

A Middle Pleistocene deposit with *Elephas antiquus* remains near Colferro (Roma)

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SUMMARY: A new Middle Pleistocene deposit with remains of *Elephas antiquus*, *Bos primigenius*, *Cervus elaphus* and lower Palaeolithic implements has been discovered in South-Western "Campagna Romana" (Colferro, Rome). While the stratigraphic position suggests an attribution to the lower Middle Pleistocene, the characters of the fauna do not allow a full correlation with Fontana Ranuccio FU.

1. INTRODUCTION

The fossil deposit is located in locality Colle Pantanaccio, in downtown Colferro, (Fig. 1). The first notice to the Archaeological Group of Colferro was given in 1994 by a student, when fossil bones fragments were spotted in a section cut during works of house building. A digging test carried out in December 1999 allowed to locate an elephant tusk in a clay level (Upper Unit) and vertebrate remains and scanty lithic industry in the levels below (Lower Unit).

The systematic diggings, currently in progress in the Lower Unit, were resumed in October 2000 to better understand the geologic setting of the site and to make an estimate of the actual concentration of archaeological and palaeontological evidence, foreseeing the building of a Museum.

2. GEOLOGICAL BACKGROUND

The Latina Valley is a tectonic depression with a carbonatic substratum, starting from 700-110 m below ground level (Cassa per il

Mezzogiorno 1972), overlain by synorogenic terrigenous deposits, fluvial and lacustrine sediments and volcanics mainly from the Colli Albani volcanic district (Alberti *et al.* 1975; Parotto & Praturlon 1975; De Rita *et al.* 1987). In the pre-volcanic topography, the site was located in a valley of the Paleo-Sacco river, with water-drainage towards NW, opposite to the present one. During the Middle Pleistocene the area had a reversal of water-drainage due to the emplacements of Colli Albani volcanics (II pyroclastic flow of the Tuscolano Artemisio phase, *sensu* De Rita *et al.* 1988). During this time of transition, the duration of which is still undetermined, the whole area was probably swamped.

The first observations on the stratigraphy of Colle Pantanaccio, carried out on a composed artificial section, enable us to the identification of:

- a Lower Unit (observed thickness approx. 3 m) made of materials of volcanic origin that were sedimented or resedimented in a swampy-lacustrine environment, with evidence of initial processes of pedogenesis; many fragmentary fossil remains were found in this unit;
- an Upper Unit (observed thickness approx.



Fig.1 - Location of Colle Pantanaccio, near Colferro.

2.5 m, Fig. 2), made of clays in the lower part, and of sands in the upper. The sediments and the structures suggest an anoxic environment characterized by shallow waters with low hydrodynamism; from this argillaceous facies an evolution towards a fluvial environment was observed, but always characterized by relatively shallow waters, at times emerged, corresponding to the medium-fine sands.

The sediments include macrobotanical remains. Palaeobotanic analyses currently in progress will give additional information allowing for palaeoenvironmental reconstruction.

3. FAUNA

Many remains have been recovered in the Lower Unit. The bones show traces of transport and various degrees of alteration. The following taxa have been recognized:

Elephas antiquus: one tusk (Fig. 3) displaying the typical taxonomic characters of the species, such as the low curving and the inner structure with a pattern of Schreger lines having angles greater than 110° in the external portion (Palombo & Villa 2001); in addition, the pelvis of a young individual, with an incompletely ossified pubic symphysis.

Bos primigenius: a portion of skull, with a horn and a premolar; morphology and dimensions fall within the field of variability of

Middle Pleistocene taxa (Caloi & Palombo 1980).

Cervidae gen. spec. indet.: some fragmentary remains of little diagnostic meaning, such as vertebrae and portions of long bones, have also been discovered.

From the Upper Unit a tusk approximately 4 meters long (Fig. 4) was recovered. The tusk, lying on a clay layer, was in a good state of



Fig.2 - Section of the Upper Unit of Colle Pantanaccio.

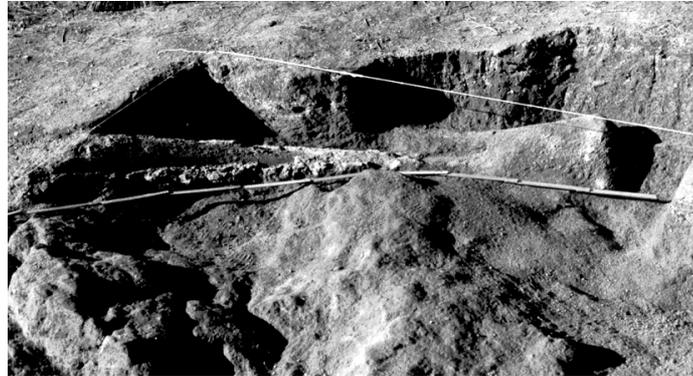


Fig.3 - Tusk of *Elephas antiquus* from the Lower Unit.

preservation and displayed typical features of the species *Elephas antiquus* (Maccagno 1962). A scapula and a fragment of lower jaw of a cervid (?*Cervus elaphus*) were found in the same unit .

4. LITHIC INDUSTRY

Scanty stone implements, made knapping small silicious pebbles, were also retrieved.

From the Lower Unit:

- a scraper on a core;
- a borer adjacent to a clactonian notch;
- a carinated borer ;



Fig.4 - Tusk of *Elephas antiquus* from the Upper Unit.

- a core with a single striking platform.

From the Upper Unit:

- one flake.

5. FINAL REMARKS

This deposit confirms the frequency of site with *Elephas antiquus* in the Middle Pleistocene of the “Campagna Romana” (Palombo 1986, 1995). Faunas with elephants are relatively common in the Plio-Pleistocene of the area, as the well known deposits near Colle Pantanaccio which include Costa San Giacomo (Costa San Giacomo FU) from which remains of *Anancus arvernesis* in probable association with *Mammuthus meridionalis* have been found; and the one of Fontana Ranuccio (Fontana Ranuccio FU) in which many remains of *Elephas antiquus* (Biddittu *et al.* 1979) have also been discovered. Among the nearby localities, on which only preliminary information is available, the most important seems Quartaccio near Paliano (Frosinone) (unpublished data). The remains from Quartaccio were recovered during surveys and surface collections in a deposit with the same sedimentary characteristics as Colle Pantanaccio. After a first examination of fragmented remains, *Elephas antiquus*, *Equus* sp. and *Bos primigenius* were all identified.

The data currently available do not allow a reliable estimate of the evolutionary degree of the faunas from Colle Pantanaccio; however

the nature of the deposits, the presence of iron crusts and of many well preserved crystals of leucite suggest a preliminary correlation with the nearby deposit of Fontana Ranuccio, dated at 458 ka by K-Ar (Biddittu *et al.* 1979). Further digging, analysis and research will allow to better define the position of Colle Pantanaccio within the Middle Pleistocene faunas of Central Italy.

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