

RECENT ADVANCES IN UNDERSTANDING THE MESO AND NEOPROTEROZOIC EVOLUTION OF THE SOUTHWESTERN SECTOR OF THE AMAZONIAN CRATON

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The southwestern region of the Amazonian Craton is a multi-orogen region formed between 1.8-1.0 Ga which experienced distal effects of successive tectonic events, markedly the Sunsás/Aguapeí orogeny (1.25-1.0 Ga). It has been difficult to identify, unequivocally, blocks of crust reflecting different tectonic individualities. Moreover, Rondônia/San Ignacio (1.55 - 1.33 Ga) and Sunsás/Aguapeí (1.25-1.0 Ga) tectonics and plutonism regionally affected and reworked precursor provinces, producing new complexes. New geological and radiogenic data can be used to elucidate the evolutionary history of this region. The most important new findings are:- significant accretionary juvenile events along an extensive Mesoproterozoic continental margin arc-system at 1.8-1.73 Ga; 1.55-1.53 Ga; 1.46-1.42 Ga; 1.1-1.0 Ga. More importantly the presence of juvenile Sunsás/Aguapeí crust is unequivocally demonstrated;- identification of the Jauru Terrane (1.80-1.75 Ga) as the SE extension of the Rio Negro-Juruena Province;- the Santa Helena Arc Complex (1.47 to 1.42 Ga) might be the SE counterpart of the Rondonia/San Ignacio Province (1.55-1.3 Ga);- documentation of the Cachoeirinha Arc Complex (1.53 to 1.54 Ga), in the Jauru area;- evidence of distinct pulses of rapakivi magmatism accompanied by extension and occasionally by granulite metamorphism, with age groupings at ca. 1.57-1.53 Ga; 1.50-1.49 Ga; 1.47 Ga; 1.41-1.38 Ga; 1.34-1.33 Ga; 1.31-1.30 Ga; 1.08-1.07 Ga; 0.99-0.97 Ga;- presence of coeval calc-alkaline, alkaline-calcic felsic, and rapakivi magmatism in the same region. Much work is required before any definitive answer can be given at the numerous question still being asked.