THE PRECAMBRIAN EVOLUTION OF SANTO ANTÔNIO DO PINHAL REGION, SP, BRAZIL

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The Santo Antônio do Pinhal Precambrian country rocks has a tectonic framework related to the Brasiliano Orogenic Cycle, showing two progressive non-coaxial ductile deformation processes.The earlier one was developed from tangential tectonics with strong crust shortening and generation of a down-dip foliation containing stretching lineation related to a southeast-northwestward tectonic transport.The subsequent process was developed from transpression tectonics related to the strike-slip right lateral shear zones, overprinting the first process structures. The Buquira, Jundiuvira and Eugênio Lefèvre are the more impressive shear zones in the area.The Embu Complex (Meso- to Neoproterozoic) occurs as a medium to high metamorphic grade upper-crustal sequence. It contains a Sn foliation (Dn deformation), which is folded (Dn+1) and refolded (Dn+2).Serra Preta, Serra do Trabiju and Morro da Piedade igneous granitoids suites truncate the Embu metamorphic sequence. The Serra Preta suite is a calc-alkaline high-K granitoids from magmatic arcs of active continental margin. U-Pb zircon dating method gives an age of 616 ± 8 Ma (Neoproterozoic III). The Serra do Trabiju and Morro da Piedade suites are syn-collisional calc-alkaline high-K granitoids. The Pico do Itapeva Formation (Early Paleozoic) crops out in the studied area, showing low-grade metamorphic rocks deformed by strike-slip right lateral shear zones.The biotite K-Ar dating method gives cooling ages between 530/480 Ma (Cambrian-Ordovician), representing the mobile belt uplift and the ending of the Brasiliano Orogenic Cycle.Thrust faults was active until the Cambrian period, while the strike-slip shear zones were developed among the Cambrian and Ordovician period.