



A new side-necked turtle (Pleurodira, Pelomedusoides) from the Santana Formation (Early Cretaceous), Araripe Basin, Northeastern Brazil

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Abstract

The fossil fauna of turtles from the Santana Formation, Araripe Basin, Early Cretaceous from Northeastern Brazil, includes, to exception of the *Santanachelys gaffneyi* (Cryptodira, Protostegidae), only pelurodiran taxa. A new genus and species, *Caririemys violetae* **gen. et sp. nov.** (Pleurodira, Pelomedusoides), from the Romualdo Member, upper section of the Santana Formation, is described here. *Caririemys* is based on one specimen consisting of a carapace, several vertebrae, a right femur and a right pelvis. *Caririemys* differs of the other pleurodirans from the Santana Formation by the following combination of characters: oval and moderately domed carapace; complete neural series reaching the suprapygals; and neural plate 8 shows an extensive contact with costal 7 and 8. This new taxon enhances the turtle diversity of the Santana Formation, which is presently the most diverse deposit of Mesozoic Testudines in the country.

Key words: Santana Formation; Romualdo Member; Early Cretaceous; Testudines; Pleurodira

Introduction

The Araripe Basin is a sedimentary structure situated at the northeastern part of Brazil, distributed between the states of Ceará, Pernambuco and Piauí (Fig. 1). From the paleontological aspect, the most important unit is the Santana Formation, which is subdivided into three members: Crato, Ipubi and Romualdo (Beurlen 1971). Based on palynomorphs, those layers were formed during the Aptian/Albian (Pons *et al.* 1990).

The Santana Formation has yielded several fossils reptiles such as dinosaurs, pterosaurs, crocodyliformes and lizards (see Maisey 1991 and Kellner 1998 for a review).

Those layers also preserve an important turtle fauna, including four described genera: *Araripemys* (Price 1973), *Santanachelys* (Hirayama 1998), *Brasilemys* (Lapparent de Broin 2000) and *Cearachelys* (Gaffney *et al.* 2001) (Tab. 1). All have been found in the typical calcareous nodules of the Romualdo Member, and only *Araripemys* was found also in the laminated limestone of the Crato Member (Fielding *et al.* 2005; Oliveira & Kellner 2005a, b). Here we describe a new turtle from the Romualdo Member, which is the fifth described turtle genus from this deposit. The specimen was prepared using the chemical preparation method commonly used in specimens from this deposit (e.g. Kellner 1995).

Systematic

Testudines Linnaeus, 1758

Pleurodira Cope, 1864

Pelomedusoides Cope, 1868