Abstract

This study reports the first known occurrence of the Ediacaran fauna in northeastern Brazil (at Pacujá Municipality, northwestern state of Ceará) and presents preliminary interpretations of its significance. Regional correlation indicates that the fossils originated in the Jaibaras Basin and that they may represent a new geological system. The depositional environment can be attributed to a fluviomarine system. Nine Ediacaran species can be identified, including members of pandemic groups (e.g., Charniodiscus arboreus Glaessner, 1959; Charniodiscus concentricus Ford, 1958; Cyclomedusa davidi Sprigg, 1947; Ediacaria flindersi Sprigg, 1947; and Medusinites asteroides Sprigg, 1949) and endemic groups (e.g., Kimberella quadrata Glaessner & Wade, 1966; Palaeophragmodictya reticulata Gehling & Rigby, 1996; Parvancorina minchami Glaessner, 1958; and Pectinifrons abyssalis Bamforth, Narbonne, Anderson, 2008). Three ichnogenera are also present: Arenicolites Salter, 1857; Palaeophycus Hall, 1987; and Planolites Nicholson, 1873. The relative age of the deposits is between ?Ediacaran and Cambrian, and the fauna resembles the White Sea Assemblage. The bioturbation presents typical unbranched Ediacaran ichnogenera with little depth in the substrate. This previously unknown occurrence of the Ediacaran fauna reinforces the importance of the state of Ceará to Brazilian and global palaeontology.

Keywords

Brazil, state of Ceará, Ediacaran fauna, fluviomarine environment, White Sea Assemblage.