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A LATE PLEISTOCENE ENDEMIC GENET (CARNIVORA, VIVERRIDAE) FROM AGHIA NAPA, CYPRUS

Abstract

The Pleistocene endemic fauna of Cyprus consists mainly of dwarf hippos and elephants, adapted to the insular environment. Among the rare elements of this endemic fauna is a small carnivore, the viverrid Genetta plesictoides, poorly known from scanty material that comes from two localities. Recent excavations in a rockshelter site at the area of Aghia Napa yielded — apart from a rich hippo sample— new skeletal remains (a partial skull and a tibia) of the cypriot genet. The dental morphology shows adaptations towards a more carnivorous diet in relation to the extant Genetta genetta.

Cyprus, as an oceanic island, has yielded a greatly impoverished endemic fauna (Bate 1904, Boekschoten and Sondaar 1972). The main elements are a dwarf hippopotamus, *Phanourios minor* (Desmarest, 1822), and *Elephas cypriotes* Bate, 1903, a dwarf elephant (Bate 1903, 1905). Other, generally quite sparse, findings include the genet *Genetta plesictoides*, one or two species of murid rodents (*Mus* sp.), one or two species of bats and a soricid insectivore (*Crocidura suaveolens*) (Boekschoten and Sondaar 1972).

Recently (2001-2003), the Geological Survey of Cyprus and the Department of Historical Geology and Palaeontology of the University of Athens carried out an excavation in a rockshelter site in the eastern part of the island, near the town of Aghia Napa. The site is situated about 1 km east of the town of Aghia Napa (Fig. 1). It yielded abundant material of the dwarf hippo *Ph. minor*, as well as cranial and postcranial finds of the small carnivore of Cyprus, which are described here. The genet remains were found during the October 2002 excavation, in the square Q8, together with numerous *Phanourios* remains. ESR datings carried out on *Phanourios* teeth in the National Centre of Scientific Research 'Demokritos' in Athens, yielded ages of 11.0–13.5 ka for the Aghia Napa site (Bassiakos pers. com.).

Fig. 1 – Satellite image of Cyprus (source: NASA). The position of the Aghia Napa site is indicated with an asterisk

Order: Carnivora Bowdich, 1821
Family: Viverridae Gray, 1821
Genus: *Genetta* Oken, 1816

Genetta plesictoides Bate, 1903

The skull is narrow and elongated (estimated condylobasal length: 86 mm), with moderately long and low rostrum, which occupies about 1/3 of the skull length. The infraorbital foramen is large and opens above the parastyle of P4. The orbital fossa is large and its anterior margin is slightly behind the infraorbital foramen's level. The sagittal crest is very thin, Y-shaped anteriorly, and slightly more developed at the posterior part of the cranial roof. The choanae open 4 mm behind the M1. The tympanic bulla is elongated, and it is characterised by the marked antero-posterior elongation of the entotympanic chamber and the absence of an external auditory meatus tube.

The upper dentition is well preserved on the right side except for the incisors. The P1 is very small and single-rooted. The P2 is elongated and narrow. Its distal part exhibits a tiny accessory cusp. The P3 is similar to P2 but its main cusp is more symmetrically placed, while there is also a small accessory cusp at the base of the crown and anteriorly. There is no lingual cusp. The P4 is long and narrow, and has a very small and low parastyle, while the metastyle is clearly smaller in length than the paracone. The tip of the paracone is directed backwards. The protocone is weak, does not protrude significantly lingually, and does not extend mesially beyond the parastyle level. The M1 is subtriangular and transversely elongated. Its mesial margin is convex, while the distal one is slightly concave. The ridge of the paracone is strong, elongated and transversely directed, whereas that of the metacone is very weak and low. A M2 is lacking, but it is possible that a very small M2 did exist.
The tibia has the typical morphology of the family.

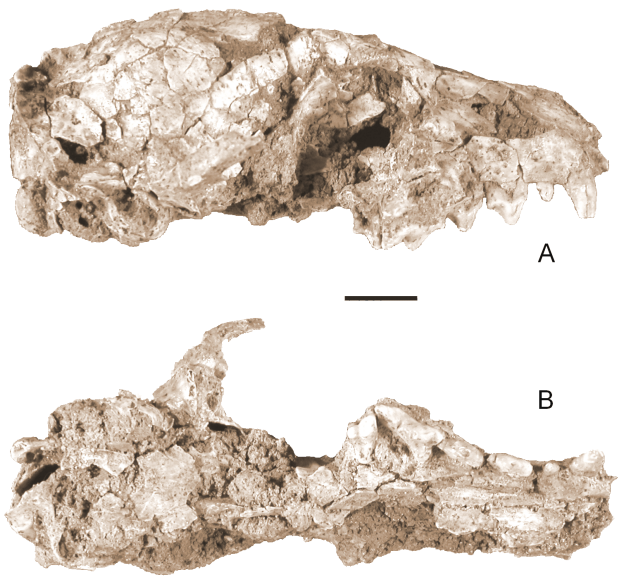

Fig. 2 - *Genetta plesictoides* from Aghia Napa, Cyprus; skull: A, right lateral view; B, ventral view. Scale: 10 mm

Discussion

The fossils ascribed until now to *G. plesictoides* are not comparable to the material described here, as they represent different skeletal parts. However, their size —superior in comparison to that of G. genetta— is very similar, allowing us to ascribe the studied material to *G. plesictoides*.

In general, the upper dentition of the studied *G. plesictoides* cranial specimen is very similar in morphology to the dentition of the extant *G. genetta*. Nevertheless, the premolars (P2–P4) of *G. plesictoides* have different proportions, being longer and transversely narrowed. Moreover, the P3 lacks the internal cusp that characterises the extant genets. Contrary to the extant species, the protocone of P4 does not project lingually so much and is much less developed; the P4 itself is longer in relation to the other premolars (especially P3) or the whole cheek teeth series. It is not clear if the M2 is absent in *G. plesictoides*. However, if present, this tooth must have been diminutive, much smaller than in *G. genetta*.

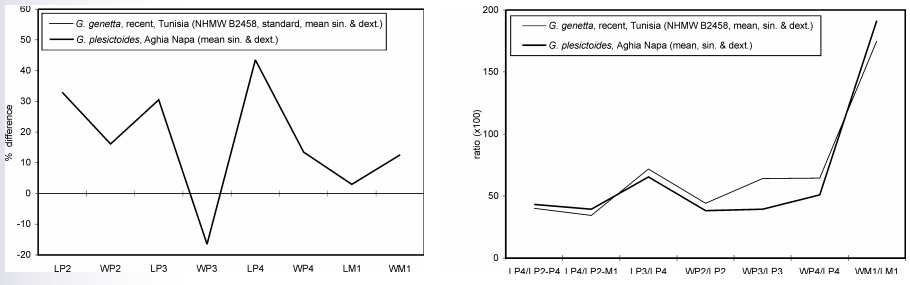

Fig. 3, 4 - Diagrams comparing the dental dimensions of *G. plesictoides* from Aghia Napa, Cyprus and extant *G. genetta* from Tunisia

Conclusion

The species *G. plesictoides* is a poorly known endemic viverrid. Apart from an adult mandible and scarce limb bones, as well as some scanty juvenile dental and postcranial material, no other skeletal parts of this small carnivore were known until recently. The new material from Aghia Napa is the first adult skull and upper dentition of the species. Its main character is the development of the cutting function of the dentition, probably reflecting a more carnivorous diet, compared to the extant common genet.

The co-occurrence of *G. plesictoides* with *Phanourios minor* in the site of Aghia Napa, positively indicates that the Cypriot genet belongs to the endemic Pleistocene fauna or is at least closely associated with it.

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