

APTIAN PLANKTONIC FORAMINIFERA OCCURRENCE IN THE SOUTHEASTERN BRAZILIAN MARGINAL BASINS

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ABSTRACT: The occurrence of Aptian planktonic foraminifera in the South Atlantic Ocean was first reported in the 1960s for the Sergipe-Alagoas Basin and in the 1970s for the African marginal basins (Angola). However, it has never been reported for adjacent Santos, Campos, or Espírito Santo basins. The aim of this work is to present unpublished planktonic foraminifera data recovered from the post-salt section in those Brazilian marginal basins. The studied section, previously assigned to Albian age, represents the first marine sediments deposited above the evaporitic sequence. Core, sidewalls, and cuttings samples from about 30 oil drill-holes were analyzed during the last ten years of research. A total of 35 planktonic foraminifera species were recognized, most of them cosmopolite and chronostratigraphically long-ranging. The recovered species belong to four genera: *Favusella* (*F. ex gr. washitensis*), *Globigerinelloides* (*G. aptiensis*, *G. barri*, *G. blowi*, *G. duboisi*, *G. ferreolensis*, *G. gottisi*, *G. maridalensis*, *G. paragottisi*, *G. praebarrri*), *Hedbergella* (*H. aptiana*, *H. bizonae*, *H. excelsa*, *H. gorbachikae*, *H. handousi*, *H. hispaniae*, *H. infracretacea*, *H. kuhryi*, *H. kuznetsovae*, *H. labocaensis*, *H. luterbacheri*, *H. maslakovae*, *H. mitra*, *H. occulta*, *H. praetrocoidea*, *H. primare*, *H. roblesae*, *H. ruka*, *H. semielongata*, *H. sigali*, *H. similis*, *H. trocoidea*, *H. tuschepsensis*) and *Paraticinella* (*P. rohri*, *P. transitoria*). The planktonic foraminifera assemblages are variable in terms of abundance and diversity throughout the studied section. The lower part of the section is composed by high-energy shallow water carbonates and the planktonic foraminifera assemblage is characterized by low diversity, with specimens concentrated in some abundance levels. The assemblage diversity increases toward the upper part of the section, probably related to the establishment of deeper water marine conditions. The regional distribution of the planktonic foraminifera assemblage varies according to the lithofacies, the paleogeographic context and the influence of the salt tectonics on the deposition and/or preservation of the carbonatic section. The Aptian planktonic foraminifera assemblages identified on the Brazilian marginal basins are similar to those recognized in the Tethyan and other Atlantic basins. Considering the biostratigraphical distribution of the species identified, the studied section spans from the late Aptian *Globigerinelloides ferreolensis* to *Paraticinella rohri* zones. The results of this work indicates a late Aptian age for the marine section deposited above the evaporitic sequence in Santos, Campos and Espírito Santo basins. Accordingly, part of the section traditionally dated as Albian is now placed in the Aptian. These new remarkable biostratigraphic findings represent a significant contribution to the understanding of the geological evolution of the early South Atlantic Ocean.

KEY-WORDS: BIOSTRATIGRAPHY; APTIAN PLANKTONIC FORAMINIFERA; BRAZILIAN MARGINAL BASINS.