



Some New Caves under Airport in Dubrovnik

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Till today six speleological sites are known to exist at the premises of the Dubrovnik Airport in Croatia. This is a highly weathered area that has been in the focus of attention of speleologists ever since the airport was built in 1961/62. Two vertical caves measuring 31 m and 10.5 m in depth were discovered at that time. These two caves are now situated right underneath the new control tower of the Dubrovnik Airport. A tunnel entrance to the cave that has been known to local population for a long time is situated in the immediate vicinity of the control tower. In late 1950's the entrance to the cave was closed with concrete because of a military airport construction, but a tunnel was built so as to enable access to the cave. The cave is about 200 meters long and it fully occupies the space underneath the concrete runways of the Dubrovnik Airport. Thanks to efforts made by speleologists in 2006-2010 the cave was adapted to enable tourist visits, and it is now the world's only tourist cave underneath an operating airport. During apron extension activities in May 2012, three additional speleological sites were discovered and examined, together with other previously discovered caves, from the standpoint of geophysics, geology and speleology. Results of exploration shows that there are several faults zones in karstified limestones. The water flow in the caverns varies depending on climatic conditions on the ground surface. Water reaches the caverns via joints directly from the ground surface (to a lesser extent) or in deeper parts via joints and paraclases from other parts of Cretaceous carbonate formations (in most cases).

The weathering zone depth in the area of these speleological features, are estimated at 300 to 500 meters (included under sea levels), and the zone of vertical circulation varies from 50 to 150 m. It is followed by the zone of horizontal circulation in which the ground water is carried via Cretaceous limestones toward submarine springs in the Adriatic Sea.