

## **ICHNOFOSSILS AND ENVIRONMENTAL INTERPRETATION IN THE RIO DO SUL FORMATION (ITARARÉ GROUP, PARANÁ BASIN), SANTA CATARINA, BRAZIL**

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The Paraná Basin is an extend depositional depression located in center-southern portion of South America with an area of 1,400,000 Km<sup>2</sup> and its evolution occurred from Paleozoic to Mesozoic era. The Rio do Sul Formation represents the top of Itararé Group on the Paraná Basin. This formation was developed in transgressive systems tract accompanying the last transgression (Kungurian) of the Itararé Group. The sedimentary rocks represent the end of glacial influence in the most different depositional environments. The studied area (the Itau Quarry) is located in Trombudo Central city, State of Santa Catarina, and it's characterized by sedimentary rocks with supposed cyclic deposition (granulometric fraction between silt and clay) and abundant ichnofossils. The ichnofossils are, on the majority, epistratals and constitute the main registration of life evidence in this environment. Several ichnogenera were identified, as *Diplichnites*, *Umfolozia*, *Diplopodichnus*, *Koupichnium*, *Nereites*, *Lophoctenium*, *Lockeia*?, *Mirandaichnium*?, and probably resting traces of *Merostomata*. The Rio do Sul Formation has always been interpreted as a lacustrine environment with marine influence, based on rhythmites associated with varves and palinological staff. The presence of dropstones in these sediments used to be said as indicative of the glaciation acting on the lake border. So far, ichnofaunistic association plus *Tasmanites* and framboidal pyrite occurrence allow to suggest a shallow marine environment for those deposits, according to preliminary field data.