Available online at www.sciencedirect.com
ScienceDirect
C. R. Palevol 7 (2008) 499–527
COMPTES RENDUS PALEVOL
http://france.elsevier.com/direct/PALEVO/

Systematic palaeontology (vertebrate palaeontology)

Late Miocene Carnivora from Chad: Herpestidae, Viverridae and small-sized Felidae

Stéphane Peigné [a], Louis de Bonis [b,*], Hassane Taisso Mackaye [c], Andossa Likius [c], Patrick Vignaud [b], Michel Brunet [b,d]

[a] *CNRS UMR 5143, Muséum national d'histoire naturelle, 8, rue Buffon, CP 38, 75231 Paris cedex 05, France*
[b] *IPHEP UMR 6046, UFR SFA, université de Poitiers, 40, avenue du Recteur-Pineau, 86022 Poitiers cedex, France*
[c] *Université de N'djamena, Chad*
[d] *Collège de France, chaire de paléontologie humaine, 3, rue d'Ulm, 75231 Paris cedex 05, France*

Received 1st September 2008; accepted after revision 29 September 2008

Written on invitation of the Editorial Board

Abstract

The small-sized feliforms (Viverridae, Herpestidae, Felidae) from the Late Miocene fossiliferous area of Toros-Menalla, Chad, are described. The Viverridae are represented by dental and postcranial remains of two species: a new, large-sized viverrid, *Sahelictis korei* n. gen. n. sp., which is characterized by a more trenchant dentition than in *Viverra* spp., and an indeterminate species similar in size to *Viverra howelli*. The Herpestidae are represented by a subcomplete mandible with partial dentition assigned to *Herpestes* sp., similar in size to the smallest individuals of the extant *Herpestes naso* and *H. ichneumon*. Felids are known from two, possibly three small-sized species. Fragmentary dental and postcranial remains indicate the presence of one or two species of the size of the golden cat (*Profelis aurata*). A partial skeleton of a wildcat-sized species assigned to *Felis* sp. is also described; this record is by far the earliest record for the genus in Africa. ***To cite this article: S. Peigné et al., C. R. Palevol 7 (2008).***
© 2008 Académie des sciences. Published by Elsevier Masson SAS. All rights reserved.

Résumé

Carnivores du Miocène supérieur du Tchad : Herpestidae, Viverridae et Felidae de petite taille. Les féliformes (Viverridae, Herpestidae, Felidae) de petite taille du secteur fossilifère Miocène supérieur de Toros-Menalla, Tchad, sont décrits. Les Viverridae sont représentés par les restes dentaires et postcrâniens de deux espèces : un nouveau viverridé de grande taille, *Sahelictis korei* n. gen. n. sp., caractérisé par une denture plus coupante que celle des espèces de *Viverra* et une espèce indéterminée de la taille de *Viverra howelli*. Les Herpestidae sont représentés par une mandibule incomplète comprenant une partie de la denture attribuée à *Herpestes* sp., voisine par la taille des plus petits individus des actuelles *Herpestes naso* et *H. ichneumon*. Les petits Felidae sont connus par deux ou trois espèces. Des restes dentaires et postcrâniens fragmentaires révèlent la présence d'une ou deux espèces de la taille du chat doré (*Profelis aurata*). Un squelette partiel d'une espèce de la taille du chat sauvage et attribué à *Felis* sp. est également

* Corresponding author.
E-mail address: louis.debonis@univ-poitiers.fr (L. de Bonis).

1631-0683/$ – see front matter © 2008 Académie des sciences. Published by Elsevier Masson SAS. All rights reserved.
doi:10.1016/j.crpv.2008.10.002

décrit ; il s'agit, de loin, de la plus ancienne trace du genre en Afrique. ***Pour citer cet article : S. Peigné et al., C. R. Palevol 7 (2008).***

© 2008 Académie des sciences. Published by Elsevier Masson SAS. All rights reserved.

Keywords: Late Miocene; Chad; Central Africa; Carnivora; Feliformia

Mots clés : Miocène supérieur ; Tchad ; Afrique centrale ; Carnivora ; Feliformia

1. Abbreviations

Abbreviations used in the text.

Aao fossils from Ahl al Oughlam
BAR fossils from Baringo District, Community Museums of Kenya
KNM-LT fossils from Lothagam, Kenya National Museums, Nairobi
MNCN Museo Nacional de Ciencias Naturales, Madrid
MNHN CG catalogue général, Muséum national d'histoire naturelle, Paris
NMA-AKK fossils from Akkasdagı, Natural History Museum (MTA), Ankara
SAM-PQ L fossils from Langebaanweg, Iziko South African Museum, Cape Town
TM fossils from Toros-Menalla

2. Introduction

Knowledge of the Neogene carnivoran faunas of Africa has greatly improved in the past few years with important discoveries in southern, eastern, and central Africa. These include the faunas from Arrisdrift (early Miocene of Namibia, eight species) [51], Ngorora (middle Miocene of Kenya, seven species) [49], Nawata Formation at Lothagam (late Miocene of Kenya, 18 species) [41,45,87], Lukeino Formation in the Tugen Hills (late Miocene of Kenya, 14 species) [50,53], Lemudong'o (late Miocene of Kenya, 12 species) [30], and Adu-Asa and lower Sagantole formations [67], Middle Awash (late Miocene–Early Pliocene of Ethiopia, 14 species) [25]. These six localities or formations have together yielded more than 60 species, including approximately 20 new species and genera. The carnivoran faunas from Sahabi (nine species) [90] and Langebaanweg (approximately 20 species) [90] also deserve to be mentioned, because they are still important references in African carnivoran studies; the latter is regarded as early Pliocene in age, however. Since 1994, the MPFT has conducted field research in Mio–Pliocene strata of central Chad. One of the richest fossiliferous areas, Toros-Menalla (TM), has yielded the earliest hominid *Sahelanthropus tchadensis* [13,14,86], associated with a late Miocene faunal assemblage that has become a new, important reference for the late Miocene of Africa. Recently, a radiochronological age of 7 Ma was proposed for the biostratigraphical unit called "Anthracotheriid Unit" (AU) of this area (TM 254 and TM 266), based on cosmogenic nuclide dating [42]. Preliminary observations on the material indicate that the carnivoran fauna from Toros-Menalla is particularly rich and diverse. So far, only a part of the carnivoran material has been studied, including nine species belonging to the Felidae, Canidae, Herpestidae, Hyaenidae, and Mustelidae [9–12,57–59]. All the extant African families of Carnivora are represented at Toros-Menalla. It is noteworthy that TM has yielded the earliest Old World vulpine [11] and the earliest African modern mongoose [58]. The extinct family Amphicyonidae is also represented at Toros-Menalla, as far determinable based on the available remains. The present contribution deals with the material assigned to the small feliform carnivorans from Toros-Menalla. Five or six species are described, belonging to the families Viverridae (two species), Felidae (two or three species), and Herpestidae (one species). With the previously described small-sized herpestid [58] and hyaenid [9], TM includes seven to eight species of small feliforms (i.e. species of less than 20 kg body weight).

3. Material and method

The material from Toros-Menalla is currently stored in the collections of UMR 6046 IPHEP, University of Poitiers, France, for study. The material will be conserved in the collections of the Centre national d'appui à la recherche (CNAR), N'djamena, Chad. Definitions and illustrations of the measurements, which were taken with vernier callipers to the nearest 0.1 mm, can be found in Peigné and Heizmann [56].

4. Systematic paleontology

Carnivora Bowdich, 1821
Feliformia Kretzoi, 1945
Viverridae Gray, 1821
Sahelictis korei n. gen. n. sp.

Download English Version:

https://daneshyari.com/en/article/4746069

Download Persian Version:

https://daneshyari.com/article/4746069

Daneshyari.com