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## **Characterization of Guaraguaçu River (Paraná, Brazil) based on the distribution of foraminiferal and thecamoebian assemblages and sedimentological analysis**

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The aim of this study is to characterize Guaraguaçu River (Paraná, Brazil) based on sediment analysis and on the distribution of foraminifers and thecamoebians. In November 2005 thirty-three surface sediment samples were collected from the river bottom with a van Veen grab to perform sediment analysis. Fauna analysis was performed in twenty-three of those samples. Preliminary results are presented here. The river belongs to the estuarine system of Paranaguá Bay (Paraná, Brazil); it is a meandering river with saline intrusions influencing up to 14 km upstream. Close to river mouth salinity varies from 27 to 13; at the middle river varies from 15 to 3 and at the upper river the values range from 3 to 0 (zero). Sand fractions dominate the sediments all over the studied area. Close to river mouth very fine to medium sand prevail with a small percentage of silt and clay. At the middle river fine and very fine sand prevail; silt and clay were found only near the river edges. At the upper river sand grains represent almost 100% of the sediment; fine sand prevails. Along the river total carbonate lies around 1% and 5%, but near the edges of lower and middle river it is higher than 5% (up to 13%). Total organic carbon shows similar trends, remaining below 2.5% in most parts; in the lower part it can reach up to 6.6%. Near the edges of middle part it lies between 2.5% and 5.5%. Samples with 50 cm<sup>3</sup> for foraminiferal and thecamoebian analysis were preserved in 4% buffered formaldehyde solution and stained with Bengal Rose. Close to river mouth the following foraminifers occur *Bolivina striatula*, *Cibicides* sp., *Rosalina globularis*, *Quinqueloculina laevigata*, *Criboelphidium poeyanum*, *Ammonia tepida*, *Caronia exilis*, *Ammobaculites exiguus*, *Acupeina triperforata*, *Miliammina fusca*, *Paratrochammina stoeni*, *Portatrochammina* sp., *Arenoparrella mexicana*, *Haplophragmoides wilberti*, *Trochammina inflata*, *Siphotrochammina lobata* and *Paratrochammina* (L.) *guaratibaensis* and the thecamoebians *Diffflugia oblonga* and *Diffflugia corona*. At the middle river occur

*Miliammina earlandi*, *M. fusca*, *H. wilberti*, *Siphotrochammina elegans*, *S. lobata*, *P. stoeni*, *T. inflata*, *P. (L.) guaratibaensis*, *C. exilis*, *A. mexicana*, *Ammoastuta inepta*, *Ammotium directum*, *Ammonia parkinsoniana*, *A. tepida*, *Criboelphidium excavatum* and *C. poeyanum*. The thecamoebians *Pontigulasia compressa*, *D. oblonga* and *Cyclopyxis* sp. are also present. At the upper river *M. fusca* is the only species in some samples, but also occurs together with *H. wilberti* and *T. inflata* and the thecamoebian *D. oblonga* in others. Species composition differs between samples from low, middle and upper parts of the river. Thecamoebians occur all over the area reflecting freshwater influence from river discharge and adjacent drainage system. Calcareous marine species occur together with agglutinated foraminifers at the lower part, but are absent in the middle where only euryhaline calcareous species are present with agglutinated foraminifers. At the upper river only agglutinated foraminifers are present. Species richness does not change too much between middle and lower river, but it decreases abruptly at the upper river. The results show expected trends for such environment.