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ABSTRACT BOOK

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***Palaeoloxodon* exploitation in the late Middle Pleistocene site of Polledrara di Cecanibbio (Rome, Italy)**

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The site of Polledrara di Cecanibbio, located on the slopes of the Sabatino volcanic complex NW of Rome, is included within the fluvio-palustrine sediments of the depositional sequence of Ponte Galeria (PG6) and is correlated to MIS 9 (Anzidei et al., 2004, 2012). The site underwent extensive excavations since 1985 (Anzidei et al., 1989); nowadays takes part of a protected area and is accessible to the public.

Two main phases in the formation of the site have been recognized: the older one is represented by a fluvial episode characterized by an irregular ancient riverbed, with alternating raised and depressed areas. At the bottom there are bones that have been transported and deposited according to the strength of the flow; such bones belong mainly to *Palaeoloxodon antiquus* (Palombo et al., 2003) and *Bos primigenius*. In the later phase the river became progressively more marshy leading to the formation of swampy areas with muddy pools where some elephants were trapped as documented by the presence of two individuals whose zeugopodia and autopodia are still in living position.

In the sector that is presently being excavated an almost complete articulated skeleton of *Palaeoloxodon* was discovered; its carcass had been exploited by humans. More recently, in the same area and close to the paleosurface, seven cervical vertebrae and some long bones belonging to a second adult individual have been recovered. Taphonomic analysis on these bones exclude any fluvial transport.

In the articulated skeleton, the outstanding specimen is the skull, surrounded by lithic implements, with the penultimate and ultimate molariform teeth in wear. The skull has been found in anatomical connection with the mandible, while the left stylohyoideum is slightly displaced but close to it. Most of the postcranial bones of this individual are present, though those of axial skeleton only consist of four cervical vertebrae and a thoracic vertebra, scattered few meters far from the skull. Bones of the appendicular skeleton are well preserved and mostly found in anatomical connection. In the fore limbs the right humerus is missing as well as both scapulae. As regards the hind limbs, both right and left distal part of femurs, a right broken caput femoris, patellae, tibiae, fibulae, and tarsal bones were found. Both feet are complete, being the sesamoid bones also preserved. The elephant carcass belongs to an adult individual, about 40 years old as indicated by the wear stage of the molars and by the degree of long bone ossification. It lies with the posterior limbs slightly folded towards the bottom.

This context, exceptionally well-preserved due also to the features of the sediment, allows reconstructing the

position of the animal at its death as well as hypothesizing the dynamics of how it became mired. The presence of more than five hundred lithic implements (cores, tools, flakes, working debris), documents also human activity related to the exploitation of the carcass by scavenging; such evidence is proved mainly by the wear traces detected on some tools used on soft animal tissues. The lithic industry, on small flint pebbles, was produced at the site as evidenced by the refitting and by the presence of working debris indicating very simple reduction chains. It is also worth mentioning the presence of some blocks of effusive rocks (leucite) transported there by humans; they may be related to the fragmentation of the bones of the carcass. In fact, there are numerous bone fragments and flakes with an extremely fresh appearance that in some cases have been refitted together; it has been recently assumed that some of these may have been occasionally used as tools.

Ongoing research include, among others, isotopic study of the volcanoclastic sediments, K-Ar and ESR - U/Th datings, as well as some chemical analyses devoted to a better understanding of fossilization processes and to recognize the causal factors producing surface alterations on exposed bones, in order to indicate methodologies suitable for an optimal in situ preservation of vertebrate specimens.

References

- Anzidei, A.P., Angelelli, L., Arnoldus Huizendveld, A., Caloi, L., Palombo M.R., Segre, G., 1989. Le gisement Pléistocène de La Polledrara di Cecanibbio (Rome, Italie). *L'Anthropologie* 93, 3, 749-781.
- Anzidei, A.P., Arnoldus Huizendveld, A., Palombo, M. R., Argenti, P., Caloi, L., Marcolini, F., Lemorini, L., Mussi, M., 2004. Nouvelles données sur le gisement Pléistocène moyen de La Polledrara di Cecanibbio (Latium, Italie). In: Baquedano, E., Rubio, S. (Eds.). *Miscelánea en homenaje a Emiliano Aguirre. Zona Arqueologica 4. Archeologia. Museo Arqueológico Regional, Madrid*, 20-29.
- Anzidei, A.P., Bulgarelli, G.M., Catalano, P., Cerilli, E., Gallotti, R., Lemorini, C., Milli, S., Palombo, M.R., Pantano, W., Santucci, E., 2012. Ongoing research at the late Middle Pleistocene site of La Polledrara di Cecanibbio (central Italy), with the emphasis on human- elephant relationships. *Quaternary International* 255, 171-187.
- Palombo, M.R., Anzidei, A.P., Arnoldus-Huizendveld, A., 2003. La Polledrara di Cecanibbio: one of the richest *Elephas (Palaeoloxodon) antiquus* sites of the late Middle Pleistocene in Italy. *Deinsea* 9, 317-330.

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