

**PLANT DEBRIS ACCUMULATIONS IN THE RIO PRETO SUB-BASIN, ITANHAÉM, SP, BRAZIL: INSIGHTS FROM SUB AQUATICS GEOPHYSICS**

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**RESUMO:** Geophysical methods can be utilized for the identification of the frequency and spatial distribution of plant debris, as well as for the study of the evolution of such accumulations. The results obtained in a tropical fluvial system were confirmed by the analysis of cores, with all data integrated into the GIS environment. Lateral scan sonar and a sub-bottom profiler were used to generate acoustic images of the plant macroremains along a 16.9-km stretch of the meandering course of the Preto River in the municipality of Itanhaém, SP, Brazil. Numerous slanted layers of plant debris composed the point bars, while sand dunes marked the migration of the channel along the straighter portions of the river. Moreover, a large concentration of methane gas was found associated with the organic sediments in the river. This was related to the diagenesis of the plant biomass deposits throughout the Quaternary. The present study is one of the first to apply the methods of geotechnology to taphonomic research.

**PALAVRAS-CHAVE:** ITANHAÉM; PLANT ACCUMULATION; QUATERNARY.