consecutive days, the longest any Israeli has ever spent in one underground exploration.

Langford, who does measurement and mapping of caves for the Hebrew University cave research unit, commented: "The preparations for expeditions such as this are extensive and involve a lot of mental

preparation. I have tried for some years to join this exploration effort, and I am glad I finally succeeded. One of the exciting findings of our work there was to discover a new species of transparent fish living in water of two degrees and at a depth of two thousand meters."

"Cave exploration is an area in which people have to work together, since descending into the depths requires a great deal of teamwork, especially in a cave as complex as Krubera," said Prof. Frumkin. "The basic purpose of cave exploration is first and foremost to understand the cave, its underground water system, its geological development and the ancient climate which existed on earth. One of the interesting questions at Krubera-Voronya was how the cave reached such a great depth, and the assumption is that this is connected with lower levels of the Black Sea in the past.

Frumkin said that beyond such scientific importance, many [cave](#) explorers are engaged in this work because of the personal challenge and the adventurous aspect of the work.

"One has to remember that caves are the last place in the world where it is still possible to be the first human to tread on unexplored territory," he said.

Provided by Hebrew University of Jerusalem

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