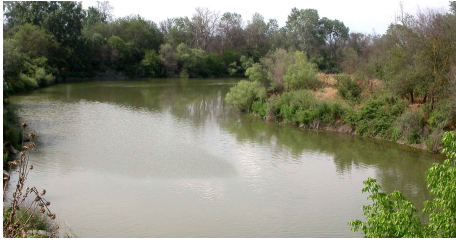


The Late Pleistocene fauna of Peneiós valley (Lárisa, Thessaly, Greece): new collected material

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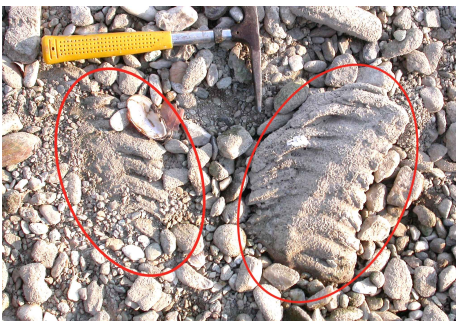


Peneiós is the main river that drains the Thessalian Basin, an extensive lowland area in central Greece. In the eastern part of the basin the river cuts deep into its own Pleistocene deposits, bringing mammal fossils, as well as Palaeolithic artefacts, to light. The finds are located west of the city of Lárisa, at the riverbed area between the mouth of Kalamáki gorge and the city. The locality is marked with a red circle on the topographic map.



A distal humerus of the elephant *Elephas antiquus*

The fossils come to light during very dry summers, when the water level drops dramatically. They are found loose on the river bed, eroded from the adjacent banks. Most of them are hardly moved from their original position, as they are very well preserved; some, though, show clear signs of rolling. To explain the simultaneous presence of artefacts and fossil bones, Runnels & van Andel (1993) consider the locality as a seasonal hunting camp site. However, no cut marks have been yet found on any collected bone specimen, so this hypothesis remains to be proved.



Left and right lower third molars of the elephant *Elephas antiquus*, as they were found. The two specimens quite plausibly belong to the same individual, implying preservation *in situ*.

The Peneiós fauna is already known from earlier publications (Milójić *et al.*, 1965; Schneider, 1968; Athanassiou, 2001). The until now determined taxa are:

- *Elephas antiquus*
- *Stephanorhinus hemitoechus*
- *Equus ferus*
- *Equus hydruntinus*
- *Hippopotamus* sp.
- *Megaloceros giganteus*
- *Cervus elaphus*
- *Capreolus capreolus*
- *Bos primigenius*
- *Bubalus* cf. *arnee*
- *Saiga tatarica*
- *Capra ibex*

Bubalus and *Saiga* are only referred to by Milójić *et al.* (1965) and have not been found again since then. The presence of *Capra* is given here for the first time, while the available material of the other taxa is greatly enriched.

The fauna is biochronologically dated to the Late Pleistocene.

The fossils are found in Peneiós' lower terrace, which has been dated to 45–30 ka, based on radiocarbon dating of freshwater shells and U/Th dating of pedogenic carbonates from different locations in the river banks and valley (Demitrack, 1986; Runnels & van Andel, 1993).

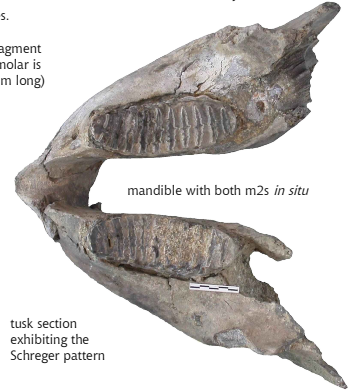
This is the only specimen referred to *Capra ibex*. The morphology and dimensions are comparable to the sample from the Pleistocene of W. Alps (Chaix & Desse, 1982).



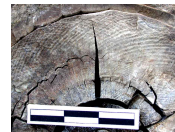
The straight-tusked elephant *Elephas antiquus* is the most abundant taxon of the fauna. It is represented by numerous dental and several postcranial specimens that exhibit the characteristic morphology of the species: molars with rather low lamellar frequency, folded enamel with medial sinuses, weakly curved tusks with obtuse Schreger angles.



left side cranial fragment with M2 (the molar is 180 mm long)



mandible with both m2s *in situ*



tusk section exhibiting the Schreger pattern



The aurochs *Bos primigenius* is present with horn cores, dental series and several limb bones (mostly tibiae, radii and metapodials). The male metapodials, as the pictured one, are extremely robust (specimen length: 250 mm).



A right hemimandible of the steppe rhino *Stephanorhinus hemitoechus* with p4–m3 (specimen length 290 mm). The Peneiós sample belong to a small-sized population of the species.

A left hemimandible of *Megaloceros* with m1–m3, characterised by marked pachyostosis.



Slender metatarsals (left), a metacarpal and a right hemimandible with p3–m3 (pictured mirrored) referred to *Equus hydruntinus*, a small Late Pleistocene equid of onager affinities. The left metatarsal is heavily rolled.



The fauna includes elements that characterise open plains (horses, rhino), as well as species that usually imply a more forested environment (straight-tusked elephant, cervids). This may be the result of a possible faunal concentration and mixing at the area of the gorge mouth. Alternatively, it may show a mixed biotope of open forests, interrupted by low-vegetation spaces.

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