



## **Some different Types of Speleogenesis in Croatian Karst Area**

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The Croatian Karst is the so-called locus typicus for the world Karst areas. A great number of scientific theories and cognitions on Karst, on the flowing of groundwater in the Karst, on its specialties and phenomena, caves, are founded on investigations in the Croatian Karst area. Therefore, we must understand its value and significance, complicated quality, complexity, but we must also know how to preserve it from possible pollution in tunnels, roads, and waste landfill. More than 50% of the Croatian area is situated in the Karst regions where there are special hydrogeological conditions, where underground water flow is more intensive than the surface one, and where mostly water porous rocks are developed, which are easily soluble and are secondarily tectonically broken in pieces. Speleogeology and special Speleogenesis gives data, which cannot be evaluated, measured and noticed on the Karst surface. The accent here is on underground water connections, groundwater flow, groundwater quality, its direction and flow speed, underwater accumulations, erosion and corrosion karstification processes, (from the initial to the secondary, tertiary and Quaternary sedimentation to the fossil cave phase- old cave). Such data cannot be acquired by exploratory drilling, which is much more expensive than speleohydrogeological researches. Detail speleogenesis research shall be carried out on specially chosen locations, which are tectonically active, and significant from the hydrogeological point of view. Together with taking down morphostructural and lithostratigraphic data inside the caves, special instruments shall be used to measure neotectonic activities. The spots for positioning the instruments inside the caves or pits shall be determined after detailed cave surveying, speleogeological, speleohydrogeological and other research has been carried out. The significance of these researches being made is connected to the geological sciences in general, water supply, civil constructions and engineering,

environment protection and country's defense. The results shall show the connections between neotectonic and hydrogeological parameters in the speleogenesis (regressive or gravitation karstification). Research will be in tunnels and in caverns which were explored in last tens years road constructing in Croatian karst.