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PALEOGEOGRAPHIC DISTRIBUTION OF ESTHERELIIDEAN CONCHOSTRACEANS ON THE CRETACEOUS RIFT INTERIOR BASINS OF NORTHEASTERN BRAZIL

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Among the various groups of Cretaceous conchostraceans from northeastern Brazil, the esthereliideans were restricted to the initial development stages of interior rift basins such as Sousa, Jatobá and Tucano (Figure 1). The two known species - *Estheriella brasiliensis* and *Estheriella lualabensis* - are only found in Lower Cretaceous rocks (Rio da Serra and Aratu local stages).

Estheriella brasiliensis occurs in Sousa, Jatobá and Tucano basins. In the African basins of Congo, Mayo Oulo Léré and Mayo Tafal, the species *Estheriella camerouni* and *Estheriella moutai* show a morphological pattern similar to the Brazilian species (Carvalho, 1993). According to Oliveira (1953), *Estheriella brasiliensis* is a good index-fossil for the biostratigraphy of Lower Cretaceous continental rocks (Rio da Serra and Aratu stages).

The original description of *Estheriella lualabensis* comes from Upper Jurassic - Lower Cretaceous of the Lualaba Series (Congo Basin). In the northeastern Brazilian basins, it is found in the Sousa Basin, exclusively in Lower Cretaceous rocks (Rio da Serra and Aratu stages).

The small area of paleogeographic distribution of these two species may reflect local taphonomic conditions. The fossilization through mouldage, could lead to the loose of fine morphological details (such as the radial ribs), which allow them to be classified. Despite this, the great number of conchostraceans on the Cretaceous basins of the northeastern Brazil required specific environmental conditions. In this way we can infer the palaeocological aspects of the small lakes from these interior rift basins. The living conchostracofauna are typical of alkaline shallow freshwaters (pH between 7 and 9), in well-oxygenated environments with argillaceous substrates. The water temperature was probably between 20°-30°C, the ideal to the conchostraceans (Massal, 1954). The ponds where this low-diversity conchostracofauna thrived were shallow and ephemeral. Such stressing ecological parameters are highly restrictive to the settlement of an abundant and diversified biota.

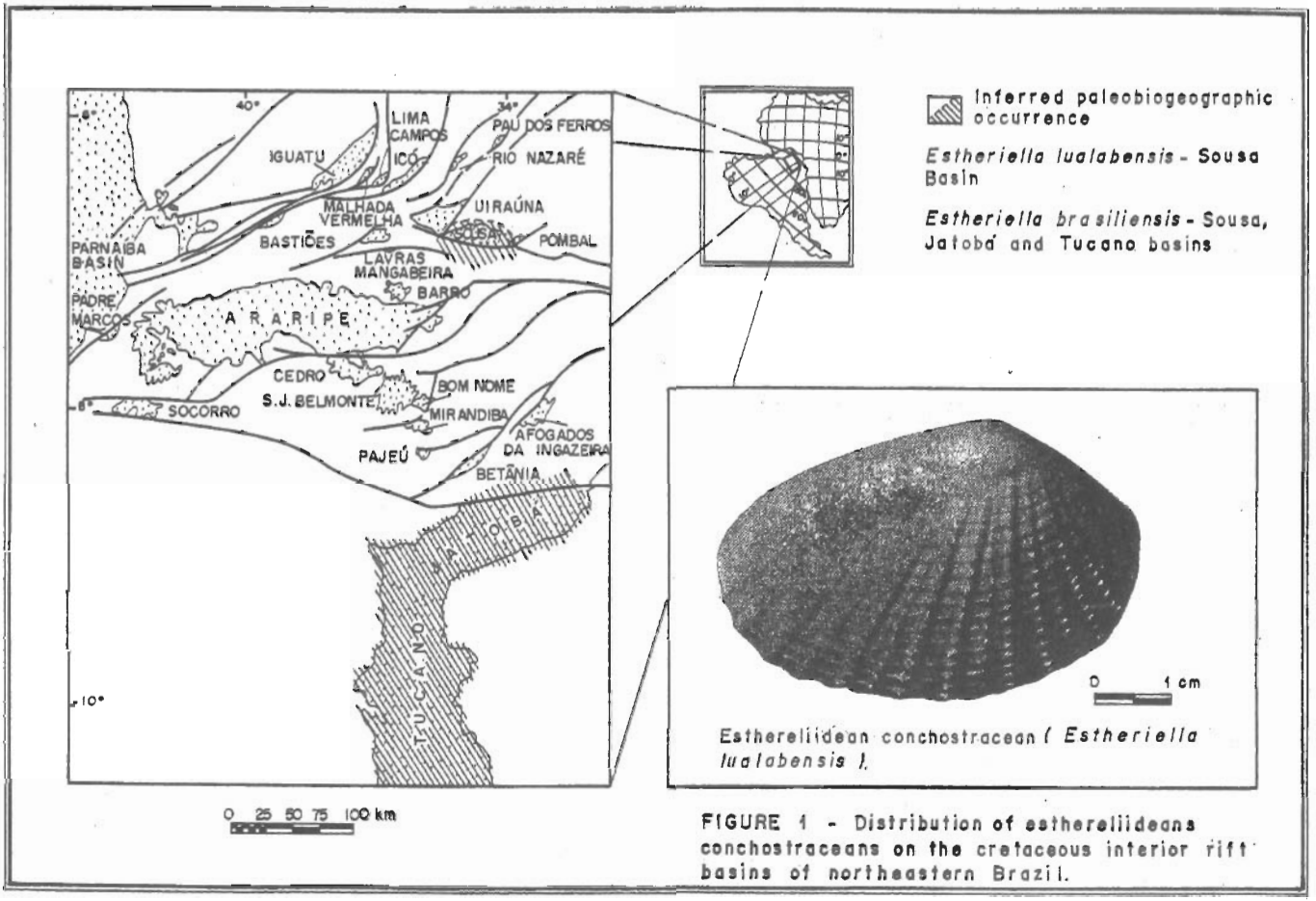

FIGURE 1 - Distribution of estherelliideans conchostraceans on the cretaceous interior rift basins of northeastern Brazil.

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