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Tectonic relationship between the dom Feliciano belt

AND THE JOINVILLE MASSIF, SOUTHERN BRAZIL - 1990

Miguel Angelo Stipp Basei
Oswaldo Siga Junior
Adilson Machiavelli

Instituto de Geociências
Universidade de São Paulo

A B S T R A C T

This paper discusses a 450-km-long geological cross section through the Dom Feliciano Belt (DFB) and its foreland, the Joinville Massif (JM), with emphasis on the main boundaries and internal tectonic subdivision of these major geological units (fig. 1). From SE to NW four main geotectonic domains have been proposed: A) Granitoid Belt; B) Schist Belt; C) Santa Catarina Granulite Complex; and D) Curitiba Massif (fig. 2). The first two domains correspond to the DFB itself and the following two correspond to the JM. Gravimetric studies help to reveal the geometric relationship between these geotectonic units and to enhance the thrust faults that carried the DFB over the JM. Sm-Nd, U-Pb and Rb-Sr geochronological data point to a complex geological history from the Archean (JM) to the Late Proterozoic (DFB). During this time the reworking-accretion ratio increased from older to younger geotectonic domains. In the whole area there is no indication of accretion during the Late Proterozoic. A K-Ar cooling age profile indicates a 600-500 Ma. range exception for the Santa Catarina Granulite Complex (in the JM) which was a cool and stable area since the end of the Early Proterozoic.

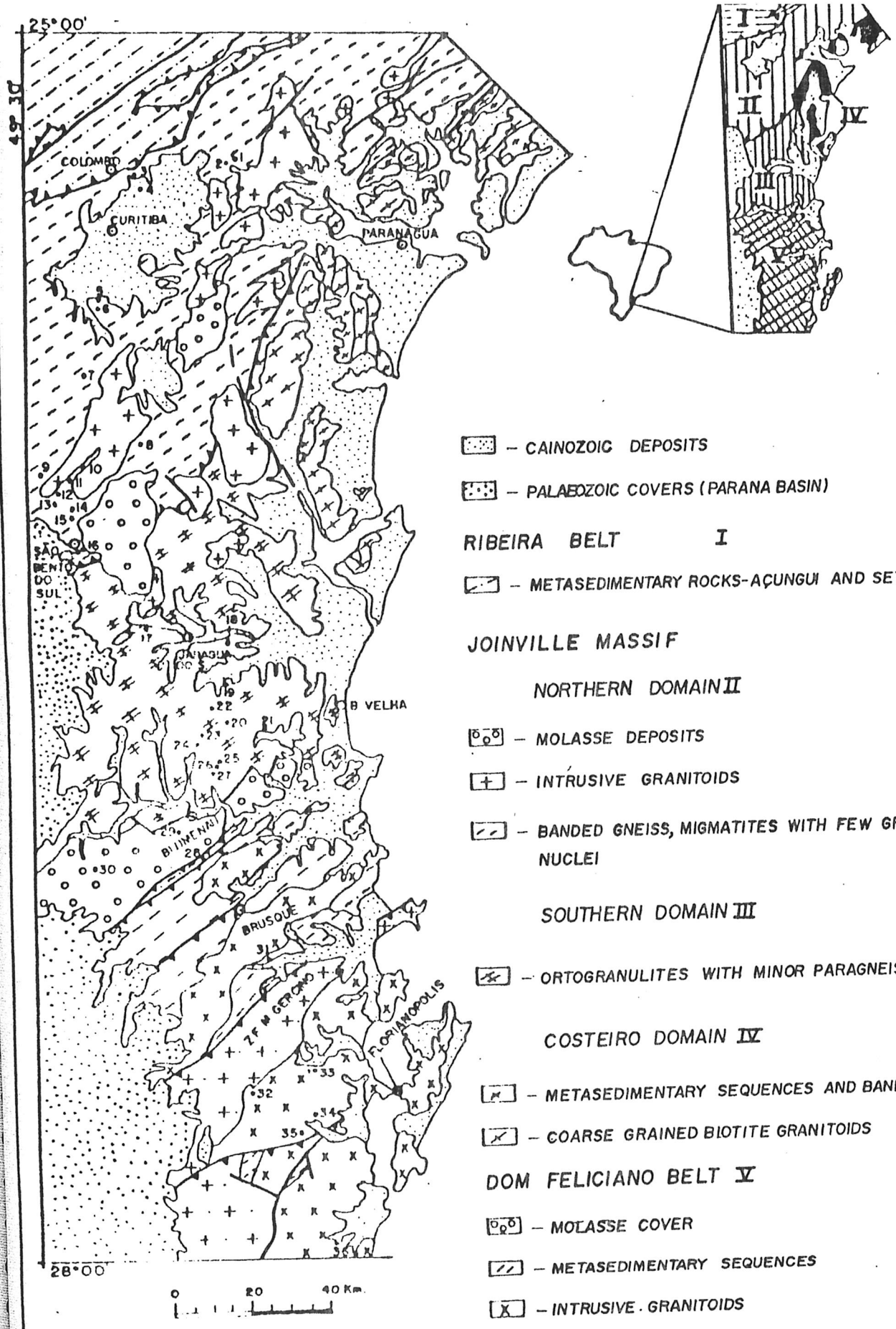

Fig. 1–TECTONIC OUTLINE OF JOINVILLE MASSIF AND ADJACENT FOLD BELTS (PR-SC) SOUTHERN BRAZIL

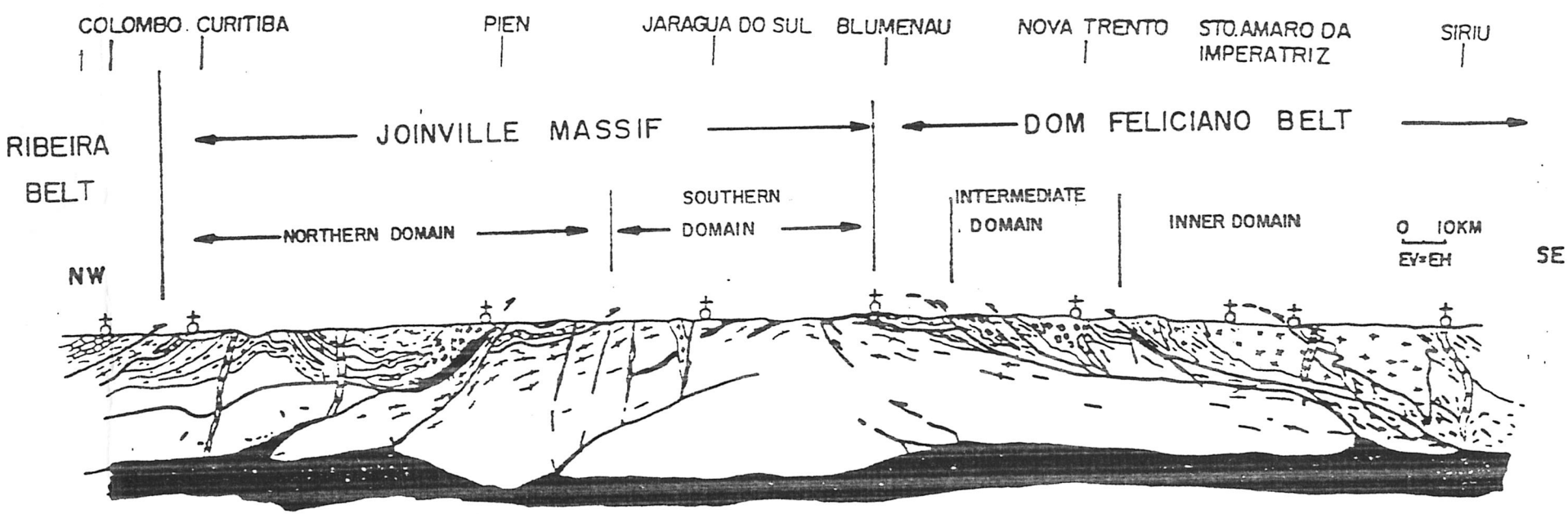

Fig. 2-K-Ar PROFILE (A) AND GEOTECTONIC SECTION (B) OF JOINVILLE MASSIF AND DOM FELICIANO BELT.