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HUNTING CAMPS IN PREHISTORY

Current Archaeological Approaches



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Article outline

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1 - Introduction	333
2 - A small site within a big one	334
3 - Sedimentary context and site modifications: ambiguous data	335
4 - Highly specialized tools?	337
5 - The zooarchaeological data: few imports, no exports?	338
6 - Conclusion	339
Acknowledgments	340
Bibliographic references	340

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THE MESOLITHIC SITE OF LES FIEUX (MIERS, LOT): a hunting camp on the Gramat karst plateau?

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Abstract

The Mesolithic site located in the western entrance of the cave of Les Fieux (Miers, Lot), excavated in the 1970's by F. Champagne, has often been interpreted as a hunting camp. This hypothesis is mostly based on features of the lithic industry, which is largely dominated by weapon elements. The results of a multidisciplinary study of the Mesolithic assemblages now provide an opportunity to question the validity of this hypothesis. While the data collected (in the fields of anthracology, zooarchaeology, carpology, lithic technology and usewear, bone technology, sedimentology, etc.), do not completely invalidate it, they do suggest a few nuances. The activities identified are more varied than would be expected for a simple hunting camp, as are the animal carcass exploitation strategies, indicating an *in situ* consumption of animal products and thus a functional complexity that is not fully compatible with this interpretation.

Keywords

Early Mesolithic, Sauveterrian, rock shelter, site function, activities, lithic industry, bone industry, usewear, zooarchaeology, paleoenvironment.

1 - Introduction

The Mesolithic site located in the western entrance of the cave of Les Fieux (Miers, Lot) was discovered in 1966 when modifications were being made to the entrance of the decorated part of the cavity discovered two years earlier. F. Champagne then explored the site from 1967 to 1973. It yielded a sequence of Mesolithic occupations distributed throughout three successive levels (from the latest to the earliest, D1, D2 and D3). These occupations were attributed to an early phase of the Sauveterrian (ten C14 dates between 8500 and 8000 cal. BC), currently known through only a few notes (Champagne, Espitalié, 1972; Champagne and Jaubert, 1981; Champagne *et al.*, 1990) and university theses (Valdeyron, 1994; Marcus, 2000; Briand, 2004). In the context of the preparation of a monographic publication, we conducted multidisciplinary studies of the site itself and the different assemblages collected by F. Champagne. The goal of this paper is to present a synthesis of the results of these studies and their confrontation with each other, focusing on the interpretation of the site function that can be reached based on the data now available. While the initial hypothesis of a “hunting camp” cannot be totally rejected, some of the data indicate a more varied range of activities than would be expected and thus a site function that is more complex than that of a site occupied only during specialized movements associated solely with hunting.

2 - A small site within a big one

On the northern part of the Gramat karst plateau, less than 6 km from the Dordogne River (figure 1), the site of Les Fieux is located at around 250 m a.s.l in a typical karst landscape with no superficial run-off. This location on the edge of the plateau is strategically well placed at the intersection of different biotopes: the valley and plateau, the slopes connecting them and, in the background, the nearby western slopes of the Massif Central. We can imagine that this environmental diversity provided a varied and often complementary array of resources, especially at the beginning of the Holocene with the extension of the forest cover, making the zone surrounding the site highly attractive to human groups. This is corroborated by the anthracological and carpological analyses, whose combined results show both the proximity of these forest zones and the collection of diverse vegetal resources (firewood, fruit, particularly hazelnuts, and wild legumes) (Bouby, *in* Valdeyron *et al.*, 1999; Henry, 2011). The configuration of the site is rather unusual, with two buried porches separated by an open corridor around thirty meters long, resulting from the erosion and collapse of the roof of a karstic gallery at the beginning of the Quaternary, which was then gradually filled and whose original entrance is thus unknown (figure 2). During the Mesolithic, the site must have had the appearance of three-quarter filled trench, which was easy to access and modify, while the two extremities of the porches provided the advantages of a natural shelter. If we count only the gallery and the two porches (there may have been open-air occupations on the edges of the aven, which were not preserved due to the taphonomic conditions), at the beginning of the Holocene, the site offered at least 300 m² of useable space. Curiously, however, the Mesolithic occupation seems to have been contained only under the western porch (the eastern porch was probably already more or less filled in at the beginning of the Holocene), covering fifty square meters at most, but probably much less due to the gradual filling of the rock

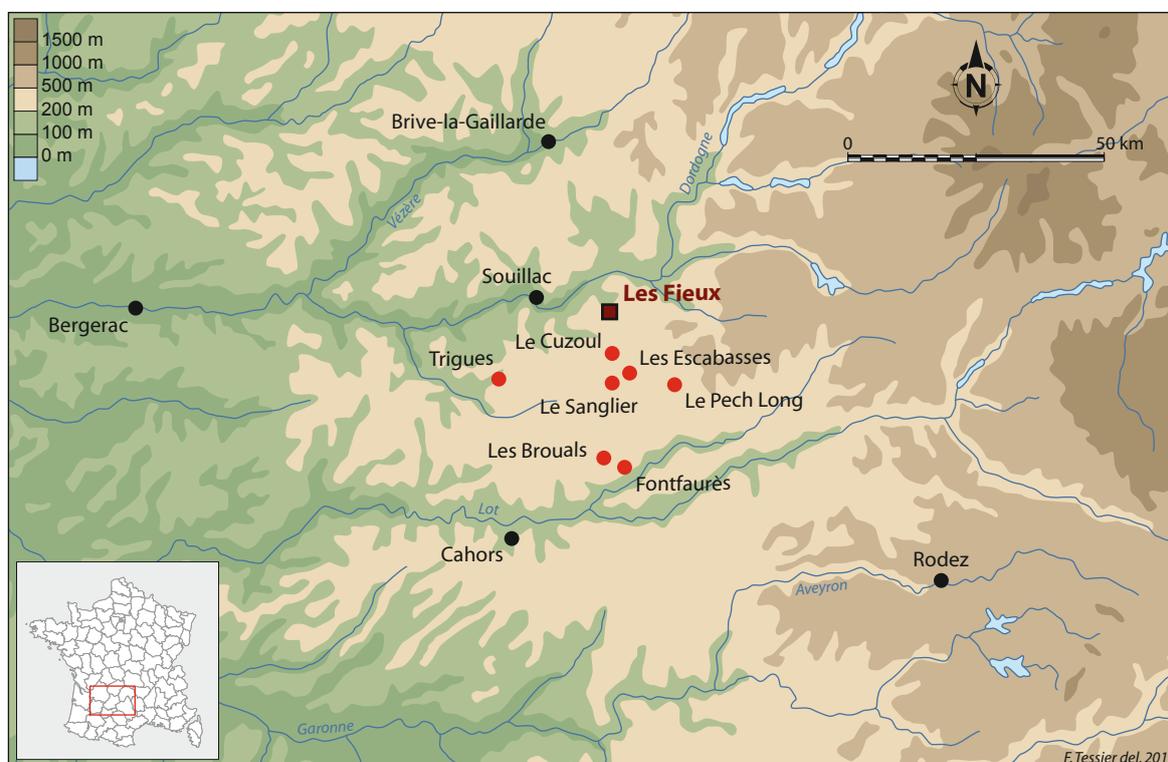


Figure 1 - Geographic location of the site of Les Fieux and the main Mesolithic sites in the Quercy region that have yielded contemporary levels.

shelter. Though it is always difficult to determine the actual size of a site, and even more so the size of the group that occupied it, the surface used here would not have been adapted to a large group and thus more likely corresponds to an occupation by only a few individuals.

3 - Sedimentary context and site modifications: ambiguous data

The sedimentary context does not provide any elements that could directly indicate a particular site function. We must remember that the information available to us is almost entirely based on the observation of residual stratigraphic profiles and that because we have not been able to explore the levels ourselves, we are deprived of important data (e.g. the vertical and horizontal distribution of remains), which are barely addressed in the notes of F. Champagne. That said, we can note the *a priori* discordant nature of the information yielded by the upper part of the sequence (level D1 of the early excavations), which is ambivalent. At the base of this level, we find the probable remains of an intensive modification to the site, which could indicate its importance and suggest long occupation periods, but this is then followed by a continuous overlapping of basic hearth structures, which could, on the contrary, indicate a minimal investment and short occupation durations. An analysis of the stratigraphy reveals a major incongruity in the sequence of the deposits (figure 3), with a clear sedimentary discordance suggesting that level D2 corresponds to a flattening of the ground surface through a massive importation of sediments (several cubic meters). The objective was probably to regularize the surface in preparation for its occupation, and in particular to smooth the steep slope towards the inside of the cavity. This modification, whose only equivalent in Europe is that mentioned by J. Roch for the shell midden in Cabeço da Amoreira, Portugal (Roche, 1965), in which the base of level 7 was the subject of true earthworks, was forcibly very costly in terms of time and energy. It thus seems disproportionate for a site function consisting of no more than a simple hunting camp (whatever the species hunted or any other factor) and it is tempting to see it as a preparation for occupations planned from the beginning to be relatively long and/or adapted to a relatively large number of individuals. Those who benefited from this investment then apparently limited their interventions at the site to a strict minimum during repeated occupations of a short duration. For the entire surface explored, F. Champagne indeed noted only one feature in the form of a depression filled with stones, in addition to the flat hearths mentioned above. The lenticular appearance of these simple combustion features, clearly visible in profile, is well known in the local context where we find them in variable proportions at all the sites. Associated with spreads of mixed ash and charcoal that are generally small and whose limits are difficult to determine due to their gradual overlapping and partial superposition, they constitute a sort of elementary element of the anthropogenic sedimentary dynamics in the context of natural shelters. Very few in number at Escabasses, and nearly exclusive at Fontfaurès, they have been interpreted as the signs of short, repeated passages (Barbaza *et al.*, 1991). The open-air site of Brouals, limited to a single combustion feature with very few associated artifacts, probably corresponds to the same type of short duration occupation (Valdeyron, 2003). We can confidently propose the same hypothesis for the features in level D1 of Les Fieux, which would thus indicate repeated short duration and low intensity, compatible in this case with a “hunting camp” function. The paradox between this occupation type and the amplitude of the initial modification could therefore be an illusion and underline the error in assuming that a high degree of investment is incompatible with short duration, low intensity occupations. It could also indicate a change in site function during the formation of level D1, which may be corroborated by the C14 dates that are dispersed over at least two or three centuries, even if we consider only the highest probabilities.

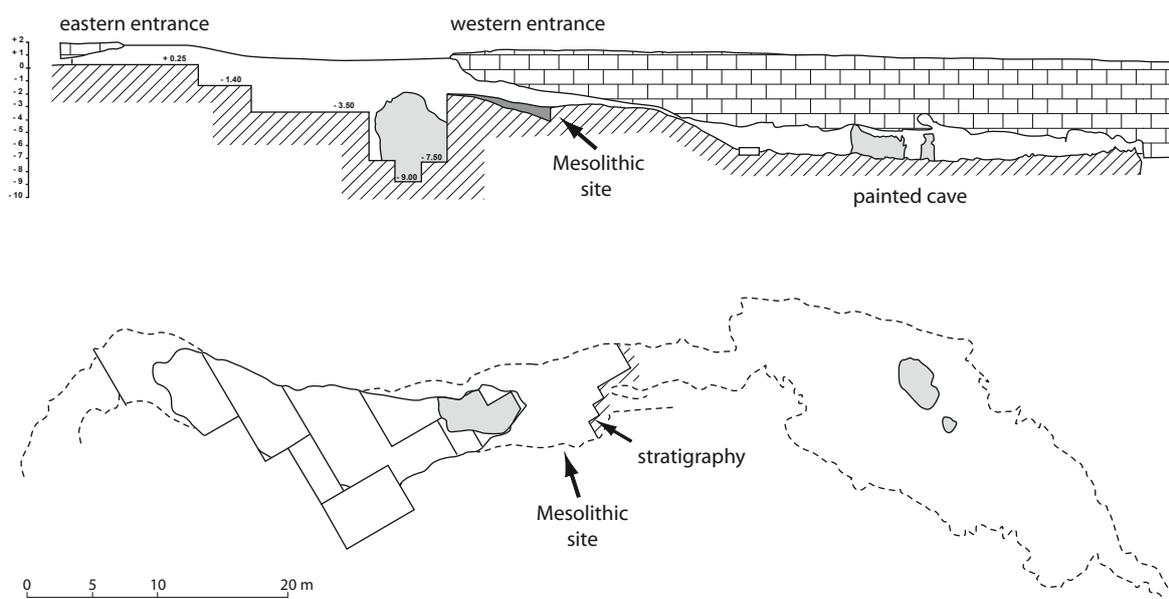


Figure 2 - General plan and east-west stratigraphic profile of Les Fieux (after F. Champagne, completed by N. Valdeyron).



Figure 3 - East-west stratigraphic profile of the Mesolithic sequence showing the sedimentary discordance between level D3 and level D2 (photograph: J.-E. Brochier).

Because of the absence micromorphological analyses, it is difficult to determine the duration of use and number of these burning features, and by extension, the possible number of successive occupations under the porch during the formation of level D1. That said, their anthracological content, dominated in all cases by *Quercus* *sp.* and *Prunus mahaleb/spinosa*, are relatively diverse and appears, according to the analysis of the other samples taken from the site, to be statistically and ecologically coherent (Henry, 2011). The good paleoecological representativeness of the charcoal layers dispersed in the archaeological levels, as well as that of the successions of charcoals concentrated in the hearths, could correspond to different episodes of wood collecting using a non selective strategy based on the gathering of dead wood (which reliably reflects the vegetation of the procurement territory), a strategy with few constraints which is well adapted to short term occupations. The results of the paleoethnobotanical study (Bouby, in Valdeyron *et al.*, 1999) indicate a small scale exploitation of vegetal resources. Representing 99% of the determined seed remains (1333 fragments), hazelnut pericarps are highly dominant. As these fruits are particularly well adapted to storage and transport, their presence cannot inform us concerning possible gathering activities or occupation seasonality. That being, the gathering of hazelnuts near the site is one possibility since the presence of hazelnut trees is shown by the anthracological analysis and the seasonality of the occupations (*cf. infra*) coincides partly with the season of fruit ripening. Whatever the case, the number of identified fragments corresponds in reality to a small quantity of hazelnuts and does not allow us to evaluate the role of gathering activities in the diet of the occupants.

4 - Highly specialized tools?

Of the 13,500 lithic artifacts yielded by the Mesolithic assemblages of Les Fieux, 95% were found in level D1. Almost all of them were made on local raw materials. Nearly 90% of the flints (Jurassic from the Gramat plateau, jasperoid of the Infralias and Tertiary collected from alluvial contexts), which are largely dominant, and the few quartz pieces were procured from distances of less than 10 km. The allochthonous materials (Fumelois flint, Gray Senonian flint from the Perigord region and *Meulière* flint from Domme) indicate circulations toward the west over distances from 30 to 70 km. Though it is difficult to directly implicate this small quantity of long distance materials in the question that we address here, even if it does indicate the existence of complementary occupations in the mobility cycle, it is coherent with the regional Mesolithic context, which differs from the Epipaleolithic context in terms of the contraction of acquisition zones and the correlative decrease in long distance circulations. The information contributed by the techno-typological features of the assemblage is more significant, showing a spatially segmented *chaîne opératoire* (production sequence) and a high proportion of weapon elements, representing approximately 85% of the tools (643 out of 760 tools) (Marcus, 2000; Briand, 2004). This clearly dominant proportion remains nonetheless difficult to interpret in functional terms because it is very common in Mesolithic assemblages, at least at sites where the sediments were sieved. This is the case at Fontfaurès (Lentillac-Lauzès, Lot) and Escabasses (Thémines, Lot), two sites close to Les Fieux, where the weapon elements represent between 70 and 90% of the total tool assemblage (except in level 6 of Fontfaurès in which there is 60 to 40 ratio of domestic tools to weapon elements) (Valdeyron *et al.*, 2008). A few intriguing counter examples nonetheless exist in the Sauveterrian, including in this regional context, thus giving meaning to these quantitative variations. This is the case for the two open-air sites of Al Poux (Fontanes, Lot) and Camp Jouanet (Réalville, Tarn-et-Garonne), where the weapon elements represent only 45% of the tools (Amiel et Lelouvier, 2002).

The debitage objectives, realized in large part at the site, were to produce small bladelets or lamellar flakes, obtained by direct percussion with a soft stone hammer or a small cobble. The

blanks were then transformed into diverse weapon elements (triangles and a few segments for the geometrics; diverse point types, most often with a non retouched base, for the non geometrics), sometimes after being segmented using the microburin technique (Valdeyron *et al.*, 2008). These weapon elements have a relatively high fracturation rate: depending on the level, 25 to 35 % of the microliths are fragmented. While some of the breaks could be accidental (in particular during fabrication), others can be attributed to their use as projectile points (distal bending fracture) or barbs (*cf. infra*). Most of the domestic tools, realized on only slightly standardized blanks, consist of secondary products with minimal retouch, with classic tools being represented by only a few end scrapers and borers. The lithic equipment thus appears to be clearly oriented toward hunting activities, and even more so if we include the microburins.

A usewear analysis of 476 retouched and unretouched pieces (with 105 positive observations) confirmed this impression, though also identifying a range of activities broader than that expected based on the typological proportions alone (Khedhaier, 2007). As would be expected, most of the microliths (265 pieces analyzed, 48 with use traces) served as projectile weapon elements, either in the form of a perforating element or as a barb. Meanwhile, some of triangles and scalene bladelets, as well as one segment, served as knife elements, totaling approximately 20% of the microliths with use traces. This cutting function realized by microliths, which has already been identified at other Mesolithic sites (Khedhaier, 2003), diminishes the preponderance of hunting that could be deduced based on a simple inventory of the pieces identified as weapon elements based on techno-typological criteria and traditional classifications. The 57 active edges identified on debitage by-products and domestic tools show a longitudinal kinematic action. The great majority of them (91%), display use traces resulting from butchery activities and the cutting of soft animal tissues. Only a few edges (9%) were used to cut wood. The traces of 31 active edges indicate a transverse action (scraping); more than half of these (69.5%) were used on cutaneous tissues, and others on bone materials (17.4%) and wood (13.1%). Only one tool was used in a perforating action to work a soft cutaneous material. A distal fragment of a retouched bladelet displays the two kinematic actions (transverse and longitudinal), successively and on the same edge. While, as expected, these results indicate activities directly associated with hunting related activities (arrowhead maintenance, dehafting to conserve the shaft, the broken armature replacement, etc.), they also reveal a significant proportion of activities related to the transformation and consumption of animal products (meat, hide, bone and antler). This finding indicates a range of activities that is broader than that which could be expected for a simple hunting camp.

The bone industry, consisting of only 18 pieces (95% of which originate from level D1), is composed of a majority of fragments of small perforating objects in bone or cervid antler (Marquebelle, 2009). There is in addition one red deer object with a distal bevel and one fragment with a longitudinal bevel made on a wild boar canine. Diverse elements indicate that these osseous materials were worked in place, in particular the debitage of red deer antler by a notching process requiring a type of lithic tool that is absent from the assemblage. In total, this component has very little to do with hunting, perhaps reflecting the everyday equipment of these Mesolithic populations and the domestic activities that were realized in the rock shelter.

5 - The zooarchaeological data: few imports, no exports?

The number of animals hunted, at 37 individuals, is relatively low given the probable duration of these occupations. They are unequally distributed between the three levels, as are the other materials: 72% are concentrated in level D1, and the remaining ones almost equally divided between levels D2 and D3. The spectrum is largely dominated by the three species most often

found at Mesolithic sites in the Quercy region: in descending order, wild boar, red deer and roe deer. The other species present are badger, and a few specimens of wolf, beaver and wild cat. The absence of aurochs, which is often present in the assemblages of this region, perhaps indicates the occupation and preferential exploitation of ecological zones to which this species was poorly adapted, such as the forest formations surrounding the site: could this indicate a restricted procurement territory? All of these animals were hunted during the warm season, between spring and fall, first focusing on young animals and females, and then during the rut. The seasonality data compiled based on the determination of the ages at death (Martin, 1999; Thibeau, 2008) agree with the results obtained through a cemento-chronological analysis of several samples (Martin, 2000).

The butchery procedure (*chaîne opératoire*) does not appear to be segmented as all the stages of the process are present on the site (Thibeau, *ibid.*). It is possible that some of the red deer, roe deer and wild boar carcasses in level D1 were not introduced whole, but in the form of quarters, with the head and limbs being preferentially transported to the camp, and the vertebral columns more often abandoned at the kill site. The intensity of the exploitation of the carcasses is low, as is shown by a low degree of fragmentation, a minor exploitation of the resources contained in the bones and a low frequency (20 %) and intensity of butchery and combustion traces (16 %). No sign of a later exploitation of the carcasses at another site has been identified and the low number of butchery marks seems to exclude an *in situ* processing of the meat in preparation for its transport: the quarters rich in meat were thus apparently consumed in place and it does not appear that pieces were taken away for a differential consumption at another camp. Les Fieux thus differs from the other sites in the Quercy region for which this type of data exists, namely Fontfaurès (Martin, 1991) and Les Escabasses (Rivière, 2006), where the quarters richest in meat are absent.

6 - Conclusion

While the Mesolithic site of Les Fieux was initially interpreted as a hunting camp, a confrontation of all the multidisciplinary data available today leads us to question the validity of this hypothesis. The specialized nature of the lithic industry, which is largely dominated by weapon elements, as well as the low degree of exploitation of meat resources and the occupation type, consisting of small, recurring occupations by groups that appear to be relatively small, all argue in favor of a high degree of mobility and thus appear to correspond to a hunting camp. It is nonetheless difficult to integrate the site of Les Fieux within the type of logistic mobility strategy that corresponds precisely to the notion of a “hunting camp”. At least two factors lead us to this conclusion: a range of activities that is broader than expected for a hunting camp (which may also correspond to a more complex social organization than expected) and the *in situ* consumption of most of the products resulting from hunting. It seems to us that these two elements are incompatible with the strict definition of a hunting camp and correspond more closely with the definition of a temporary hunter-gatherer camp.

Even if such a degree of analysis is not yet accessible in the present case, in order to address the question of whether a site is a simple hunting camp or not, we must have a global perception of territories and the sites they contain, studied through a double approach addressing functional complementarity and seasonal mobility. The Sauveterrian site of Les Fieux can be clearly understood only through such a perspective, and it is this perspective only that can prevent us from falling into the trap of distorted interpretations.

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