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Abstract Volume

Oral presentation

Woolly rhinos and woolly mammoths in Southern Greece? Using REE elements to trace the provenance of old museum collections

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The Mediterranean peninsulas of Europe are commonly included in the glacial distributions of cold-adapted faunas, particularly with respect to their most iconic animals: the woolly mammoth (*Mammuthus primigenius*) and the woolly rhino (*Coelodonta antiquitatis*). The presence of both taxa is well documented by rather scanty, though identifiable, remains from Northern Greece, as well as from Megalopolis in Peloponnese, a quite southern locality (37°N).

The incompatibility of cold-adapted elements with the rest of the Megalopolis fauna, which is of forest/woodland type, together with the presence of physically similar specimens from Ukraine in the collections of the Museum of Palaeontology and Geology, University of Athens, raised many doubts about the provenance of the alleged Megalopolis finds. The Ukrainian fossils come from “Kiev, Telichka” locality and were donated to the museum more than a century ago. To test our doubts we used Rare Earth Elements (REE) analyses. Small quantities of bone, dentine and sediment samples were pulverised and analysed on an ICP-OES spectrometer. The normalised REE signal of the analysed samples showed clearly that the supposed woolly mammoth and rhino samples from Megalopolis were completely different from a specimen that definitely comes from this locality, but matched with another, unquestionably Ukrainian sample, evincing a quite plausible Ukrainian provenance. Our results contradict the referred presence of woolly mammoths and rhinos in southern Greece (possibly due to specimen mixing), which is in accordance with the regional faunal data.

Poster presentation - Supported by The Raymonde Rivoallan Fund

Biometrical study of post-cranial deer material from the Late Pleistocene of Crete and Karpathos

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A characteristic endemic fauna, restricted to the island of Crete occurred during the Late Pleistocene, in which the ungulates were by far the most successful forms (0.3-0.01 Mya) ranging from dwarf to relatively gigantic size. They probably occupied different ecological niches in the insular isolated environment and belonged either to one genus (*Candiacervus*) on the basis of monophyly or to more implying different ancestors.

In the present study, the biometrical analysis of size variation and limb morphology of the Cretan cervids and comparison with nearby Karpathos endemic Pleistocene deer were attempted. The studied fossil material, currently stored in the Natural History Museum of Crete, was originally collected from numerous cave localities in the late sixties and early seventies by the German palaeontologist S.E. Kuss. The widely spread and abundant smallest or dwarf-sized groups were mainly distinguished from scatter plots of combinations of several measurements on full grown bones while the recovered larger sizes were extremely rare. These were likely the last representatives of the Cretan deer that had short and massive limbs displaying a much greater degree of robustness than continental cervids. Furthermore, multivariate analysis (PCA) resulted in a definite morphological distinction between the post-cranial fossil material from the two islands. The Karpathos cervids differ significantly from the deer remains found on Crete both in size and morphology, bearing unique anatomical features, and implying no direct link with the Cretan stock. Furthermore, despite insufficient evidence, the existence of two different species in Pleistocene Karpathos is also suggested.