

Mammoths from Upper Palaeolithic sites in the Ardèche (France)

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SUMMARY: The province of Vivarais, which coincides with what is now the department of the Ardèche, lies between the Massif Centrale and the Rhône valley. Human occupation of the area during the Upper Palaeolithic has left traces along what were the two main routes of communication, the Rhône river basin to the East and that of the Ardeche to the South. A first phase of research, added to by more recent work, has enriched our knowledge of the inhabitants of the area during the Upper Palaeolithic. Analysis has confirmed the presence of various open sites, Valence and Pont Saint Esprit in particular, along the loess at the edge of the Rhône valley; numerous remains of *Mammuthus primigenius* have come to light in these deposits.

1. HUNTER SITES IN THE CHARMES AND SOYONS LOESS

“La Vallée morte de Touloud” lies on the right bank of the river Rhône at the limit of the granite massif of the Vivarais. During the pre-Pliocene and the early quaternary this would have been the bed of the river Rhône. The river shifted to the East during the Mindel to the course it follows to this day.

Numerous sediments were deposited in the area in question during this phase, including an important sequence of Wurmian loess. A variety of Palaeolithic sites have been identified within the sequence, Charmes and Soyons amongst them. These eolic deposits are scattered the length of the Rhône valley (from Crussol). These are made up of very fine yellowish carbonate deposits, though there is no stratification that brings to mind the loess of the Lyons region.

A typical fauna of small gastropods – *Helix arbustorum* L., *Clausilia laminata* M., *Pupilla muscorum* L. and *Succinea oblonga* M. - is present in the deposits between Saint Peray to the North and Baix to the South. In the south-

ern areas such as Saint Martin and Saint Marcel the number of malacofauna diminishes; in fact only three species have been distinguished - *Pupilla muscorum*, *Fructicola hispida* and *Limnea* sp.. On other sites there are no organic remains at all. This was pointed out by Roman (1950) and Mazonot (1956) in Bourg-Saint-Andiol.

1.1 Charmes: the Tayac site

In 1938 various bone fragments came to light during agricultural work in a field on the right bank of the Rhône. In September of the same year P. Paya began an archaeological excavation of the loess deposits sealing the bone scatter. A few mammoth remains and stone artefacts were recovered. The bone fragments were originally identified as *elephas intermedius*, given the analogy of the finds with others discovered at Bel on the other side of the river (between Saint-Vallier and Beausseblant). Baudouin identified the stone artefacts as an Aurignacian industrial assemblage for hunting and subsequent butchery. Further excavations brought to light a skull with its two tusks, the

jaw bone and other bone fragments (including a tibia) in the same context as a large quartzite aménagé cobble tool. J. Laurent identified the bone remains as *Elephas trogontheri*, and this, as well as the presence of the cobble tool has led to a very early date being given to the site.

In 1950 J. Combier re-examined the P. Paya collection and identified the jawbone of a reindeer and the metapodium of one of the family of bovidae. Further analysis by R. Vaufrey confirmed these results and led to the original identification of the “*elephas*” to be altered to “*Elephas primigenius*”.

Thus, only after the sedimentological study carried out by F. Bourdiere in 1962 and documentation during the excavation followed by more recent analysis by J. Combier and subsequently P. Ayroles in 1973 has it been possible to date this butchery site to the Upper Palaeolithic.

In particular the industrial assemblage and the characteristics of the flakes appear to fit in with the overall picture of gravettian sites in “la Vallée morte de Toulaud”.

1.2 Soyons: the Jaulan and Lèches sites

Various archaeological finds came to light during urban construction work to the west of the village of Soyons in 1982. These included four molars from a mammoth, a few bone fragments and a blunt-backed knife. All were entirely embedded within the loess deposit. Finds analysis dated the site to the Upper Palaeolithic.

The site lies on the Southern slopes of the Serre de Saint-Christol between two minor watercourses. In 1986 a rescue dig uncovered the fragmentary remains of an *Elephas primigenius*. The excavation concentrated on Layer 3. Part of the skull with two molars was recovered, as were the tusks (in a very bad condition), the jaw (this too with two molars), the atlas, various vertebrae in their anatomical position, the ribs and two heel bones. The limbs and pelvis were missing. The reason for their absence could lie at the hands of the prehistoric hunter group but it is more likely the result of the intensive modern urbanisation in the area. There is evidence, however, of deep incisions

on some of the bone fragments. The industrial assemblage, though fairly limited, could be taken to identify this as a butchery site for large animals (G. Onoratini *et al.* 1995).

The industrial assemblage includes a flat faced point, a fragment of a backed knife, fragments of retouched knife blades and denticulates, a calcareous-siliceous flake with visible use-wear traces, and a broad truncated knife. All these finds fit happily within a Gravettian context. They can be associated with open settlements further to the North, such as Méret.

2. THE SETTLEMENT SITES ON THE LOESS OF SAINT MARTIN D'ARDECHE

The eolic sedimentary deposits on the right bank of the Rhone run as far south as Pont Saint Esprit. These deposits tend to be found in the side valleys such as the Escoutay (the Bouzil gravettian site) and the Ardèche further to the south.

The open settlement site of Blanchisserie was found in 1978 on the right hand slopes of the latter gorge. It has now all but disappeared. The site was interpreted as an encampment for hunters from the Magdaleine. It lay on the pebbly silt deposits that had subsequently been buried beneath silty eolic sediments. The finds record from the site consisted of a homogeneous industrial lithic assemblage and a few bones. There were 223 bone finds in all. 38 were identifiable. 185 bone slivers were too small and too badly preserved to identify. The faunal record included the following: *Rangifer tarandus*, *Equus caballus*, and *Mammuthus primigenius*. The state of preservation of the identified bone finds is mediocre. Manganese residues and resultant alteration to the bone surface has hindered any attempt to identify butchery marks and signs of deboning of the meat. However it has been possible to distinguish fresh fractures on some of the bones, though only rarely has the original point of impact been identified. The faunal association would suggest a cold and dry climate.

The industrial lithic assemblage includes frequent knapping debris. The surface of the lithic finds is well preserved. About a hundred finds

can be placed in the Upper Magdalenian (Onoratini & Joris 1995). There is no absolute date for the deposit but given the sedimentological context of loess sands one could assume that the industrial assemblage is associated with a very cold period close to the glacial maximum, possibly the early Dryas I.

The industrial assemblage is relatively interesting from a typological viewpoint as it ties in with typical elements of the local Salpêtrien. These include frequent backed knives, truncations and typically Solutrian elements. The abundance of burins and the presence of "archaic" elements could place the assemblage in the Magdalenian II (Salpêtrière layers 18-15). In the traditional industrial assemblage there are few transversal burins, triangles or other Aurignacian elements.

3. CONCLUSIONS

In summing up it is interesting to note that while our attention is focused on a fairly rare species as far as the Mediterranean zone is concerned, mammoth remains appear to be relatively frequent in the Gard and Ardèche regions. It is also clear from various site evidence that these remains are to be found in natural "traps" such as dolinas or swamps.

Analysis underway at the moment, which involves a revision of previous site records and their integration with more recent documentation, suggests that these beasts were not only hunted and killed in some of these spots but also butchered.

The sites where mammoth remains have come to light that have so far been analysed appear to date to between 25,000 and 15,000 BP. This would tie them nicely to the Gravettian, Solutrian and Upper Magdalenian butchery sites.

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