

When bioclasticity began? Taphonomy of *Cloudina* shell concentrations, Itapucumi Group, Ediacaran, Paraguay

Lucas Warren¹; Marcello Guimarães Simões²; Thomas Rich Fairchild¹; Claudio Riccomini¹; Paulo César Boggiani¹; Fernanda Quaglio¹; Bernardo Tavares Freitas¹

¹Instituto de Geociências, Universidade de São Paulo, Brazil; ²Instituto de Biociências, Universidade Estadual Paulista, Brazil

RESUMO: Dense accumulations of biomineralized metazoan remains are a significant part of the Phanerozoic marine record and often represent the only reliable source of paleontological information. However, current taphonomic knowledge of these richly bioclastic concentrations is mostly biased toward post-mid Paleozoic occurrences. Skeletal remains of the Ediacaran metazoan *Cloudina* sp. occur abundantly as laterally discontinuous shell beds within troughs in wave- and current-rippled fine grainstones and around thrombolitic domes in the Ediacaran Itapucumi Group, Paraguay. The deposits comprise dense accumulations of parautochthonous, disarticulated remains and loosely packed concentrations containing in situ specimens. *Cloudina* was the critical source of durable hard parts necessary for the shell accumulations, especially in a monotonous, predominately non-bioclastic environment, punctuated by episodic sediment input. Their thickness, simple internal fabric, and geometry molded either by high-energy reworking or preserved as obrution deposits allows us to affirm that both types of accumulations are typical of Cambrian-style shell-beds. Despite the Precambrian age, the bioclastic accumulations studied here support the notion that phylogeny rather than environment was the primary factor in determining the Phanerozoic style of preservation in shell-beds.

RESUMO: Ediacarano, bioclasticidade, *Cloudina*