

The paradise of the Brazilian Cretaceous Dipnoiformes

Eliane Pinheiro de Sousa¹, Manuel Alfredo Medeiros², Carlos Eduardo Vieira Toledo³ & Reinaldo José Bertini⁴

Since the discovery of the Coringa Flagstone on the Cajual Island, a fossiliferous outcrop from the Alcântara Formation, a remarkable diversity of Cretaceous vertebrate's morphotypes has been recovered. Besides genera and species of Dipnoiformes previously identified, there were 25 new dental plates and many fragments recovered from that locality. These specimens were compared to the material described in the literature. Some of them are attributed to genera and species of Dipnoiformes identified in previous contributions as *Ceratodus africanus*, *Asiatoceratodus tiguidiensis* and *Protopterus humei*, besides other entire newly morphotypes. The definition of a new genus of Neoceratodontidae Dipnoiformes will be published very soon, to shelter these new Brazilian Cretaceous morphotypes. Considering the peculiarities of these fishes, adapted to extended dry conditions, the extraordinary diversity related to a single outcrop is one of many evidences to figure out the paleoenvironmental and climatic conditions in this region during Cretaceous. The paleoenvironmental reconstruction of the Alcântara Formation, based in contributions published since 1960's, points to an estuarine system with large and deep fluvial channels. The continental part would be dominated by arborescent pteridophytes and conifers humid forests, surrounded by an extended arid and/or semi-arid paleoenvironment. The remarkable diversity of Dipnoiformes is coherent with this interpretation, since some of the morphotypes are huge ones, indicating the presence of water bodies with considerable sizes and due the surviving adaptation to dry extended conditions, called estivation.

¹Universidade Estadual do Maranhão (UEMA), Cidade Universitária Paulo VI - Tirirical - São Luís, MA, Brasil.

²Departamento de Biologia, Centro de Ciências Biológicas e da Saúde, Universidade Federal do Maranhão (UFMA), Avenida dos Portugueses, s/nº, Campus Universitário do Bacanga, 65080-040, São Luís, MA, Brasil.

³Instituto de Geociências, Universidade de São Paulo (USP), Rua do Lago, 562 - Butantã - 05508-080, São Paulo, SP, Brasil.

⁴Departamento de Geologia Aplicada, Instituto de Geociências e Ciências Exatas, Universidade Estadual Paulista Júlio de Mesquita Filho (UNESP), Avenida 24A, 1515, - Bela Vista - 13506-900, Rio Claro, SP, Brasil.

E-mails: elianepsousa@yahoo.com.br, alf@ufma.br

(Congresso Brasileiro de Paleontologia (21. 1009: 2009) - São Luís)
livro de resumos [pequenos e grandes]