The paleoenvironmental reconstruction using fossil invertebrates of Zăton Lake (south-western Romania)

Oana Teodora Moldovan‡, Ladislav Miko§, Marius Kenesz‡, Silviu Constantin¶

‡ Emil Racovitza Institute of Speleology, Cluj-Napoca, Romania
§ Faculty of Environmental Sciences, Czech University of Life Sciences, Prague, Czech Republic
¶ Institute for Environmental Studies, Charles University, Prague, Czech Republic

Corresponding author: Oana Teodora Moldovan (oanamol35@gmail.com)

Received: 18 Sep 2018 | Published: 19 Sep 2018


Abstract

The Zăton Lake is a closed depression located in the Ponoarele karst area (south-western Romania) formed along a tectonic-erosional window as a NE-SW corridor (250–450 m a.s.l.). In this area Mesozoic sedimentary rocks outcrop, along with the metamorphic basement of the Danubian Domain of the Southern Carpathians. The entire river basin is drained underground through the caves of Zăton (105 m in length) and Bulba (5 km long, developed on three levels). Flooding of the lake is temporary, during periods with high precipitation or the spring snow melting. A total of 34 samples were taken from one sedimentary section of the Zăton Lake and the diversity and abundance of fossil mites was assessed at different depths of the sediments. OSL (optical stimulated luminescence) datings and fossil mites’ determination were correlated with sediments geochemistry and rock magnetic properties and record the changes in temperature and vegetation in the area from present day to more than 2000 years ago.

Presenting author

Oana Teodora Moldovan

© Moldovan O et al. This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.