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Palaeontology of the upper Miocene vertebrate localities of Nikiti (Chalkidiki Peninsula, Macedonia, Greece)

Chalicotheriidae☆

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ABSTRACT

The skull and some mandibular fragments with deciduous dentition of a chalicothere are studied in the present article. The studied material is described and compared with the known material from other localities of Greece and neighboring areas. The comparisons indicate that the studied material shares morphological and metrical similarities with the well-known ancylothere of Greece, *Ancylotherium pentelicum* (Gaudry and Lartet, 1856). The geographic and stratigraphic distribution of the genus and species are also discussed. *Ancylotherium* shows a wide expansion covering much of the Old World. The species *Ancylotherium pentelicum* is well distributed in the Greco-Iranian Province but its main occurrence involves the Balkans and Asia Minor; although it was recognized in Central Asia, its occurrence appears unusual based on current knowledge, but ongoing research in this area will possibly unveil more *A. pentelicum*-bearing sites in the future. Despite its great expansion, the known material of *A. pentelicum* is scarce in comparison to the other large members of the associated fauna. In Eurasia, *A. pentelicum* is known mainly from the Turolian, while recently *Ancylotherium* was recognized in the Vallesian of the Eastern Mediterranean region as a new species: *A. hellenicum*. In addition there are some limited evidences for its presence in the Vallesian of Spain.

1. Introduction

The studied material originates from the early Turolian (MN 11) locality of Nikiti 2 (NIK), situated in the Chalkidiki Peninsula (Northern Greece), near the village Nikiti, about 100 km from Thessaloniki city. The locality is situated in the Nikiti Formation; it provided a rich fauna including several mammal taxa, as well as some turtles and birds (see this volume). The available material of the NIK chalicotheres is poor but constitutes the third evidence of its presence in northern Greece – after Thermopigi and Pentalophos. Chalicotheriidae Gill, 1872 is a group of perissodactyls with a peculiar anatomy; instead of hooves they have bifid claws. The chalicotheriids are known from the Oligocene to Pleistocene and are divided in two subfamilies: Chalicotheriinae Gill, 1872 and Schizotheriinae Holland and Petterson, 1914. They are present in the majority of the late Miocene mammal localities from the Eastern Mediterranean region, but their remains are always scarce. In the NIK collection there are only four specimens of chalicotheres among the ~2000 determinable fossil remains. The available specimens of NIK are described and compared with known material of chalicotheres from Greece and elsewhere, providing some information about their deciduous dentition. More information about the NIK locality, stratigraphy and age are given in Koufos (2016) and Koufos et al. (2016).

2. Material and methods

Measurements were taken using a digital caliper; they are given in mm with an accuracy of 0.1 mm. The dental nomenclature follows Coombs (1978: fig. 4); instead of protoconule the term paraconule is used. All the material is housed in the Laboratory of Geology and Palaeontology, University of Thessaloniki (LGPUT).

Abbreviations: **AMNH**: American Museum of Natural History, New York; **HD**: Hadjidimovo, Bulgaria; **LGPUT**: Laboratory of Geology and Palaeontology, University of Thessaloniki; **MCGL**: Musée Cantonal de Géologie, Lausanne; **MNHB**: Museum für Naturkunde der Humbolt Universität zu Berlin; **NIK**: Nikiti 2; **PIK**: Pikermi, Greece; **PNT**: Pentalophos 1, Greece; **SAM**: Samos, Greece.

3. Systematic palaeontology

Order Perissodactyla Owen, 1848
Superfamily Chalicotherioidea Gill, 1872
Family Chalicotheriidae Gill, 1872
Subfamily Schizotheriinae Holland et Peterson, 1914
Genus ***Ancylotherium*** Gaudry, 1863
Ancylotherium pentelicum (Gaudry et Lartet, 1856)
Figs. 1, 2

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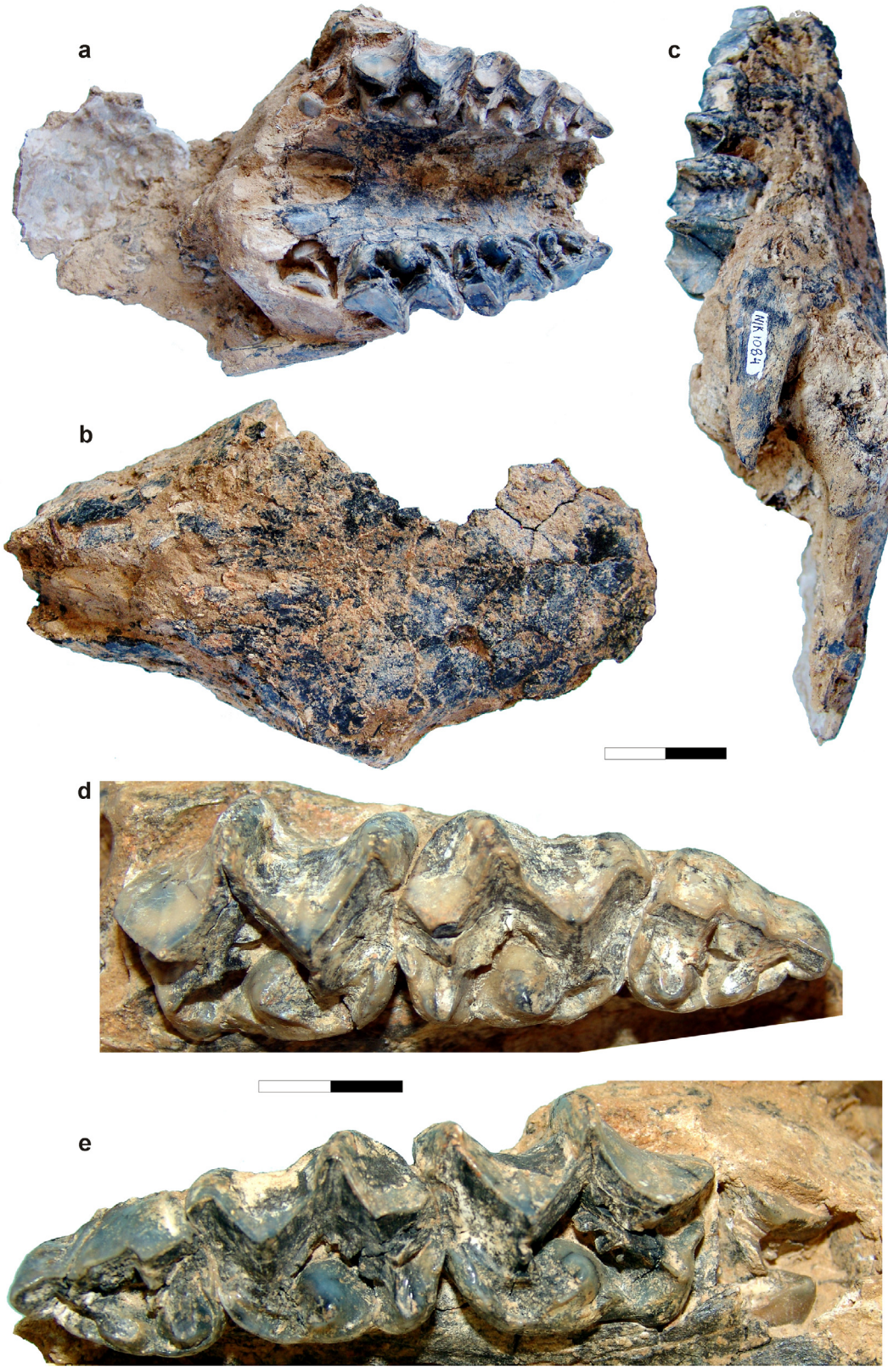

Fig. 1. *Ancylotherium pentelicum*, Nikiti 2 (NIK), Macedonia, Greece; early Turolian, MN 11. Partial juvenile skull, NIK-1084; **a**. Ventral view; **b**. Dorsal view; **c**. Left lateral view; **d**. Right tooth row; **e**. Left tooth row. Scale bars: 4 cm (a–c), 2 cm (d, e).

Locality: Nikiti 2 (NIK), Chalkidiki Peninsula, Macedonia, Greece.

Age: early Turolian, MN 11, late Miocene.

Material: Frontal part of the skull of a young individual with both tooth rows DP2-DP4, NIK-1084; partial mandible of a young individual with dp3-dp4 dex. and dp2-dp4 sin., NIK-1085; right mandibular fragment with dp2-dp4, NIK-1667; left mandibular fragment with dp3-dp4, NIK-1552.

Measurements: See Tables 1, 2.