Tools from elephant bones at La Polledrara di Cecanibbio and Rebibbia-Casal de' Pazzi

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SUMMARY: The two Pleistocene deposits of La Polledrara and Rebibbia-Casal de' Pazzi, located in the "Campagna Romana", show some similarities in the geological setting and in the modality of accumulation of bones and lithic industry. The presence of bone tools confirms a peculiar characteristic of artifact production at the Pleistocene sites of the Latium region.

1. La Polledrara

The excavations of the Middle Pleistocene deposit of La Polledrara di Cecanibbio, undertaken between 1985-1999, have uncovered about 750 square metres of a paleosurface belonging to an ancient stream bed dissecting a leucitic granular tuffite bank. The deposit is included within the terminal series of the pyroclastic deposits of the "Sabatino" volcanic complex and has been associated with the "Aurelian Formation", correlated with OIS 9.

The palaeosurface was covered irregularly by a large number of faunal remains (so far over 9000 finds), particularly of *Elephas antiquus* and *Bos primigenius*, which accumulated in various levels in the deepest part of the stream bed and which are scattered within a single level in the marginal areas. The bone assemblage shows varying states of surficial preservation: highly abraded bones are very numerous; a few bones are fresh in appearance or have only minor traces of abrasion; sometimes only the exposed surface of the bone shows traces of weathering, whereas the surface of the bone in contact with the paleosurface is unaltered.

A more recent phase, characterized by the obliteration of the watercourse and the formation of a marshy environment, has been revealed during the latest archaeological campaigns. The bones from this layer have very fresh surfaces; the partially articulated skeletons of two elephants (*Elephas antiquus*) and one wolf (*Canis lupus*) have also been recovered from this layer.

The bones were embedded in a light grey ashy tuffite and were fossilized by their transformation into fluoroapatite - a resistant material linked to post-volcanic gaseous activity.

The bone assemblage varies greatly not only in the state of the surface preservation, but also in various degrees of fragmentation. One of the aims of the taphonomic analysis of the deposit, currently in progress, is to clarify the various processes of bone fragmentation, for example, environmental conditions, trampling by animals, carnivore and human activity. The presence of a lithic industry made from small siliceous pebbles in association with the bones, testifies the presence of humans at the site.

The presence of humans is also documented at La Polledrara and in other Middle Pleistocene deposits of the Latium region (Castel di Guido and Fontana Ranuccio), by indubitable tools made from fragments of long bones of elephant.

The difficulty of obtaining raw materials in this volcanic area for the production of large-sized lithic tools has certainly contributed to the development of this kind of bone artifact production.

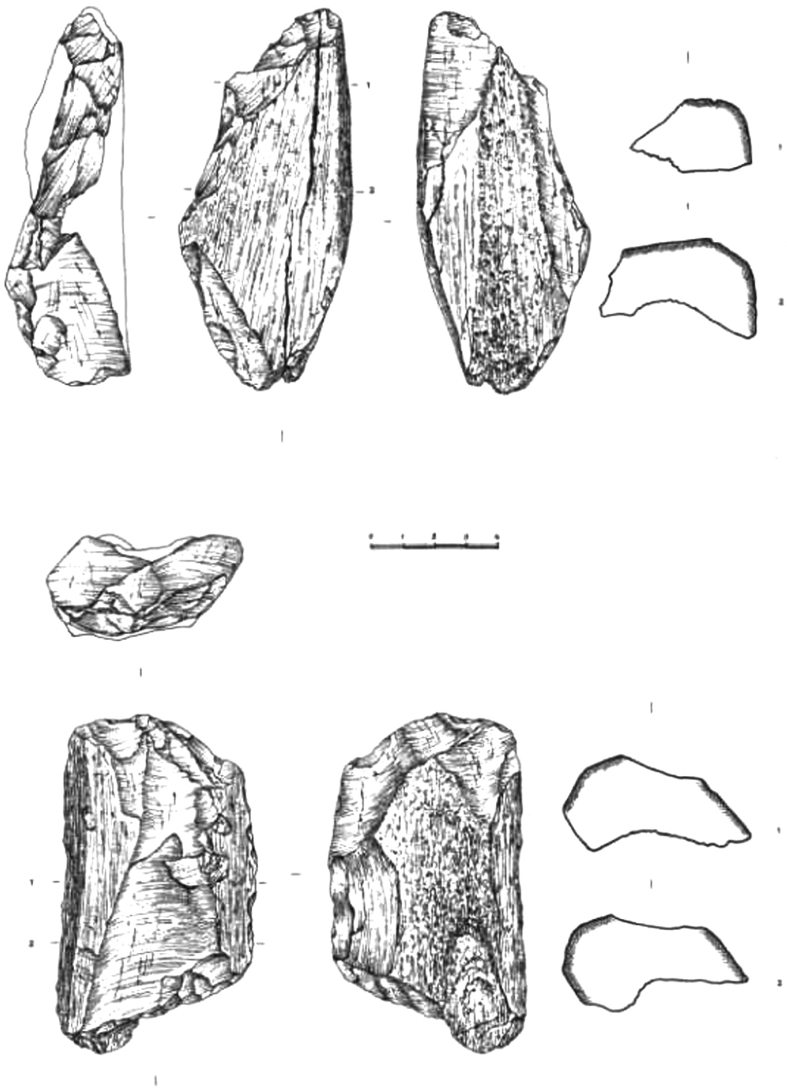

Fig.1 - Bone tools from La Polledrara.

In contrast to the neighbouring Pleistocene deposit of Castel di Guido, where numerous unambiguous Acheulean bifaces made of elephant bone are present, only a few artifacts (a total of eight so far) were identified at la Polledrara di Cecanibbio. The tools, selected from about 9000 faunal remains, comprise scrapers, denticulates as well as artifacts with truncated ends with multiple unifacial or bifacial scars (Fig. 1). The edges of scrapers and denticulates were modified by continuous retouch producing flake scars with negative bulbs of percussion. These traces are usually located on the cortical face of the finds. In addition to deliberately worked bone tools, flakes produced from the diaphyses of elephant bones with a striking platform and a bulb of percussion similar to those observed on lithic flakes have been identified at la Polledrara. Further, fragments of long bones were recovered with a few unidirectional removals subsequent to primary fracture, probably resulting from the utilization of these pieces as tools by humans.

The presence at la Polledrara of such a large number of bovid and elephant carcasses suggests that humans frequented the site during their scavenging or butchering activities, and also with the intention of exploiting accumulations of bone for tool making.

2. Rebibbia - Casal De' Pazzi

Between 1981-1986 archaeological researches in the suburbs of Rome on the middle terrace of the valley of the river Aniene, revealed a segment of an ancient river channel cut into the "Tufo litoide lionato" layer, belonging to the "Vulcano Laziale" complex. In the infill of gravel and sand, over 2000 faunal remains, mainly *Elephas, Bos, Hippopotamus* and *Cervus*, were discovered in association with some 1500 lithic tools made of small siliceous pebbles, and a fragment of a parietal bone attributable to an ancient form of *Homo sapiens*.

The deposit has been correlated with OIS 7, and belongs to the sedimentary cycle called "Vitinian".

The presence of bone tools is testified by only one clear implement made from a fragment of the diaphysis of a long bone of elephant. The tool has a truncated end and a few unidirectional flake scars (Fig. 2).

3. References

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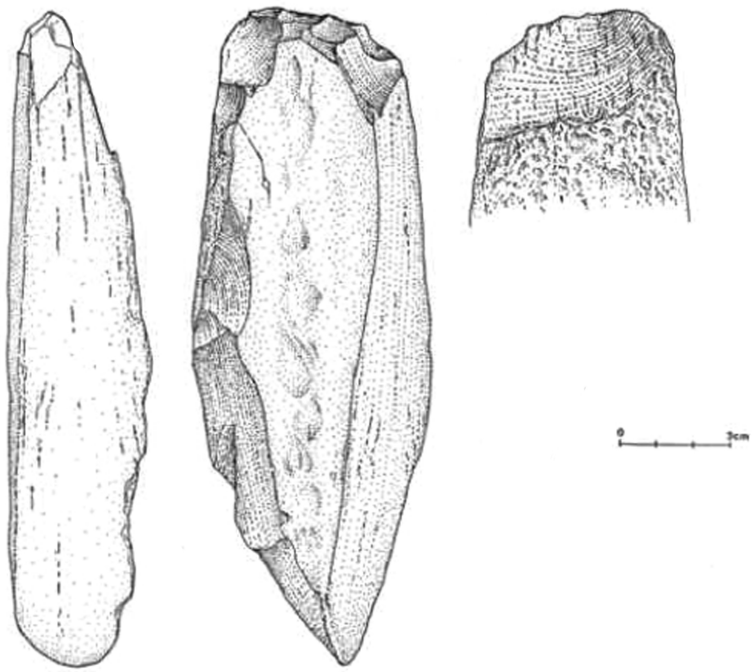

Fig.2 - Bone tool from Rebibbia - Casal de' Pazzi.

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