THE FAUNAL REMAINS AT ROC DE MARSAL (Campagne-du-Bugue, Dordogne, France) AND GAME EXPLOITATION IN THE QUINA MOUSTERIAN

CASTEL JEAN-CHRISTOPHE Museum d’Histoire Naturelle de Genève Département d’Archéozoologie CP 8434 CH-1211 Genève 6 Switzerland E-Mail: jean-christophe.castel@mel.ch

INTRODUCTION

Roc de Marsal is best known for the discovery in 1961 of Neanderthal infant remains from a purported intentional burial. The deposits contain a series of rich Mousterian industries. A multidisciplinary, collaborative project was begun in 2004 to re-excavate the site under the direction of Harold L. Dibble, Paul Goldberg, Shannon P. McPherron, Dennis Sandgathe, and Alain Tung. A major goal was to study the particularly rich Quina Mousterian occupations. This small cave is in a low cliff near the top of the plateau along the edge of the Ratine Valley, a dry tributary of the Vézère River. The location provides a clear view up and down the valley.

FAUNAL REMAINS

Faunal remains are very abundant in all layers: in each square there are over 3000 numbered remains (>2.5cm) and more than 15,000 small fragments. Several samples of this material have been analyzed: layers G18 (complete sequence) and K16 (Layer 4). In terms of taphonomic processes and human modifications, the bones from these two squares and other samples are very homogeneous. Faunal remains from ROM have also been studied by Marie-Cécile Soulier, Jamie Hodgkins and Marylène Patou-Mathis.

FAUNAL EXPLOITATION OF THE QUINA OCCUPATIONS

The Upper part of the sequence is strongly dominated by reindeer. Horse is the second most frequent hunted species. Bison and deer are rare. In the lower levels, the assemblages are dominated by red deer and roe deer with diminishing reindeer and horse. Layer 4 is for now the most documented part of the sequence. It gives precise indications on Quina Mousterian activities. In most of Quina assemblages from Southwest of France, especially those from Weichselian first glacial maximum, reindeer is the most frequent species followed by horse and bison.

The presence of horse indicates that this species was present in the vicinity of the cave. The actual availability of bison and red deer has to be discussed regarding their position in anthropic and natural sites around 70,000 BP in the lower Vézère Valley. Though late Middle Paleolithic paleoenvironments could have been close to those of the Last Glacial Maximum in which Mammoth and cave bears are strongly suspected. According to data from other Quina assemblages, it seems that reindeer was selected by Neandertals at least at Roc-de-Marsal and Les Pradelles.

Preservation of bone surfaces is very good; the main taphonomic process is superficial concretioning which alters toothmarks. The low concentration of lithics and high proportion of bones is also suggests a good preservation of organic material. The presence of fetal bone indicates late winter occupation (at least).

Teeth are rare but show that killed animals are not selected according their age.

Burned bones are also very rare. There are no combustion features in Layer 4.

FAUNAL REMAINS

Spongy bone is under-represented but its proportion increases with smaller size fragments. This could indicate that those kinds of tissues are reduced to fragments invisible in classic zoarchaeology.

Other aspects of exploitation in situ: The breakage of long bones for marrow produces smaller fragments than those from Upper Paleolithic assemblages dominated by reindeer: fragments over 6cm are under-represented. No explanation is given except that it is not relevant from reindeer bones characteristics.

Cutmarks are abundant especially on long bones, scapula and coxal but also on ribs (they have not been examined under a microscope – so present values are below the real frequencies). All skeletal parts show evidence of human intervention: cutmarks are abundant on meaty parts but also on metaphalanges.

Cutmarks are over represented on anterior side of metaphalanges. It seems there is a deliberate choice for the tendon present on anterior side of metaphalanges which are smaller than those from posterior side. This over-representation of cutmarks is very different from what we observe in Upper Paleolithic sites. It is the exploitation of small tendons the only possibility for explaining this pattern.

CONCLUSIONS: The assemblage from Layer 4 gives very precise information on Neandertal activities such as prey selection including age of kills, exploitation of carcasses and use of bones as tools. Specific aspects like destruction of spongy bone, the more intense fracturation of long bones and the abundance of retouchers are interesting points regarding other sciences research in Roc de Marsal. Future archaeozoological research will concern the relation between lithics and skeletal exploitation by Neandertals.

THE ROC DE MARSAL DEPOSITS

The Quina component, Layers 2, 3, and 4, is rich in lithics and faunal remains. As a unit, these layers range from 0.5 to 1.5 meters in thickness. This unit is thick – in the cave where Layer 2 includes a layer of heavy roof fall that likely contributing to the good faunal preservation. The Layers 5 and 6 are attributed to Typical Mousterian with Levallois technology and Layers 7 and 9 to Denticulate Mousterian with small flake production.

Reindeer is the main goal of human activities. The MNI is of 10 in K16 and 66 on metapodial anterior depression length; for the entire Layer 4 an extrapolation estimate would be around 100 individuals for the new excavations and between 200 and 300 for the entire site. Looking at anatomical parts shows that long bone shafts are the main preserved material.

The different long bones are present in similar proportions even metapodials. Differences between them are due to differential identification. This indicates global transport of limbs to the site and almost complete destruction of articular parts (including long bone ends, patella and bicipitale).

The destruction concerns spongy bone but also compact bone from articulations such as the talus, proximal end of metapodial or radius and distal end of tibia. Destruction of articular is a global process which concerns long bones and metapodials. It is in an in situ process that leaves very few remains. This could explain the destruction of a large part of axial material. So, the transport of complete carcasses (most of time without cranium) to the site seems to be the most probable solution for explaining this kind of skeletal profile.

The best hypothesis are: fire or grease rendering: there is no fire identified in Quina levels (elsewhere).

Retouchers are very abundant among the biggest fragments but are also on small sized shafts. In K16, 66 are on reindeer long bone shafts and 27 on large herbivore shafts. Fragments with very intensive utilisation are rare. The high proportion of retouchers among shafts contrasts with a low lithic artefact abundance in Quina layers.