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'Prehistoric Technology' 40 years later: Functional Studies and the Russian Legacy

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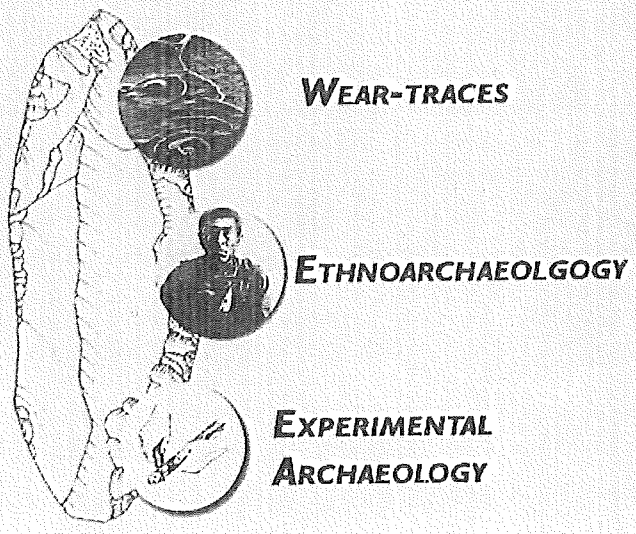

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Use wear analysis: application on the Ripatetta lithic industry. Preliminary results

Cristiana Petrinelli Pannocchia

Dipartimento di Scienze Archeologiche, Università di Pisa, Via Santa Maria, 53-56100 Pisa, Italy. cristianapetr@hotmail.com

Summary. *This work is based on the microwear analysis of a drawn sample of the lithic industry found at Ripatetta. In this Neolithic settlement, attributed to an advanced moment of the Impressed Ware, has brought to light a 80-90 sq. m. cobbled pavement. The results of functional analysis - conducted in order to identify the function of this area - have shown that stone tools were mostly used for soft or semi-soft material workings.*

Résumé. *Le sujet de cet étude est l'analyse fonctionnelle réalisée sur un échantillon de l'industrie lithique retrouvée à Ripatetta. Dans cet habitat néolithique, attribué au moment avancé de la céramique imprimée, on a mis en évidence un pavage de cailloux de 80-90 mètres carrés. Les résultats de l'analyse fonctionnelle - visée à identifier les activités qui ont eu lieu en cette zone – ont démontré que la plus part des outils étaient employés dans le travail des matières tendre ou demi-tendre.*

Key words: Neolithic, lithic industry, functional analysis, stone tools.

The site

The site of Ripatetta (Fig. 1) was excavated between 1982 and 1992. Archaeological investigations, headed by C. Tozzi (University of Pisa) in collaboration with D. Evett (Ithaca College, New York), were carried out yearly. In particular, excavations yielded the remains of a neolithic settlement located in a Pleistocene marine regression surface, deeply cut by the Volgano river.

The following areas were found:
- A main area (saggio A) with remains of a settlement consisting of various structures, such as hearths, *silos*, a plaster structure and cavities different in shape and dimension;
- An area characterised by a 70-80 sq. metres cobbled pavement (area B);
- A fencing ditch.

Remains of *Triticum bicoccum*, *T. monococcum* and *T. aestivum-durum* as well as domestic fauna were found, elements that indicate an already neolithic economy.

Ripatetta is fully inserted in the middle and evoluted *Ceramica Impressa* phase developing in south-east Italy (Guadone and Lagnano da Piede phases).

Use wear analysis

In order to identify the function of B area, where a cobbled pavement was found, a microwear analysis has been done. The absence of stake-holes or plaster has allowed to us to suppose this zone as an open working area.

The preliminary results, here presented, deal with a retouched and unretouched artefact sample, so that the quantitative relationships existing within the different typological groups were unaltered.

The assemblage was examined through a stereoscopic binocular microscope (magnifications up to 400x) and a Scanning Electron Microscope (SEM) for higher magnifications. The data were compared to experimental wears (Figs. 3.1, 3.2), obtained with an intensive experimental activity organized by a research group of the Dipartimento di Scienze Archeologiche at the University of Pisa.

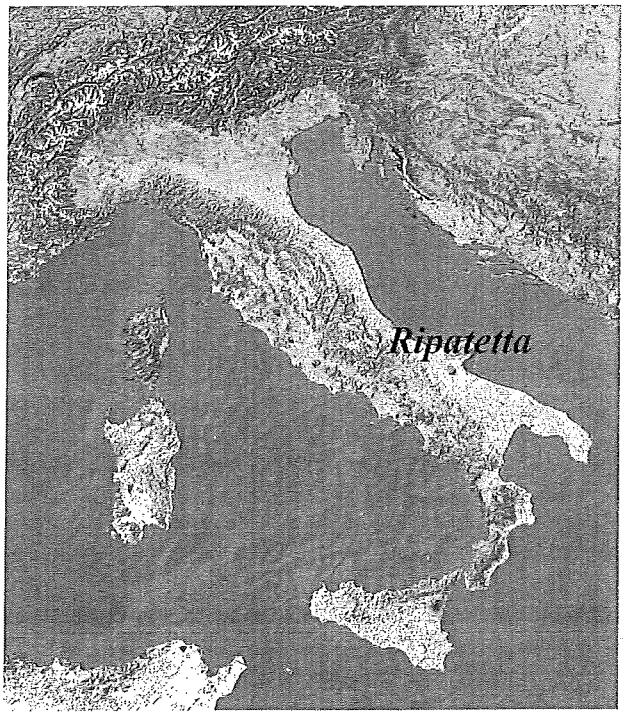

Fig. 1: Location of Ripatetta site.

Results

A preliminary study on materials was conducted in order to check the presence of post-depositonal surface modifications (Levi Sala 1986), that could have partially or totally altered microwave use traces. The analyses have shown that Ripatetta materials are in excellent condition and have no evidence of heavy PDS modifications.

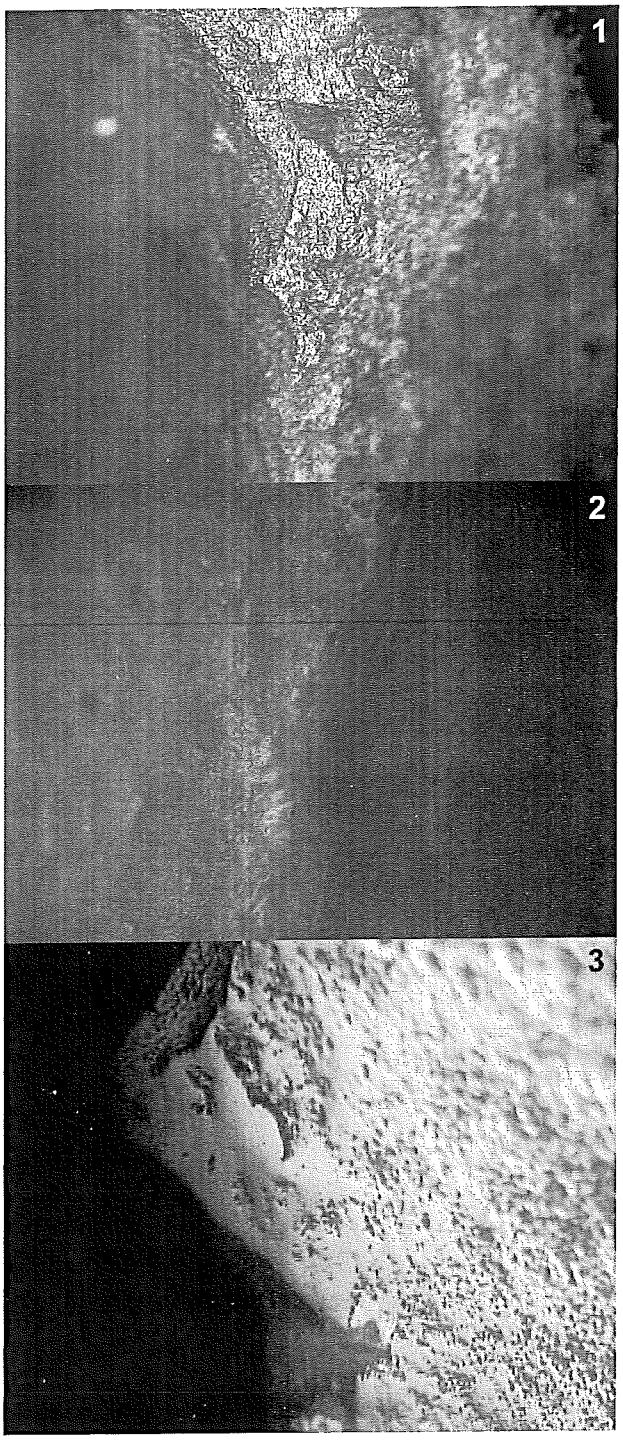

Fig. 2: 1) Archaeological artefact: used for butchering (OM 100x); 2) Archaeological artefact: used for hide-working (OM 100x); 3) Archaeological artefacts: sickle blade used for cereal working (OM 100x).

Five out of 35 specimens did not display any use wear, while the remaining 30 showed a total number of 33 working edges.

The absence of refreshing cutting edges was proved through a preliminary macroscopic observation: this is not surprising since the closeness to row materials' sources.

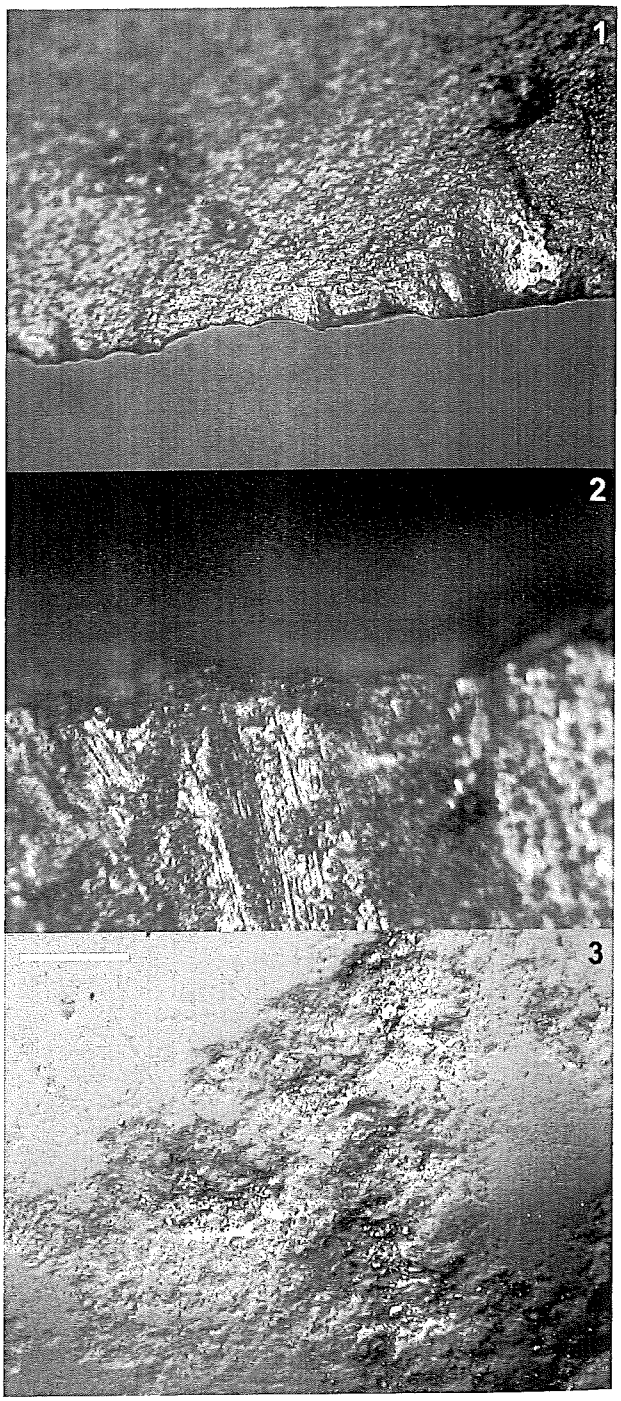

Figure 3: 1) Experimental artefacts: used for butchering (OM 100x), the edge shown microscars due to the contact with bone; 2) Experimental artefacts: used for hide working (OM 100x); 3) Archaeological artefact: sickle blade used for cereal working (SEM 450x, scale value 50 μm).

The polished appearance observed on only one edge as well as its extension towards the implements' inner surface can be referred to a transverse movements, suggesting slicing and scraping activities with an angle lower than 45°. The feeble development of polished areas observed on eight specimens does not allow a certain identification of the materials; due to the low presence of microflakes, and the absence of striations on the

remaining tools, the work of soft or semisoft materials should be supposed. In particular, the feature and topography of polishes, mainly developed on the very end of the edge, distributed on the microflakes, suggest in most cases a contact with meat or hide (Figs. 2.1, 2.2).

Dry hide work seems to have occurred in two cases (a endscraper and a blade fragment). Possible microimpact wears was noticed on two specimens, while a third tool (backed knife) has shown slight traces on the retouched edge as well as blackish material residues could imply the presence of a handle.

Six specimens analysed (of which only one was found in the B area) are characterised by a gloss parallel to the artefact axis. Analyses show typical polishes clearly related to cereals-working (Figs. 2.3, 3.3). A case still under examination seems to display traces related to reed-cutting: this would be coherent with the plaster analyses, which evidenced traces of reeds belonging to the species *Arnudo* and *Fragmites*.

Conclusion

In conclusion, the gathered data seem to depict an area used for meat- and, to a smaller extent, hide-working. Thus, the undifferentiated polishes observed on 8 specimens could be attributed to a butchering activity. Further investigations on a wider sample and a comparative analysis with materials from other areas of the settlement will provide a wider scenario.

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