Abstract

The main goal of this study was to reconstruct the Late Pleistocene-Holocene floristic composition in an area of the northern Brazilian Amazonia, comparing the results with other Amazonian localities in order to discuss the factors that have influenced phytophysiognomic changes over this time period. The work in eastern Marajó Island at the mouth of the Amazonas River was approached based on analysis of 98 pollen and diatom samples from core data distributed along a proximal to distal transect of a paleoestuarine system. The results indicated high concentration of Rhizophora, associated with arboreal pollen grains typical of the modern Amazonian rainforest during the last 40,000 cal yrs BP. Pollen composition also included wetland herbs. Diatoms were dominated by marine and fresh water taxa. Wetland forest, mangrove and, subordinately herbs remained constant during most of the latest Pleistocene-early/middle Holocene. At 5,000 cal yrs BP, there was a distinguished change from forest and mangrove to wet grassland savanna due to sea level fluctuation. As marine influence decreased, the estuary gave rise to fresh water lacustrine and swamp environments, with establishment of herbaceous campos. A main conclusion from this study is that solely the occurrence of herbaceous savanna can not be used as a definitive indicator of past dry climates in Amazonian areas.

Keywords

Vegetation pattern, climate, late Quaternary, paleoenvironment, Marajó Island, northeastern Amazonia.