PHYLOGENETIC RELATIONSHIPS OF A GIGANTIC THEROPOD DINOSAUR FROM THE CRETACEOUS OF PATAGONIA*

Rodolfo A. Coria
Subsecretary of Culture of Neuquén. Museo "Carmen Funes" (8318) Plaza Huincul, Neuquén.

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I communicate a preliminary analysis on the phylogeny of a new theropod, characterized by being the largest carnivorous dinosaur encountered up to now. Only comparable in size with *Tyrannosaurus rex*, the new species has nonetheless greater length in cranial and postcranial elements, as well as the estimate of greater weight than the North American species. The ingroup was constituted of Ceratosauria, Torvosauroidea, *Allosaurus* and Coelurosauria, being all polarized with *Herrerasaurus*. From the analysis of 36 cranial and postcranial characters, the greatest parsimony produced a single tree of 44 steps with a Consistency Index = .81, where the new theropod presents no synapomorphies with Neoceratosauria (e.g. *Ceratosaurus*, *Abelisaurus*, *Carnotaurus*) but is located among the Tetanurae (all the theropods except Ceratosauria and more primitive forms) by having a tibia with a fibular crest, facet for the ascending process of the astragalus more than 20% of the tibia length, and fibula with an anterior tubercle. As well the new form constitutes the sister-taxon to Neotetanurae (= *Allosaurus* + Coelurosauria) by sharing a well-developed and laterodorsally projecting lacrimal crest, pubis with an open obturator foramen, well-developed pubic foot, and medially-projecting femoral head. The presence of a maxilla with a dorsoventrally wide body and subparallel margins, lacrimal-postorbital contact, a pair of pneumatic foramina in the quadrate, the dorsoventrally extensive anterior end of the dentary with a ventral process, anterior end of the scapula projecting forwards and onto the coracoids, strong scapular process for the insertion of the triceps, lobular obturator process of the ischium, femoral

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head strongly directed dorsally, and posterior intercondylar sulcus on the proximal end of the tibia are considered autapomorphies of the new species. The present specimen and recent discoveries in East Africa demonstrate the existence of basal Tetanurae in the Cretaceous of Gondwana.