

Landform evolution in the headwaters area of Araguaia river (Mato Grosso and Goiás states, Brazil)

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Jurassic-Cretaceous basaltic sheets of Serra Geral Formation where *traps* and sandstone *intertraps* overlay large areas of Botucatu Formation sandstones exposures are the main lithologic units in the upper section of Araguaia river basin. These pinkish to reddish, fine-to-very fine textured, and well-sorted aeolian rocks show small-to-medium cross-stratification structures. Over the Mesozoic basement were modelled extensive land forms known in central-western Brazil as *chapadões*, large horizontal to undulating plateaus edged by well-defined scarps from which flat-topped buttes are observed. *Chapadões* are the remnants of large structural surfaces located above 850 m a.s.l. where landforms and Ferralsols (Red and Yellow-Red Latossols) relate to *in situ* pedogenesis of basaltic rocks and drainage systems are practically absent. Around the *chapadões* scarps ≈ 40 m medium height evolve by retreat leaving behind them restricted planation surfaces with low gradient to undulating relief (750 – 800 m a.s.l.) originated by reworking of soil and rock debris eroded from the *chapadão*. Many low-order streams flow over minor scarps (≈ 20 m) or high-gradient slopes circumscribing the second surface. Remnants of the second surface were identified in a lower planated level or third surface.

Keywords: Structural surfaces; Ferralsols; Pedogenesis; Morphogenesis; Latossolos