

A new dyrosaurid crocodyliform from the Palaeocene of Morocco and a phylogenetic analysis of Dyrosauridae

Stéphane Jouve, Mohamed Iarochène, Baâdi Bouya, and Mbarek Amaghzaz
Acta Palaeontologica Polonica 50 (3), 2005: 581-594

A new genus and species belonging to Dyrosauridae, *Arambourgisuchus khouribgaensis*, from the Thanetian (Palaeocene) of Morocco, is erected. Two more or less complete skulls and three mandibular fragments enable a reconstruction of the anatomical characteristics of this species. Dyrosaurid systematics is mainly based on mandibular characters. The comparison of this new material with several dyrosaurid species previously known provides new systematic data for this group. The width of the interfenestral bar, the shape and development of the occipital tuberosities and the shape of the supraoccipital and the basioccipital are of particular importance. A phylogenetic analysis of the dyrosaurids provides an outline of the relationships between the best known species. *Chenanisuchus lateroculi* is the most primitive dyrosaurid. *Sokotosuchus ianwilsoni* and *Phosphatosaurus gavialoides* form a clade, more closely related to other dyrosaurids than to *Chenanisuchus lateroculi*. The relationships between *Arambourgisuchus*, *Rhabdognathus*, *Congosaurus*, and *Hyposaurus* are unclear, and the two latter taxa remain too poorly known to provide an uncontested phylogenetic result. The dyrosaurids are known from nearly all continents. The phylogenetic results suggest a North African range for basal members, and the wide distribution of *Rhabdognathus* and *Hyposaurus* confirms the possibility of transoceanic dispersal of these taxa. Unfortunately, many dyrosaurids are insufficiently known to be included in the analysis, and the present analysis considers mainly African forms. A better knowledge and the inclusion of other taxa from other geographic regions should significantly improve and modify the hypothesis.

Key words: Crocodyliformes, Dyrosauridae, Arambourgisuchus, Paleocene, Ouled Abdoun Basin, Morocco.

Stéphane Jouve [jouvestephane@yahoo.fr], UMR 5143 du CNRS, Muséum National d'Histoire Naturelle de Paris, Département Histoire de la Terre, 8 rue Buffon 75005 Paris, France; Mohamed Iarochène, Ministère de l'Énergie et des Mines, Institut Agdal, Rabat, Morocco; Baâdi Bouya and Mbarek Amaghzaz, Office Chérifien des Phosphates, Centre Minier de Khouribga, Khouribga, Morocco.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see creativecommons.org), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

 [Full text \(607.2 kB\)](#)