CLASTIC SEDIMENTARY DEPOSITS IDENTIFICATION INSIDE CAVES IN CENTRAL BRAZIL

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The clastic sediments in caverns are important paleoenvironmental indicators for the geomorphological reconstruction of the landforms in central Brazilian plateau. The local geology of the Correntes River Basin (3904.3 km^2) consists of rocks of the Urucuia Group of Cretaceous elderly are found in the highlands that overlay carbonate rocks of the Neoproterozoic Bambuí Group. There are 164 mapped caves in the basin. The objective of the present work is the identification of cavities with clastic sedimentary deposits having potential for paleoenvironmental studies. In the selected caves (n = 11), the deposits are characterized based on thickness, texture, color, contacts, speleothems, sedimentary structures and position of the profile before the water current in the cave. Two deposits in Gruna Tarimba (6th largest in Brazil) are considered for chronostratigraphic characterization using Optically Stimulated Luminescence (LOE) technique. Two main types of deposits are observed: filling of meandering galleries with ephemeral flows of local hydrographic basins that converges to sinkholes and alluvial deposits connected to the fluvio-karstic canal from large catchment areas that converges to sinks. Eleven caves were identified in total: five with active water flow and dynamic deposition/erosion processes and six with recessed fluvio-karstic channels and conduits filled with deposits. In general, the thickness of deposits varies from centimeter to the metric scales, sedimentary structures as cross stratification/parallel plane, contraction cracks and ripple marks. These deposits are found predominantly of sandy contributed by sandstone of Urucuia Group. Preliminary results developed at the Gruna Tarimba show that sediments are older than 50,000 years and are deposited in two stages: (i) an older, preferably clayey with centimetric gravels and (ii) younger essentially sandy.

Keywords: Clastic sediments; cave; central Brazil