



Phylogeny and paleobiogeography of hadrosaurid dinosaurs from Argentina

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The osteology of the Hadrosauridae dinosaurs from Argentina was studied in detail and their phylogeny was analyzed within a cladistic framework. The species “*Kritosaurus*” *australis* Bonaparte et al., *Secernosaurus koeneri* Brett-Surman, and a new genus and species from the Allen Formation (Campanian-Maastrichtian) of the La Pampa Province are diagnosed by the identification of several autapomorphies. A new generic combination for “*Kritosaurus*” *australis* is proposed because of the absence of derived common features with *Kritosaurus* Brown. Remains from the Allen Formation of the Río Negro Province previously assigned to Lambeosaurinae are preliminarily discussed and included as a terminal taxon in the phylogenetic analysis. The cladistic analysis was made scoring 125 cranial, dental and postcranial characters distributed among 26 taxa of ornithischian dinosaurs. The reduced strict consensus shows to “*Kritosaurus*” *australis* and the Lambeosaurinae indet. from Río Negro as a monophyletic sister taxon of the group formed by *Parasaurolophus* + (*Hypacrosaurus*, *Corythosaurus* and *Lambeosaurus*) by equivocally sharing the presence of a blunt and dorsoventrally low maxillary ascending process. *Secernosaurus*, the new genus and species from La Pampa Province, and the Hadrosauridae indet. from the Coli Toro Formation are placed within Euhadrosauria more derived than *Telmatosaurus* although their phylogenetic relationships within the clade remain unsolved. The Hadrosauridae record from Argentina is interpreted as a geodispersal event of North American lambeosaurines, which reached South America through land-bridge connections during the Campanian-Maastrichtian and not as vicariant forms of basal Hadrosauridae present in South America before such intercontinental connection.

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