

# ABSTRACT VOLUME

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The history of life:  
A view from the Southern Hemisphere



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## THE UPPER JURASSIC OF BRAZIL: ALIANÇA FORMATION (JATOBÁ BASIN), A GOOD PALEOVERTEBRATE FAUNA REPRESENTATION

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The Jurassic sedimentary record is scarce in Brazilian basins due to the unfavorable conditions prevailing sedimentation and pre-rift tectonics during this period in Gondwana. Extensive arid regions associated with fluvial and lacustrine environments resulted in reddish oxidized sandstones and shales. Therefore Jurassic fossils are also rare and are of extremely importance at national and international levels (even when they present high index of fragmentation). The typical fossil samples for this unity are scales, bone fragments, teeth, spines and osteoderms that belong to Hybodontiform sharks (*Planohybodus marki* and *Parvodus* sp.), fish (*Ceratodus*, *Mawsonia* and *Lepidotes*) and a crocodyliform. The Jatobá Basin Aliança Formation, northeast Brazil, provides an excellent fossiliferous potential when compared to other Brazilian basins, giving this unity a special interest for Jurassic paleovertebrate studies in the country. Recent surveys carried out in the basin (Pernambuco State) resulted in the finding of lots of bone fragments, isolated teeth, scales, head and dorsal fin spines and coprolites attributed mainly to fishes. Crocodyliform teeth and osteoderms, and a fragmentary egg shell were also collected. The fragmentary material allows the identification of new species and gives insights about the understanding of the regional dynamics during the period. The Jatobá Basin fauna is correlated with other basins in northeastern Brazil such as Brejo Santo Fm. (Araripe Basin); Bananeira Fm. and Serraria Fm. (Sergipe-Alagoas Basin); Aliança Fm. (Tucano-Recôncavo and Camumu Basins); Malhada Vermelha Fm. (Lima Campos Basin). It is also related to the Tacuarembó Fm. (Paraná Basin in Uruguay). In Brazil there is some disagreement between authors about stratigraphic position of this faunal association: most of them agree it belongs to the Upper Jurassic, but some attribute it to the Lower Cretaceous. However, the confirmation of Late Jurassic aged fossils attributed to the Jatobá Basin is enhanced by the association with ostracods *Darwinulla oblonga* and *Bisulcoypris pricei* which allowed the framework of the typical vertebrate fauna in the regional PETROBRAS biozone NRT-001 from the Dom João Local Stage (Upper Jurassic).

