

ABSTRACT  
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**Bat Guano Influence on the Geochemistry of Cave Sediments  
from Modrič Cave; Croatia**

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The entrance to the Modrič cave is located at the altitude of 30 m above sea level some 70m away from the major coastal highway Rijeka-Zadar in Croatia. The cave was formed within Cretaceous limestones, and is characterized by slightly inclined to horizontal chambers and channels, which have a total length of 829 m. Baseline contents of elements both in sediments and percolating waters were determined. Silty loams with guano contain abundant quartz, illite and taranakite and minor vivianite and high concentrations of Cu (2869 mg/kg), Zn (951 mg/kg) and Cd (28 mg/kg). Also sediments mixed with guano are enriched with light REE as well as elevated concentrations of U, Th, Rb and Hg in comparison with local topsoil. Sediments with bone fragments contain abundant quartz, illite, calcite and hydroxylapatite and minor carndallite and lower contents of heavy metals. All sediments analysed showed various degrees of contamination by Cu and Zn from dispersed guano.