PEĆINA VJETRENICA U POPOVU POLJU – NOVO SHVATANJE SPELEOGENEZE

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Na rubu Popova polja, pored kojeg je nekada meandrirala u sopstvenom nanosu, do tada najduža ponornica u svijetu Trebišnjica, sada meliorisana u betonskom koritu, u Zavali nalazi se pećina Vjetrenica. Ona je po dužini krških kanala, od kojih je istraženo 6.300 m, morfometriji i morfografiji pećinskih formi najveća, a po speleodiverzitetu najpoznatija pećina u zoni vanjskih Dinarida. Zbog speleoukrasa sredinom prošlog stoljeća (1950. god.) stavljena je u poseban režim zaštite – spomenik prirode.

Spleogeneza je usmjerena duž glavnih krških kaverni u pravcu Jadranskog mora tj. južnog pravca na početku i prema završetku pećine, a u u njenom središnjem dijelu ima pravac jugoistoka. Krško korazioni procesi u krškim kavernama su veoma aktivni i pokazuju tendenciju speleoevolucije u smjeru produbljivanja donje krške erozione baze, o čemu svjedoče stalne hidrološke aktivnosti, posebno nakon poplave središnjeg pećinskog sistema koji su se desili u vremenu od 12. do 16. oktobra 2015. god.

Kako je pećina na rubu Popova polja, koje je prije melioracije bilo periodično plavljeno krškim i nivalnim retencioznim vodama, nekada i gotovo cijelu godinu, a prema ranijim pretpostavkama speleogenetičara u ranokrškim fazama razvoja ovoga holokarsta, pretpostavljalo se da je ona bila otoka poplavnih voda iz Popova polja. Orijentacija i padovi karbonatnih slojeva očito su bili temeljni za pretpostavku njene otočne uloge poplavnih voda iz Popova polja.

Novije speleološke prospekcije, posebno one koje se odnose na prirodne procese i pojave, osobito speleoklimatske, hidrogeološke i speleoevolucijske navode na zaključak da je ona hidrološka bifurkacija, posebno u povodnju, kada višak vode obrazuje povremeni tok Lukavac usmjeren u pravcu Popova polja, a drugi stalni dio voda dubokim krškim pukotinama odvodi u pravcu Jadranskog mora. Reverzibilna funkcija vrela Lukavca, po kojoj on odvodi vode iz Popova polja prema kanalima donje Vjetrenice nije dokazana i prema tome ona nema funkciju estavele. Ova pretpostavka koja je narativno propagirana, od strane autora ovoga rada, potvrđena je ove godine, kada su intenzivne kišne padavine u oktobru, generirane đenovskom ciklonom, u vrlo kratkom vremenu premašile prosječnu dvomjesečnu visinu padavina. Njima je izazvano potapanje pećine Vjetrenice, reverzibilo i obsekventno padu karbonatnih slojeva prema njenom izlazu. Pored toga, iz pećinskih kanala poplavne vode su bifurkaciono oticale i prema vrelu Lukavca, koje se nalazi neposredno ispod pećinskog ulaza u dnu Popova polja.

Ključne riječi: *pećina, speleogeneza, pad slojeva, estavela, bifurkacija, reverzibilnost voda*

THE VJETRENICA CAVE IN POPOVO KARST FIELD – NEW UNDERSTANDING OF SPELEOGENESIS

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On the edge of the Popovo karst field, through which once meandered in its own coat, the river of Trebisnjica, until then the longest underground river in the world, now ameliorated in a concrete riverbed, in Zavala, is the cave Vjetrenica. By the length of the karts channels, from which 6,300 m has been explored, and by the morphometry and morphography of the cave forms, Vjetrenica is the largest and by the speleodiversity the most famous cave in the outer Dinarides zone. Because of the speleothemes during the middle of the last century (1950.) it was placed in a special protection regime – a natural monument.

The speleogenesis is focused along the main karst caverns in the direction of the Adriatic Sea, i.e. a southerly direction at the beginning and the end of the cave, and in its central parts it has southeast direction. Karst corrosion processes in karst caverns are very active and have a tendency of speleoevolution in the direction of deepening the lower karst erosion base, as evidenced by the constant hydrological activities, especially after flooding of the central cave system that took place in the period from 12 to 16 October 2015.

Since the cave is located on the edge of Popovo karst field, which before the melioration process was periodically flooded by the karst and nival waters, and sometimes during the whole year, and according to the earlier assumptions of speleogenetic scientists in an early stages of development of this holokarst, it was assumed that it was the channel through which the flood waters were leaving Popovo karst field.

Newer caving prospection, especially those relating to the natural processes and phenomena, especially speleoclimatic, hydrogeological and speleovolcanic ones, suggest that the cave is actually hydrological bifurcation, especially in the flooded area, when the excess water forms a temporary flow Lukavac directed towards the Popovo karst field, while the other permanent part has been directed towards the Adriatic Sea through deep karst fissure sinks. Reversible function of the Lukavac flow, with which it drains water from the Popovo karst field to the lower channels of Vjetrenica hasn't been proven so far, and therefore it has no function of the estavelle. This assumption which was narratively propagated by the author of this work has been confirmed this year, when intense rainfall in October, generated from Genoa cyclone, in a very short time exceeded the average two-month amount of rainfall. It caused the flooding of the Vjetrenica cave, reversible and consequential to the decline of the carbonate layers towards the cave's exit. Moreover, from the cave channels, the flood waters were directed at the Lukavac spring, located directly below the cave entrance at the bottom of the Popovo karst field.

Keywords: *cave, speleogenesis, decline of the layers, estavelle, bifurcation, water reversibility.*