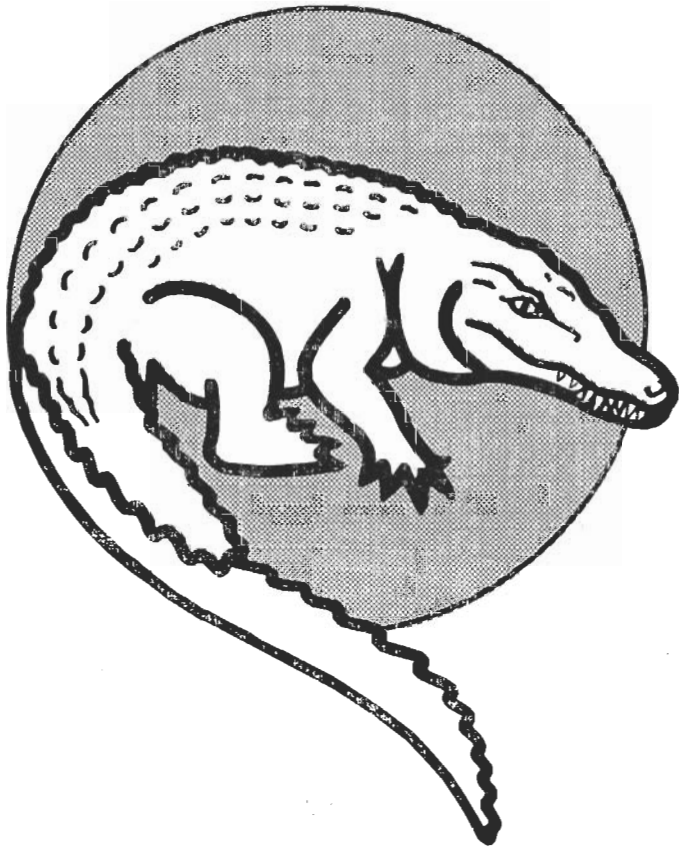


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Paleobiological and phylogenetical comments about notosuchians, Cretaceous crocodylomorphs

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Notosuchians were a peculiar group of small Cretaceous “mesosuchian” crocodylomorphs with a relatively high skull, pre-orbital region laterally compressed, short mandibular fenestra, reduced and specialized dentition, primitive characters on the palatal region. They have been recovered from continental Cretaceous deposits in South America (Brazil and Argentina), Africa (Niger and Malawi) and Asia (China). Phylogenetic analysis suggests they were very close to protosuchian ancestry, and it is probable they had been ancestrals of sebecosuchian lineage, which existed in South America during Upper Cretaceous and Cenozoic. Notosuchians presented many cranial characteristics strongly accentuated in their sebecosuchian descendents, just like high skull and specialized dentition, for example. Most notosuchians had cranial specializations indicating an active predatory habit, just like sebecosuchians. It is probable that both groups had ethological and feeding habits which would correspond to a Cretaceous ecological niche before explored, during Triassic, by some carnivorous therapsids and later, in the Cenozoic Era, by mammals. Notosuchians and sebecosuchians lived together in the Bauru Basin (Adamantina and Marília formations), Southeastern Brazil, which has evidences of the most diversified crocodylian fauna in the South American Cretaceous. It is possible they had not superposing competition niches, because notosuchians were carnivorous or omnivorous, hunting small preys, or also feeding some plants, and sebecosuchians were probably exclusively medium sized animals predators.