

ABSTRACT VOLUME

4th INTERNATIONAL PALAEOONTOLOGICAL CONGRESS

The history of life:
A view from the Southern Hemisphere



September 28 – October 3, 2014
MENDOZA, ARGENTINA

THE EARLIEST PROTO-GONDWANA SEAWAY

Lucas V. Warren¹, Fernanda Quaglio¹, Marcello G. Simões², Claudio Riccomini³,
Daniel Poiré⁴, Nicolás M. Strikis², Luis E. Anelli² and Pedro C. Strikis²

1. Instituto de Geociências e Ciências Exatas - Universidade Estadual Paulista (UNESP),
Avenida 24A, 1515, Rio Claro-SP, 13506-900, Brazil. quaglio@gmail.com

2. Instituto de Biociências - Universidade Estadual Paulista (UNESP), Rubião Júnior, s/n, Botucatu-SP, 18618-970, Brazil.

3. Instituto de Geociências - Universidade de São Paulo (USP), Rua do Lago, 562, Cidade Universitária-SP, 05508-080, Brazil.

4. Centro de Investigaciones Geológicas (UNLP-Conicet), Calle 1, 644, La Plata 1900, Argentina.

The occurrence of the Late Ediacaran guide fossil *Cloudina* sp. with other skeletal organisms and trace fossils is herein reported from the basal unit of the Bambuí Group (central Brazil). The new finding in the Sete Lagoas Formation represents one of the most important paleontological discoveries ever made in the Precambrian of South America, helping to solve an old paleogeographic puzzle of Gondwana supercontinent. So far, the age of the Bambuí Group is based on questionable geochronologic data spanning from 740 Ma to 590 Ma, which is now finally better constrained. Indeed, sedimentologic, stratigraphic and isotopic similarities of *Cloudina* interval in the Bambuí Group and other Neoproterozoic successions of Brazil, Uruguay, Argentina, Antarctica and Namibia suggest temporal and spatial correlation between these units. The Late Ediacaran age definition for the base of Bambuí Group changes drastically the interpretation that this unit was deposited in a foreland basin related to the evolution of an adjacent orogenic fold belt. The paleogeographic position of *Cloudina*-bearing successions of South America and Africa, including the central Bambuí Group, reinforces the hypothesis of ocean connectivity of coeval intracratonic basins at the end of Ediacaran. This new occurrence of shelled metazoans and trace fossils produced by soft-bodied organisms also represents a unique opportunity to understand ecologic and palaeobiologic issues of benthic communities that thrived in the epeiric sea of proto-Gondwana.

