

FIRST EVIDENCE OF CALIMIAN BASIC MAGMATISM IN REGISTRO TERRANE – RIBEIRA BELT - STATE OF SÃO PAULO

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The largest geotectonic unit of the Mantiqueira Province is the Ribeira Belt that occupies the southeastern area of Brazil. This orogen resulted from the closure of the Adamastor Ocean due to the convergence between the San Francisco, Paranapanema, Congo and Kalahari cratons. The Ribeira belt is composed of several terranes as Apiaí, Embu, Curitiba/Registro, Luis Alves and Juiz de Fora, most of all limited by expressive shear zones.

The Registro Terrane is represented mainly by Paleoproterozoic granitic-migmatitic rocks intensely deformed during late Neoproterozoic. 750 Ma amphibolite-facies metamorphic event was also found in the paragneiss of the Juréia Massif. This domain comprises deformed granitic rocks, gabbro-dioritic material commonly developing migmatitic structures and mafic dykes. It presents predominantly NW trend, with strong influence of E-W and NE structures.

An extensional Calimian event was recorded by U-Pb SHRIMP zircon age of ca. 1430 Ma in dismembered alkali gabbro-dioritic dykes intrusive in 2100 Ma Rhyacian granodioritic rocks. In the Ribeira Belt this extensional event is well marked on the Apiaí terrane by basic magmatism in the Água Clara, Perau and Votuverava successions. Up to now, either the Criogenian or Caliminian events were not identified on the corresponding Curitiba terrane in the Paraná state.

Considering that the juxtaposition of different blocks that make up the Western Gondwana occurred in the Ediacaran, the presence of the Caliminian magmatism on these terranes can be an important tracer for the identification of previous linked blocks, helping to reconstruct the possible Mesoproterozoic continental configuration.

