

THE OPEN AIR PONTINIAN: TECHNOLOGICAL VARIABILITY, GEOMORPHOLOGY AND SETTLEMENT DYNAMICS

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ABSTRACT: Aureli D., Giaccio B. & Rolfo M.F., *The open air Pontinian: technological variability, geomorphology and settlement dynamics*. (IT ISSN 0394-3356, 2011)

This article presents the preliminary results of research carried out in recent years on the Neanderthal settlement in the Alban Hills Area.

The investigations have been set on two distinct goals; i.e. (i) improving knowledge on Pontinian occupations in the Alban Hills area through the identification and study of new open air sites, and (ii) integrate archaeological data with geological observations in particular for the volcanic complex of Alban Hills Volcanic District.

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Cet article présente les résultats préliminaires des recherches menées ces dernières années sur le peuplement de Néandertal dans la région de Colli Albani.

Les recherches se sont focalisées sur deux objectifs distincts. D'une part, améliorer les connaissances sur le peuplement pontinien dans les marges septentrionales de l'aire pontinienne (région des Colli Albani) à travers l'identification et l'étude de nouveaux sites de plein air. Deuxièmement, intégrer les données archéologiques aux observations géologiques en particulier avec le complexe volcanique de Colli Albani.

Key words: Pontinian, open air site, geomorphology and volcanology, technological variability

Parole chiave: Pontiniano, siti all'aperto, geomorfologia e vulcanologia, variabilità tecnica

The strategy and the population dynamics of Neanderthal populations still remains one of the most debated issue among the international scientific community.

What were the ecological and social factors that led or conditioned these men to occupy and exploit specific territories? How can we interpret the behaviour and logical cognitive structures of Neanderthals from archaeological data?

The archaeological-geological context of the southern coast of Latium, as well as its history of research and the peculiar characteristics of archaeological data, make this region an ideal framework to address these questions.

The main aim of this paper is to reopen the debate on the scientific definition of the Pontinian phenomenon by understanding the problem in its archaeological and geographical complexity.

The theoretical condition is fundamental to consider all sites that define the problem of archaeological Pontinian as a set system where each site is strictly interdependent with others in an integrated network of relationships that bind them to the deep territory.

From there, it is necessary to reassess industries from the full range of sites in the region of plain and hilly area which is considered an important

source of information and too little has been previously considered. The study of these series could then give a more accurate picture of the Neanderthal occupation in this region.

Relatively recent research (BIETTI *et al.*, 1991, GRIMALDI, 1988-89, KUHN 1990, MUSSI *et al.*, 1984-87) show some variability in the technical Pontinian phenomenon, observable both in time and space. The area defined as Pontinian, was described from a geographical point of view as a rectangle of about 100 km long by 30 wide, bounded on the north by the Tiber River, to the east by the Alban Hills and Lepine Mounts, to the south by the Circeo and Fondi Plain, and west by the Tyrrhenian Sea. From a temporal view point, this techno-complex has been dated between about 100 and 40 ka, from age determinations mainly obtained in stratified caves sites (KUHN, 1990) and in two open air sites (BLANC, 1937; ROLFO *et al.*, 2005).

The archaeological material that reflects the technical variability of Pontinian comes from two categories of sites. On a hand, there are cave sites (Circeo and the province of Fondi), and other open-air sites (plain and hill region), often found in near-surface context. They yielded a significant number of stone tools, many of which may be associated with a specific geological setting "*Plus d'une cen-*

taine de sites de surfaces ont été signalés, au cours de prospections systématiques, dans les environs de Rome, au Nord du Tibre, et dans la Pianura Pontina (CALOI L. *et al.*, 1989).

On 1999 a research program at the University of "Tor Vergata" in Rome in collaboration with the National Research Centre was born. It attempts, through field work, to improve knowledge of the Palaeolithic settlement of northern margins of the Pontinian area (Colli Albani region) through the discovery of new sites, framed in morphological, tephrostratigraphic and tephrochronologic contexts (ROLFO *et al.*, 2007). The results of this research provided a first attempt to contextualise the surface archaeological collections with local morphological and pedo-stratigraphic context, providing a broad geo-archaeological framework for further work on the cultural Pontinian phenomenon.

The analysis of the areal dispersion of the archaeological material combined with geological observations point out that the lithic industry derive from the uppermost part of a well defined pedo-stratigraphic horizon. This is a deep paleosol developed on the pyroclastic deposits belonging to the so called Faete Phase of the Alban Hills Volcanic District (308- 250 ka), which, in a wide north-eastern area of the Alban Hills, is overlaid by previously unrecognised distal deposits of the most recent Alban Hills volcanic activity of the Albano Maar (c. 70-36 ka) (GIACCIO *et al.*, 2007).

These new tephrostratigraphic and tephrochronologic data, in addition to confirm the independent, archaeological-based attribution of the lithic industries to the Middle Latium Palaeolithic, provide a new, unheard useful dating and correlating tool worth careful consideration for the present and future research on the Palaeolithic of the Alban Hills area (GIACCIO *et al.* 2007).

In this paper we present the preliminary study of a series of open air sites found in stores. We focused our attention primarily on geomorphological aspects then on the lithic industries. The latter were analysed through a technological and techno-functional approach with the intend to understand the dynamics of land use, the functionality and

functionally from the stone tools and the technical systems of flakes production of the Pontinian phenomenon.

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