

# **ICHNOFAUNA OF GRAMAME FORMATION (MAASTRICHTIAN) AND ITS PALEOENVIRONMENTAL SIGNIFICANCE, PERNAMBUCO-PARAIBA BASIN, NE BRAZIL**

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Detailed ichnologic study was carried out on outcrop sections of the Gramame Formation (Maastrichtian) between Recife (PE) and Joao Pessoa (PB) in the Pernambuco-Paraiba Basin, northeastern Brazil. The assemblage is formed mainly by the ichnogenus *Thalassinoides*. This is a three-dimensional burrow system consisting of smooth-walled cylindrical to sub-cylindrical components, with 0.5-5.0cm diameter. Enlarged Y-shaped junctions are common. Vertical components are irregular-walled and occur in limestone layers. Horizontal components are regularly-walled and occur in marly layers. Sedimentary material from upper layers fill the burrow system. *Thalassinoides* is almost universally interpreted as combined feeding-dwelling structures of decapode crustaceans (e.g. shrimps). Sometimes the biotic activity is so intense that the layer boundaries can be completely destroyed. The presence of the single ichnogenus *Thalassinoides*, and its high population density suggest that the depositional environment was oxygen depleted, and places the Gramame Formation in the Glossifungites Ichnofacies. The nature of the wall and infill of the burrow system suggests that the substrate was firm when the assemblage established there, and the depositional energy was low to moderate.