

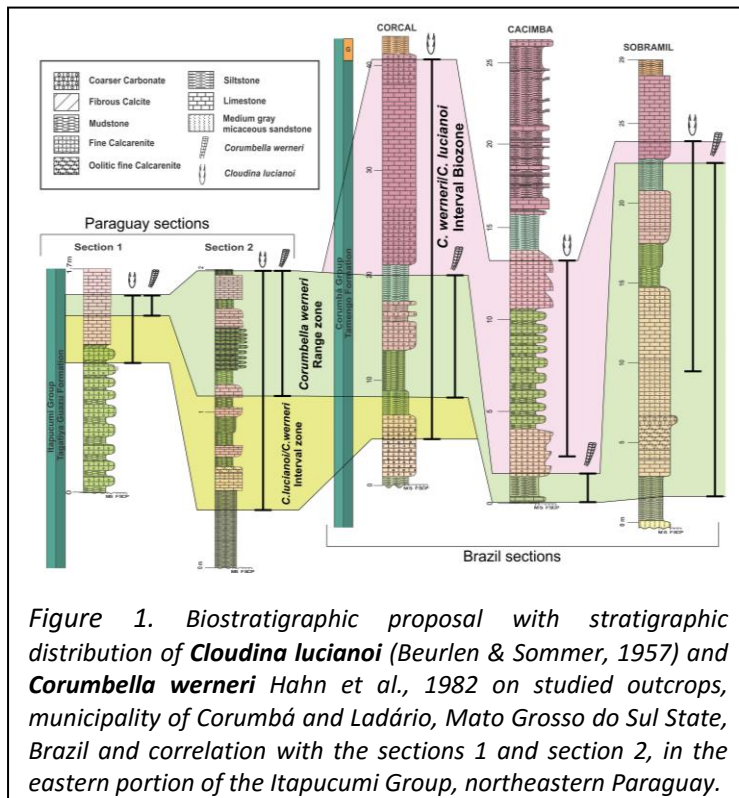
Biostratigraphy of Neoproterozoic strata based on invertebrate species from South America

Adorno, R. R.^{1,2}; Do Carmo, D.A.¹; Walde, Detlef, H.G.¹; Denezine, M. L.C.¹; Boggiani, P.C.³; Sousa e Silva, S.C.¹; Vasconcelos, J.R.¹; Tobias, T.C.¹; Guimarães, E. M.¹; Vieira L. C.¹, Figueiredo, M. L.C.F. F.⁴; Moraes, R.¹; Caminha, S.A.⁵. Suarez, P.A.Z.⁶; Pinho, D.⁶ and Rodriguez, C.G.V.

1. University of Brasília -UnB. Institute of Geosciences
2. CPRM/SGB – Geological Survey of Brazil-Porto Velho, Brazil.
3. University of São Paulo. Institute of Geosciences.
4. PETROBRAS-CENPES-PDGeo/BPA – Research Center
5. Federal University of Mato Grosso State. Department of Geology
6. University of Brasília. Institute of Chemistry.

It is proposed for discussion three biostratigraphic unities for Neoproterozoic strata in South America: *Cloudina lucianoii/Corumbella wernerii* Interval Zone, *Corumbella wernerii* Range Zone and *Corumbella wernerii/Cloudina lucianoii* Interval Zone. These two species occur in the upper portion of Tamengo Formation, where ash beds levels with zircons dated as 543±3Ma. This absolute dating suggest that *Cloudina lucianoii* and *Corumbella wernerii* in Tamengo Formation have, at least, 543±3Ma [1]. As well as, in the Ediacaran of Paraguay, occurrences of *Cloudina lucianoii* and *Corumbella wernerii* are recorded in Itapucumi Group, Tagatiya Guazú Formation [2 and 3].

For the first time, it presented a biostratigraphic proposal for a discussion based on stratigraphic distribution of *Cloudina lucianoii* and *Corumbella wernerii*. All recommendations of the International Stratigraphic Code are followed in order to present a clear concept for this cronobiostratigraphic approach. Two kinds of biozones were selected to apply herein: range and interval zones (Figure 1).



A correlation approach shows to be possible to correlate three sections Brazil with two section in Paraguay. In Brazil, locations are in Corumbá and Ladário cities, Mato Grosso do Sul State: Corcal quarry, Cacimba Ecopark, Port Sobramil. It is possible to indicate a more complete section at Corcal quarry and, for the other two classic localities in Corumbá area, the lower zone is missing. A biostratigraphic correlation with coeval strata of the Itapucumi Group in Paraguay is conducted and shows to predict a useful tool for correlation of Neoproterozoic sections of both countries. When correlating these biozones stabilised in Brazil with coeval interval in Paraguay, it is possible to note that the upper zone is missing.

References:

- [1] Babinski et al., 2008 VI South American Symposium on Isotope Geology, Book of Abstracts, San Carlos de Bariloche, p.160.
- [2] Warren et al. (2011) Terra Nova, 382–389.
- [3] Warren et al. (2014) Geology, 391–394.