

## Seeing use-wear on the “oldest tools”: La Polledrara di Cecanibbio and Casal de’ Pazzi (Rome)

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**SUMMARY:** The preliminary results of the functional analysis of the less altered tools from the two Lower-Palaeolithic sites of La Polledrara di Cecanibbio (Rome) et from Casal de’ Pazzi (Rome) are shown. The analysis combines three methods of microscopic observation to reach the most detailed view of the micro-modifications occurred to the tools surface by use and by post-depositional agents of alteration: the low-power approach with a reflecting light stereomicroscope, the high-power approach with a reflecting light metallographic microscope and the electron scanning microscope (SEM) approach.

Functional studies related to the use-wear analysis of Lower Palaeolithic industries present strong limitations due to the usually bad state of preservation of the artefacts’ surface. Post-depositional events affecting so old anthropic deposits make often impossible to apply use-wear analysis to very patinated assemblages.

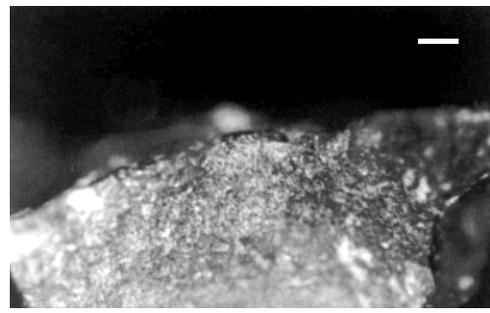
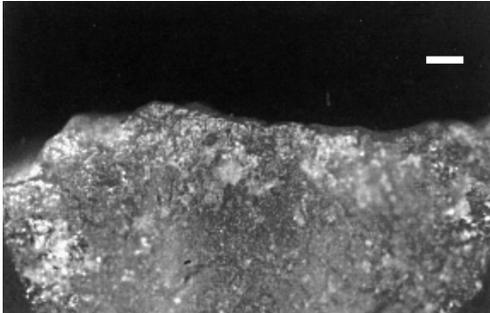
No much longer than a decade ago, more and more researchers began, for this reason, to integrate different methods of microscopic analysis of lithic surfaces with the valuation of macro- and micro-traces by means of a reflecting light stereomicroscope, a reflecting light metallographic microscope, and electron scanning microscope (SEM). This diversified approach increased the interpretative possibilities of this kind of analysis, making it possible to advance functional hypothesis even for very old contexts, and to add new data with regard to the procedures of post-depositional alteration of lithic assemblages (van Gijn 1989; Longo 1994; Márquez *et al.* 1999; Silvestrini *et al.* in publication).

As far as the two Lower Palaeolithic famous contexts near Rome of Polledrara di Cecanibbio and Casal de Pazzi are concerned, a first check was done about the potentials of the

electron scanning microscope for the functional estimation of the two lithic industries, which, in turn, present a very bad state of preservation, due to more or less developed phenomena of flutiation.

Both the natural lithic surfaces and the use-wear traces of used experimental artefacts have been analysed by SEM, so that it was possible to obtain several data, useful for the observation and the interpretation of lithic surfaces of archaeological artefacts sampled among the less patinated.

It is to be emphasised here that, as far as the Polledrara di Cecanibbio site is concerned, in the recent past it was possible to formulate detailed hypothesis about the functional analysis of some ten artefacts coming from a limited area in the western part of the excavation with an excellent state of preservation (Anzidei *et al.* 1999: 180-183). As a matter of fact, it was possible, by means of a reflecting light stereomicroscope and a metallographic microscope, to identify macro- and micro-wears related to the wood carving and carcasses butchering (Figs. 1, 2), which, in one case at least, was surely carried out by hands, as testified by the traces of an hand friction on the tool surface.



Figs. 1, 2 - Fleshy tissue polishes (butchering activity); all scale bars equal 50  $\mu$ m.

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