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An intra-site perspective on the Sauveterrian lowland occupation of the Emilian Po plain (Northern Italy)

Davide Visentin ^{a, b, *}, Federica Fontana ^a

^a Università degli Studi di Ferrara, Dipartimento di Studi Umanistici – Sezione di Scienze Preistoriche e Antropologiche, Corso Ercole I d'Este 32, 44100 Ferrara, Italy

^b UMR 5608 TRACES, Université Toulouse Jean Jaurès, Maison de la Recherche, 5 allées A. Machado, 31058 Toulouse Cedex 9, France

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ABSTRACT

The Sauveterrian occupation of the southern Po plain is known thanks to the discovery of five sites. Three are located near Bologna (INFS, Casalecchio and Cava Due Portoni), one in the Parma district (Collecchio) and one near Piacenza (Le Mose). Although they were excavated between the 1980s and 1990s, the spatial position of the archaeological finds has been recorded for all except Le Mose. This has allowed an intra-site spatial analysis to be carried out.

This paper will compare and contrast the spatial organization of the sites in search of common features and differences. The study has been aimed at a critical re-examination of the available evidence in order to better understand the role of these sites within the settlement system of the southern Po plain area during the Early Mesolithic. The Emilian evidence is made up of both ephemeral settlements occupied by small parties for short time spans that can be interpreted as hunting stands (INFS and Casalecchio), and sites specialising in the processing of specific raw materials (Collecchio). Proper residential sites, if there were any, are still missing (perhaps with the exception of Cava Due Portoni, whose functional role remains uncertain due to post-depositional disturbance). The interpretation of Le Mose appears more debatable due to a lack of spatial data.

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1. Introduction

Most of our present knowledge on the Italian Mesolithic comes from the exploration of rock-shelter and cave sites. However, such evidence represents most probably only a small portion of the wide spectrum of locations occupied by the last groups of hunter-gatherers. An indication in this sense comes also from the ethnographic work of Binford (1978b), attesting that none of the modern hunter-gatherer groups who live above 35°N have chosen caves or rock-shelters as residential sites. They are mostly used as hunting or fishing camps by specialized groups or as “transient camps”. Although this ethnographic point of view does not necessarily reflect prehistoric behavior, it strongly hints at the major role played by open-air sites.

In Northern Italy the open-air evidence is mostly represented by sites located at middle and high altitudes both in the Alps and the Apennines (Biagi et al., 1980; Bagolini and Dalmeri, 1987; Dalmeri and Pedrotti, 1992; Fontana, 2011; Peresani, 2009). On the plain, most Mesolithic evidence is represented by surface lithic scatters collected on ploughed fields (Broglio et al., 1987; Corazza et al., 2009; Peresani, 2013; Fontana et al. 2016).

The five Sauveterrian sites that are the object of this paper are located in the southern part of the Po plain (also known as Emilian Po plain) and represent the only lowland extensively excavated open-air sites in Northern Italy dated to this period. Four have been the object of an intra-site spatial analysis that will be presented in this paper. In particular, results of the spatial distribution of archaeological remains will be compared in order to understand their function and the intra-site settlement dynamics by cross-referencing spatial with techno-economic data.

2. Regional setting

The Po plain is the largest alluvial plain in Italy, drained by the river Po and its tributaries. In its eastern sector the river Po also

* Corresponding author. Università degli Studi di Ferrara, Dipartimento di Studi Umanistici – Sezione di Scienze Preistoriche e Antropologiche, Corso Ercole I d'Este 32, 44100 Ferrara, Italy.

E-mail address: davide.visentin@unife.it (D. Visentin).

marks the borderline between the Venetian Plain, to the north, and the Emilian one, to the south. The Po plain is enclosed by two mountain chains, the Alps and the Apennines, which are currently approaching each other due to tectonics (Castiglioni, 1999). The Emilian Apennines develop south-east to north-west and are characterized by numerous transversal valleys that connect the main watershed to the river Po.

The margin of the Emilian Apennines coincides with a complex belt of folded thrust, the “Pede-Apennine Thrust Front”, which were active throughout the Quaternary (Cremaschi and Nicosia, 2012). This produced an uplift of the margin of the mountain area and the consequent lowering of the plain in front of it. Several alluvial fans interfinger the gentle hills and low terraces that characterize this margin. According to recent sedimentological models, climate change during Middle and Upper Pleistocene interacted with tectonic processes in shaping these alluvial fans. Glacial periods, in particular, enhanced erosion in the mountain area and as a consequence, the discharge and sediment load of rivers increased, promoting the aggradation and progradation of the alluvial fans in the piedmont area. The opposite took place during interglacial periods, when erosive processes modeled the fans. Towards the plain the distal part of the alluvial fans and the soils overlying them are covered by fine-grained overbank deposits, intercalated with frequent weakly developed buried soils.

During the Preboreal, the vegetal landscape of the Emilian plain was dominated by pines (*Pinus*), mainly Scots pine (*Pinus sylvestris*), followed by fir (*Abies*) and spruce (*Picea*). From the Boreal onwards, deciduous mixed-oak (*Quercus*) forests spread, often combined with lime (*Tilia*). In the Apennine area the Preboreal and Boreal have been characterized by the diffusion of mixed broadleaved woods at lower altitudes, with refuge locations for chestnut (*Castanea*) and walnut (*Juglans*). In the uplands, conifers, particularly pine (mixed with fir), have dominated throughout the period (Accorsi et al., 1999).

3. The Emilian plain sites

All the Sauveterrian Emilian sites are open-air and lie in similar topographic and stratigraphic positions (Fontana et al., 2009b, 2013) within early Holocene alluvial layers (Figs. 1 and 2). Three (INFS, Casalecchio and Cava Due Portoni) are located in the surroundings of Bologna, the first to the east, the other two to the west. Collecchio lies in the territory of Parma while the last one (Le Mose) is further west, in the province of Piacenza. All have been the object of systematic excavations which also included water-screening the soil. As for chronology, the study of the lithic assemblages allowed to date them to different phases of the Sauveterrian. In particular, INFS and Collecchio present older features indicating an attribution to the Early Sauveterrian (Preboreal), as confirmed by two radiocarbon dates at Collecchio, while two others are Middle-Recent Sauveterrian sites (Casalecchio and Cava Due Portoni). As suggested by radiocarbon chronology a longer frequentation may be proposed for Le Mose which is an extensive site composed of different loci. Although the latter will not be analysed from the point of view of spatial analysis, due to the quality of archaeological data which did not allow their study, it will be included in this general presentation and discussion of data.

INFS (Istituto Nazionale Fauna Selvatica) is located at about 41 m a.s.l. and on the lateral portion of the alluvial fan of the Idice river, in a position of transition to the fan of the Quaderna river which is much less developed than the former (Farabegoli et al., 1994). The archaeological layer containing the Mesolithic assemblage, identified under 65 cm of recent sediments, was composed of highly pedogenized silt-sandy sediments. The site has been excavated in 1986 over a surface of about 30 m². Unfortunately, part of the site

was destroyed by the activity of a later channel, and therefore only one sector of the occupied surface could be explored and analysed.

Along with some badly preserved bone fragments, the site has yielded a rich lithic assemblage composed of both cherts and a partially silicified siltstone (locally known as “ftanite”) artefacts (Figs. 3, 9–15). The former are represented by pebbles collected on the ancient Pliocene shores of the Pedeapennines that were knapped by direct percussion with a unidirectional and bidirectional method for the production of small bladelets and flakes (Farabegoli et al., 1994; Fontana and Guerreschi, 2009; Fontana et al., 2009a). The latter is a coarser raw material which is very abundant in the riverbeds of the watercourses of the Bologna area and available as large blocks of varied shape. The silicified siltstone is generally aimed at producing larger elongated flakes, from which a variety of tools are obtained (backed knives and scrapers). From a typological point of view the assemblage is dominated by microlithic armatures and in particular backed points and crescents, while triangles are completely absent. The microburin technique is well attested by the presence of numerous elements. The faunal remains attest the presence of *Sus scrofa* and Cervidae.

Casalecchio di Reno is located at 59 m a.s.l., on the proximal part of the alluvial fan of the river Reno, very close to the hilly band of the Apennines. It has been the object of an emergency excavation campaign between 1998 and 1999. The site covered an area of around 40 m² (Fontana et al., 2009b) and has yielded 3000 lithic artefacts together with some badly preserved bone fragments at a depth of about 2 m under the present soil. Raw materials are the same as in INFS and the lithic assemblage composition is similar to that of the previous site, with microlithic armatures manufactured on small chert bladelets and lamellar flakes dominating over tools (Figs. 1–3, 3–8) (Fontana et al., 2009a). Among the former, all the characteristic Sauveterrian types are attested here, including some triangles both of isosceles and scalene type. A peculiar aspect of this site is the absence of waste of the microburin technique. Faunal remains have not been studied yet.

Cava Due Portoni is also located on the alluvial fan of the river Reno and a few kilometres to the north of Casalecchio di Reno. At the time of the Sauveterrian occupation the area was characterised by frequent flooding by local channels and the deposition of thin alluvial deposits (Cremaschi et al., 1990). The site was discovered in 1983 during quarrying works at a depth of 6 m from the present soil, within a thick silty-clayey layer. Unfortunately quarrying works caused the partial removal of the uppermost part of the layer that contained the Mesolithic evidence. The site was explored over a wide surface of about 82 m². Among all Emilian plain sites, Cava Due Portoni is the only one to have yielded an evident structure. In the northern sector of the excavated area, a large pit of elliptical shape and irregular profile was identified. The sandy sediment filling this structure was hardened and characterised by a reddish colour. The structure was interpreted as a large hearth pit. Concerning tool manufacturing, the use of the two main lithologies attested in the sites of the Bologna area—chert and silicified siltstone—comes together with other rocks, namely a black chert from the mid-Apennine area and a non-local type (possibly coming from the western Emilian Apennines or the Venetian pre-Alps). Moreover at this site, the dichotomy in the use of local chert pebbles and silicified siltstone seems less emphasised than at the previous two sites. In particular, the production of small bladelets from silicified siltstone cores is also attested as well as that of microliths that occur together with some common tools (backed knives and scrapers). Chert pebbles are mostly reduced in order to obtain small bladelets (length < 35 mm) and flakes for the production of microliths and small-sized tools such as end-scrapers. At this site, a high percentage of the industry is composed of technologically non-diagnostic artefacts (i.e. mostly broken pieces and flakes smaller than 6 mm) and

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