

# **THE ORIGIN OF THE CAVE MINERALS IN THE SERRA DOS CARAJÁS SPELEOLOGICAL PROVINCE -PARÁ STATE,BRAZIL.**

**Clóvis MAURITY<sup>1</sup>, Basile KOTSCHOUBEY<sup>2</sup>**

<sup>1</sup>Grupo Espeleológico Paraense. C.P. 1021. CEP 66.000-000, Belém-PA - [cloviswm@hotmail.com](mailto:cloviswm@hotmail.com)

<sup>2</sup>Universidade Federal do Pará. Centro de Geociências. C.P.1611.CEP66.050-000.Belém-PA.- [basile@ufpa.br](mailto:basile@ufpa.br)

The lateritic caves of the Serra dos Carajás show minerals formed by dissolutions of the oxi-hydroxides of Fe and Al of the duricrust related to bat guano deposits. The detailed study of five caves from the plateau N1 revealed the presence of speleothems composed of oxi-hydroxides, phosphates and sulfates of Fe and Al which constitute floor, wall and roof coatings as well as cavity fillings. Phosphatization of residual materials was also observed in the caverns, in particular at the top of detached roof blocks of laterite and hematitic breccia. It is thought that iron and aluminum of the speleothems proceeded from the lateritic environment, whereas the other constituents, that is, phosphorus, sulphur, potassium and calcium were of coprogenic origin. In fact, accumulations of decomposed bat guano or chiropterite have been found in the studied caves, mainly in those which contain the most relevant speleothems. The presence in the caverns of bat colonies and of thin gel deposits coating surfaces close to guano accumulations suggests that speleothems are developing nowadays.