Disponible en ligne sur www.sciencedirect.com
ScienceDirect
C. R. Palevol 6 (2007) 211–220
COMPTES RENDUS PALEVOL
http://france.elsevier.com/direct/PALEVO/

Paléontologie systématique (Paléontologie des Vertébrés)

Une nouvelle espèce du genre *Bohlinia* (Mammalia, Giraffidae) du Miocène supérieur de Toros-Menalla, Tchad

Andossa Likius [a], Patrick Vignaud [b,*], Michel Brunet [b]

[a] *Département de paléontologie, faculté des sciences exactes et appliquées, université de N'Djaména, BP 1117, N'Djaména, Tchad*
[b] *Institut de paléoprimatologie et paléontologie humaine, évolution et paléoenvironnements, IPHEP, UMR 6046/CNRS, UFR SFA, université de Poitiers, 40, avenue du Recteur-Pineau, 86022 Poitiers cedex, France*

Reçu le 2 août 2006 ; accepté le 4 décembre 2006
Disponible sur Internet le 24 janvier 2007

Présenté par Philippe Taquet

Résumé

Des restes fossiles de Giraffidae découverts dans les niveaux du Miocène supérieur de « l'Anthracotheriid Unit » (A.U.) du secteur fossilifère de Toros-Menalla (Nord du Tchad) permettent de proposer une étude descriptive et comparative. Ils sont rapportés au genre *Bohlinia*, jusque là uniquement connu dans quelques gisements du Miocène supérieur d'Eurasie. Il s'agit de la toute première occurrence du genre en Afrique, élargissant ainsi son aire de répartition de façon significative. La comparaison du matériel permet de montrer qu'il doit être rapporté à une nouvelle espèce de Giraffidae, *Bohlinia adoumi* n. sp., vraisemblablement proche des formes eurasiatiques. ***Pour citer cet article : A. Likius et al., C. R. Palevol 6 (2007).***

Abstract

A new species of *Bohlinia* (Mammalia, Giraffidae) from the Late Miocene of Toros-Menalla, Chad. New Giraffidae specimens discovered from the Late Miocene fossiliferous sector of Toros-Menalla (northern Chad) are described. These specimens are assigned to *Bohlinia*, a genus known so far only in some Late Miocene localities of Eurasia. This is the first occurrence of the genus in Africa. Analysis of the material allows us to describe a new species of giraffid, *Bohlinia adoumi* n. sp., probably close to the Eurasian forms. ***To cite this article: A. Likius et al., C. R. Palevol 6 (2007).***

Mots clés : Giraffidae ; *Bohlinia* ; Nouvelle espèce ; Miocène supérieur ; Tchad ; Toros-Menalla

Keywords: Giraffidae; *Bohlinia*; New species; Late Miocene; Chad; Toros-Menalla

Abridged English version

Since 1997, field missions conducted by the 'Mission paléoanthropologique franco-tchadienne' (MPFT) in the Toros-Menalla fossiliferous sector of the Djurab desert, northern Chad, have inventoried more than 400 localities. These localities, biochronologically dated ca. 7 Ma [36], have yielded abundant and diversified vertebrate fossils remains, including the earliest known hominid: *Sahelanthropus tchadensis* [5]. The rich fossiliferous mammal fauna includes important remains of Giraffidae. Here, we describe material assigned to a new species of *Bohlinia* [32], which until now was only iden-

* Auteur correspondant.
Adresse e-mail : patrick.vignaud@univ-poitiers.fr (P. Vignaud).

1631-0683/$ – see front matter © 2006 Académie des sciences. Publié par Elsevier Masson SAS. Tous droits réservés.
doi:10.1016/j.crpv.2006.12.003

tified in the Late Miocene of Greece, Turkey and Iran [12–13,29,31,33].

Systematics

Mammalia Linné, 1758
Artiodactyla Owen, 1848
Giraffidae Gray, 1821
Bohlinia Matthew, 1929

Diagnosis of the genus after [3,13,29]: Giraffinae characterized by strong ossicones with large base, extended from the supraorbital to the parietal region. In addition, *Bohlinia* is characterized by an elongated skull with flat cranial roof, strong occipital condyles, long and relatively large palate, rounded-elliptical orbit situated above the last two molars, brachyodont teeth and dolichopodial limb bones.

Bohlinia adoumi n. sp.

Holotype: **TM242.01.01**: fragmentary cranium composed of several elements of the same individual: posterior part of cranium, right ossicone, and fragmentary toothless mandible.

Additional referred material: **TM243.01.24**: fragment of left ossicone, **TM264.01.03**: fragment of right mandible with p_2–p_3; **TM321.01.01**: fragment of cranium with left ossicone.

All specimens are housed in the Centre national d'appui à la recherche (CNAR), N'Djamena, Chad.

Locality: Toros-Menalla fossiliferous sector (TM242).

Other localities: TM243, TM264, TM321

Age: Anthracotheriid Unit (AU), Late Miocene, ca.7 Ma [36].

Etymology: Species dedicated to Mahamat Adoum, our MPFT logistician in the desert, who found a majority of the fossil specimens studied here.

Diagnosis: Species with posterior part of cranium elongated, a cranial roof showing a flat parietal region; a wide external occipital protuberance; a wide and deep supraoccipital depression; two well-marked fossae ventral to the external occipital protuberance, indicating strong nuchal muscular insertions; strong occipital condyles; a diamond-shape foramen magnum projecting above the superior margin of the occipital condyles; one pair of conical and short ossicones that are enlarged at their basis and taper gradually towards the top; rounded at their distal extremity; oval transverse section of the ossicone base, at least one distinct longitudinal groove on the ossicone lateral face; basal grooves on the ossicone median faces.

Differential diagnosis: *Bohlinia attica* and *B. nikitiae* differ from *B. adoumi* n. sp. in their longer ossicones, with respectively rhomboid and elliptical transverse section at their basis (oval in *B. adoumi* n. sp) and greater anteroposterior diameter (Table 2), and in the presence of longitudinal keels (absent in *B. adoumi* n. sp.).

Description

Cranium (Fig. 1). The holotype TM242.01.01 is a posterior part of cranium. The cranial roof is flat. The parietal lines (Fig. 1a) are strongly marked and distant from each other unlike *Canthumeryx* from Gebel Zelten and *Injanatherium* from Irak [18,19,28,34]. The external occipital protuberance is well developed and strongly projected backwards. It is wider than in extant giraffid species (*Giraffa* and *Okapia* [15]) and shows a shallower notch in its middle part. In ventral view, the external occipital protuberance displays two marked circular fossae, suggesting strong nuchal muscular insertions that are separated from each other by a longitudinal groove. In lateral view, the temporal crest is curved before joining the mastoid process, whereas it is straight in *Giraffa*. On each side below the nuchal crest, there is a deep depression. Above the foramen magnum, the large and deep supraoccipital depression is bounded laterally by thick relief as in *Giraffa*. In the latter, however, this depression is narrower and shallower. The occipital condyles are robust. The foramen magnum is diamond-shaped, its dorsal margin showing a deep notch (Fig. 1b), which projects above the superior margin of the occipital condyles, whereas, in the other giraffids (except *Palaeotragus rouenii*), this margin reaches the superior border of the condyles. Moreover, the upper margin of the foramen magnum is circular to oval in the other giraffids. The size of the paraoccipital process is comparable to that of *Giraffa*, but the post-glenoid process is very wide. The large auditory canal shows a wide external auditory meatus and is immediately preceded by a large post-glenoid foramen. The glenoid cavity shows a convex ventral surface for the articulation with the mandible, whereas the dorsal surface shows a deep depression, as in *Giraffa*.

Ossicones (Fig. 2). The ossicone is short and robust. Its transverse section is oval and pneumatized at its basis. The apex is rounded, but without any distinct knob. The lateral face shows a distinct longitudinal groove (Fig. 2a). The median face displays three deeply marked grooves that all converge toward the basis (Fig. 2b). These grooves disappear just before the ossicone apex. TM321.01.01 clearly shows an ossicone vertically oriented relative to the cranial roof. The basis of the