

COLONIZATION OF VENDIAN MARGINAL MARINE ENVIRONMENT: ICHNOFAUNA FROM THE SANTA BÁRBARA ALOGROUP, SOUTHERN BRAZIL.

Carmem Lúcia Martini da Rosa

This work attempts to discuss organism-sediment relationship recorded by biogenic structures and fossil occurrences in the Santa Bárbara Alogroup sedimentary rocks. This alogroup belongs to the Camaquã Alosupergroup on Rio Grande do Sul State, southern Brazil. The Santa Bárbara Alogroup fills part of the Santa Bárbara Basin and is subdivided in two aloformations: Serra dos Lanceiros and Pedra do Segredo. Both unit reflect a progradational system over a shallow lacustrine basin, sporadically or even partially connected to desiccation a marine environment, wich suffered frequent desiccation. The alogroup organic record is present in both aloformations, represented by the icnogenera Bergaueria, Cochlichnus, Intrites, Palaeophycus, ?Phycodes and Planolites, as well as probable oppenings of simple or U-like vertical burrows. Ediacaran fossils Arumberia and Beltanelliformis were found associated with the trace fossil suite. The biogenic structures and body fossils reflect a shallow substrate where feeding and resting were the dominant behavior, with low organic diversity. Two assemblages can be recognized, one more diverse than the other. The more diverse assemblages represents the colonization of the substratum when marine conditions dominant and the less diverse one represent tentative of surviving. Considering the fauna-pattern and the recorded ichnofauna, with occurence of glauconite in the fossil bearing strata, there is no doubt that deposition took place under marine conditions. The occurrence of Intrites indicates a Vendian age for the Santa Bárbara Alogroup. The tentative presence of Phycodes and the occurence of fossils of the Ediacara biota constrain the age to Upper Vendian.