Libro de Resúmenes

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PELVIC GIRDLE AND HINDLIMBS OF BAURUSUCHUS SALGADOENSIS (MESOEUCROCODYLLIA, BAURUSUCHIDAE) FROM ADAMANTINA FORMATION (UPPER CRETAEOUS), BAURU BASIN, BRAZIL

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Since 2005 many specimens of Baurusuchus salgadoensis Carvalho et al., 2005 have been recovered from the reddish sandstones of Adamantina Formation (Turolian-Santonian, Bauru Basin) in the outskirts of General Salgado county. Most of these bear outstanding preservation, completeness and degree of articulation of skull and skeleton remains. Cranial features as lateral orbits, high orectinostral skull and terminal forwardly oriented nares indicate that this species had terrestrial habits (Price 1945). The postcranial skeleton of B. salgadoensis shows distinctive characteristics when compared to extant Crocodyliiformes, some potentially indicative of cursorial habits of locomotion (Vasconcellos et al., 2005). The sacral vertebrae are in number of three, all robust and each bear lateral processes extensively fused to the ilium. The first vertebra’s lateral processes compose the anterior part of the ilium expanded crest; the last firmly extended its lateral processes caudally, to the extension of the postacetabular crest medial surface. The ilium is stout presenting a thick lateral and posteriorly developed postacetabular crest. This postacetabular crest overhangs the acetabulum area, enclosing it anteriorly and dorsally. The ischium is small and thin blade-like bone, with stout two distinct articlar facets to the ilium. The pubis is robust and rod-like with thin anterior edge. Its small articular facet to the rest of the pelvic girdle contact the ischium but not the ilium. The acetabulum is perforated, being mainly composed by the anterior and posterior articular facets of the ischium. The appendicular bones are long and stout. They show a straight aspect of their diaphysis and well-developed epiphysis. The femur is long, showing a straight aspect in lateral view and a slight sigmoid aspect in frontal view. There is a small axial torsion at its proximal end. The fourth trochanter is pronounced and posterior oriented. Astragali is preserved and shows a well-wide rounded trochlea and a well-developed neck presenting a broad zygotic head, a feature commonly associated to ambulatory/cursorial habits among archosaurs and some synapsids. The metatarsals are long and dorsoventrally flattened, with broad articular heads. The phalanges are long, specially the ones from the toes two and three. The plantar area is wide and long, similar to many platigrade terrestrial archosaur. This pattern of pelvic girdle and hindlimbs is observed in the Rauisuchia thecodonts and primitive crocodyliformes interpreted as a characteristic trait of those able an erect posture, limb-driven and plantigrade predators of the Triassic (Bonaparte 1984). Baurusuchus, here interpreted as cursorial predators morphofunctionally convergent with triassic Rauisuchia and Protosuchia, probably competed with medium-sized Theropoda for prey, thus composing a peculiar trophic web in the Cretaceous continental environments of South America. Financial support provided by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq, grant n° 503780/2006–9) and Instituto Virtual de Paleontologia/ Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro (IVP/FAEPORJ, grant n° E–26/152.541/2006).
