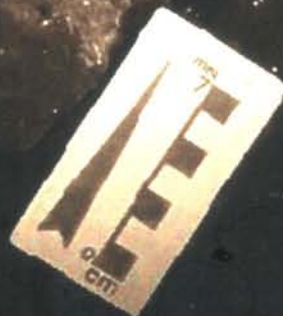




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RESÚMENES

THE DINOSAUR VALLEY NATURAL MONUMENT: DINOSAUR TRACKS FROM RIO DO PEIXE BASINS (LOWER CRETACEOUS), BRAZIL

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Sousa and Uiraúna-Brejo das Freiras are two Cretaceous basins from the Rio do Peixe region that present a great amount of dinosaur tracks. These basins are located on the West of Paraíba State, Northeast Brazil, and their origin are related to fault movements along preexisting structural trends of the basement during South Atlantic Ocean opening. The main tetrapod ichnofauna comprises isolate footprints and trackways of large and small theropods, sauropods and ornithopods. There are also invertebrate ichnofossils such as trails and burrows produced by arthropods and annelids. The body fossils are palynomorphs, plant fragments, ostracods, conchostraceans, fish scales and crocodylomorph bone fragments. These were preserved in alluvial fans, anastomosing, meandering rivers and shallow lake deposits of Neocomian age - Berriasian to lower Barremian.

This study presents the paleontological-geological relevance of Sousa and Uiraúna Basins, due its abundance of dinosaurian ichnofaunas. It has already been identified, as well as mapped, 30 ichnofossiliferous sites, and recognized 332 large theropod tracks; 29 smaller theropods; 58 sauropods; 2 quadrupedal ornithischians; 2 small ornithopods; 31 graviportal ornithopods; a set of batrachopodid prints; a lacertoid print; a large number of unclassifiable dinosaurian tracks and a very large number of small chelonian half-swimming tracks. Altogether there are more than 461 of classified dinosaur specimens. The dinosaurian ichnofaunas of these basins all have the same stratigraphic-time-paleogeographical context, and represent parts of a widespread megatracksite. Similarities in the lithofacies among the deposits where the footprints occur reflect the same tectonic, climatic and sedimentary processes. The environmental setting at that time was influenced by the initial development of the equatorial Atlantic seaway, with an endemic biota living nearby in ephemeral rivers and shallow lakes under hot climatic conditions. Then the paleontological-geological relevance of Sousa and Uiraúna-Brejo das Freiras basins is based on the abundance of dinosaurian ichnofaunas that represent parts of an Early Cretaceous widespread megatracksite established during the early stages of the South Atlantic opening.

The main distribution area of dinosaur footprints at Passagem das Pedras (Ilha Farm), in Sousa County is nowadays a natural park. In December of 1992, through a State Act (Diário Oficial do Estado da Paraíba, Decreto no 14.833, December, 20th of 1992), this area was defined as a Natural Monument - named as Dinosaur Valley Natural Monument (Monumento Natural Vale dos Dinossauros). In 1996 it was established an agreement among the Ministry of the Environment, Paraíba State Government (SUDEMA) and Sousa Municipal City Hall (Convênio MMA/PNMA/PED no 96 CV00030/96). The financial investment amount is approximately of US\$ 800,000.00 (eight hundred thousand american dollars).

The social and political recognition concerning the importance of this area allowed the following protection acts: (1) Change of the Peixe River main course. This aimed the protection of the stratigraphic levels with footprints that have been eroded during flooding periods. It was constructed a secondary artificial channel and bridges over it and the river channel. (2) Plant of native vegetation at channel borders and neighbouring areas of Peixe River. (3) Access road to the Natural Monument from the federal road BR-391. (4) Concrete footbridges over the trackways, avoiding the direct contact of visitors with the fossil footprints. (5) Informative center with an area of 222 m². It also comprises a library, a souvenir shop, a snack bar, bathrooms and an administration room. The park, with an area of 40 ha, is actually one of the best-preserved paleontological sites in Brazil. This area is now a tourist resort and offers an entire tourism infrastructure, besides a trained staff to guide tourists and to protect the paleontological site.

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