

Section 4: Human Origins and the Lower Palaeolithic

General Sessions and Posters

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Review by Shannon P. McPherron

Department of Human Evolution, Max Planck Institute for Evolutionary Anthropology, Germany

This volume is a collection of papers and posters given at the 14th UISPP conference held at the University of Liege in September of 2001. As the title indicates, the session reported on here covers the earliest portion of the archaeological record. Most of the papers are focused on the archaeology of Spain, France and Italy. Eurasia is represented by several papers, including one on Dmanisi (Georgia). Four of the papers are either principally or entirely focused on fossil hominins while the remaining 18 papers are archaeological. The papers are in both English (10) and French (12). Most of the papers are fairly specific reports on work at particular sites or regional clusters of sites. As such, they tend to be generally descriptive in nature with only a very few papers making larger arguments about early hominin behavior. While the quality, of course, varies from paper to paper, as a collection of papers this volume is a useful reference to current work in the early Paleolithic of Europe and as an entry point to a regional literature that may be less familiar to many.

The volume begins with the Eurasian papers. Dérévianko and Pétrine report on Acheulian finds from four surface collected sites in the southern Ural Mountains of Kazakhstan. The lithics include several cores identified as Levallois, several bifaces, and some flake tools which, based on a comparison with similar material from the region, they place in a Middle Pleistocene Acheulian. This is one of the more substantial papers in this volume and includes a review, discussion, and bibliography of the archaeology of this region.

The next paper, by Lioubine and Beliaeva reports on the Middle Pleistocene Acheulian levels of Kudaro I cave in the Caucasus of Georgia. Of particular interest is the relationship between raw materials, which locally are generally poor, and the stone tool typology and technology. According to the authors, these raw materials are largely responsible for the distinctive traits of the Caucasus Acheulian.

Continuing with the Georgian theme, the next paper is by Celiberti and colleagues on the lithics from Dmanisi. The authors argue that the lithics show no evidence of post-depositional movement and that there are changes in the character of the industries through time. In particular, lithics from the upper levels show more evolved characteristics such as more intensive working of raw materials and greater production of retouched tools on flakes. The paper is a rather nice description of these important industries and includes data presented by level on the distribution of types, the raw material, flake cortex, core types, and flake removal orientations.

The Soleckis have a short paper in this volume on the Acheulian of Yabrud Shelter I. Their main point is that the pre-Mousterian deposits should be classified not as Acheulian, as Rust did, but as Mugharan—following the Tabun industries. Their argument is largely based on the finding that some Acheulian handaxes in these

layers were reworked into cores, which suggests to them a kind of recycling of potentially earlier materials that could be easily found around the site. Therefore, the Acheulian elements, particularly the handaxes, cannot be used in this case as reliable indicators of chronological age. The condensed format of their presentation makes it difficult to fully evaluate this argument, but potential examples of lithic recycling in the Paleolithic are interesting and worth noting.

There are seven papers on the early Paleolithic of Italy. The first of these, by Fontana and colleagues, reports on some of the earliest material from Europe. These are some twenty open-air sites along the Po Plain of Northern Italy between Bologna and the Adriatic coast. The assemblages are simple pebble tool industries comparable to the above mentioned Dmanisi and other reportedly early assemblages from southern Europe. The dating, said to be at least prior to 840 kya, is based on correlations of the artifactual deposits with what is known of the regional chronostratigraphy including some paleomagnetic data. This is a summary article with general discussions of the geology, dating, and archaeology, and it is a useful starting point to the literature on these sites.

A little further south in central Italy are several other localities that are reported to date prior to 700 kya, perhaps the best known of which is Campo Grande de Ceprano which yielded fossil material. These are reported on here by Cauche and colleagues in a rather concise, summary format that includes some basic data on typological counts, percentage cortex on the flakes, core types, and one figure.

Next, Minelli and colleagues summarize work on a sample of the lithics from Level 3a of Isernia La Pineta. This deposit has been dated to 700 kya based on K/Ar of sanidine crystals in the level. Their summary includes some discussion of the typology and technology of the lithics, a discussion of a usewear study, and an extremely brief mention of spatial patterns.

Hohenstein and colleagues present results from a microscopic, including SEM, study of bone surface modification as evidenced in the assemblage from Isernia la Pineta. In particular, they attempt to isolate linear striations that can be interpreted as cut-marks. Unfortunately, this is complicated in this instance by preservation issues—the surfaces have been abraded resulting in edge rounding and removal of smaller, secondary striation—and by taphonomic issues, such as the presence of the sanidine phenocrystals capable of producing secondary striations that mimic cut marks. Nevertheless, they conclude that some cut-marks can be identified in the assemblage, thereby providing supporting data on the hominin role in these faunal assemblages.

The remaining three papers with an Italian theme were presented at the UISPP meetings as posters. The first of these, by Carnieri and colleagues, is a single page listing of the contents of a new exhibit at the Natural History Museum at Livorno. Next, Giunti presents a fully developed paper on some Acheulian (with handaxes) material in secondary context in deposits from the Arno Valley of Tuscany which have been dated to prior to 590 kya. Given their secondary context these are not assemblages that lend themselves to quantitative assessment, so Giunti provides a good descriptive overview of the typological and technological variability with numerous illustrations. Lastly, Borgia and Landfredini cursorily present artifacts from undated deposits in central Italy. The paper, which reads like a poster, includes five figures showing the material which, on typological and technological grounds, they attribute to late Acheulian.

There are also a number of papers reporting on the archaeological record of France, several of which are focused on the fauna. Valensi and Guennouni present a primarily taphonomic analysis of the faunal assemblage from Terra Amata. Based on a number of arguments that include part representation, age profiles, and breakage patterns, they argue that the faunal assemblage, including elephant, rhino, red deer, and, interestingly, rabbit, is solely of hominin origin. The taphonomy of a burrowing animal at an archaeological site in sands with known stratigraphic issues is challenging, but if rabbits were systematically exploited, it would alter our view of early Middle Pleistocene hominin behaviors.

Boeuf and Barbet discuss fauna from three late Pliocene cave sites, including Chillac, in the Massif Central of southeast France. Their paper is mainly a paleontological inventory of the faunal collections from these sites with limited presentation of data and without reference to stratigraphy. It seems though, that aside from controversial claims of stone tools older than 2 mya, the high quality of faunal preservation makes for an important paleontological reference collection. Note that they report finding no traces of hominin interaction with the fauna.

Next, Simone presents some information on the fauna and lithic assemblage from the site of Aldene Cave. This is a cave with a clearly complex Middle Pleistocene site formation and that likely includes a mix of hominin and carnivore use. Further complicating the picture is the fact that it was heavily exploited for phosphates in recent times. Thus only several disconnected remnants of the stratigraphy remain. Unfortunately, in this short presentation, it is not at all clear where the materials discussed come from or even under what context they were obtained, thus discussions of a 12 meter square "*sol d'habitat*" are difficult to evaluate.

Barsky and De Lumley present a paper on the deep sequence of mostly Middle Pleistocene layers from the southern French cave site of Arago. They focus on changes in the lithic assemblages in the sequence and how they might be related to changing use of the site. In particular, they base their analysis on the identification of four types of use: very brief stays, stays of several weeks, seasonal stays, and multiseasonal/extended stays. Without critiquing these units of analysis, what is particularly excellent in this contribution is the presentation and exploration of the site's deep sequence, one of its principal strengths.

The final paper in the Mediterranean area is by Garcia I Garriga (with tables and figures in Spanish) on surface and excavated collections from the Catalogne region of Spain. The presentation is based on an identification of the reduction technologies and is, unfortunately, difficult to follow in part because of the poor reproduction quality of the figures and in part because of the use of non-standard terminology that is not adequately defined.

The site of Vallonnet is discussed in a paper by Echassoux, who reports on a study of the faunal material for tooth marks and cut marks. The conclusion is that there is extensive evidence for porcupine chewing on the bones and of breakage, puncture, and gnaw marks characteristic of various carnivores. In addition there is a high degree of breakage likely attributable to cave bear. Nevertheless, some marks attributable to hominins are apparent on the bones, and it is argued that hominins played a role in the accumulation of bones at this site.

While the archaeological papers in this volume generally read as archaeological reports, Haidle takes a more theoretical and general viewpoint in considering the manufacture and use of artifacts as evidence for object planning. She identifies several aspects of planning and then briefly summarizes evidence of these in non-human primates, the Oldowan, and the Acheulian. In its barest form, the conclusion is that the Oldowan is more sophisticated than modern non-human primates and that the Acheulian is more sophisticated still. This is not a surprising result, but the approach is interesting and worthwhile.

There are a few papers in this volume that either treat exclusively or focus on hominin fossil material. One of these is by Prat on variability and taxonomic affinities of early *Homo* specimens from East and South Africa. She conducts a cladistic analysis based on 122 cranial and mandibular attributes taken from 22 specimens. These data are supplemented with a great ape and modern human sample. Her conclusion is that two species, *Homo habilis* and *Homo rudolfensis*, are clearly distinguished and these two species are separate from the australopiths and from *Kenyanthropus*.

Vialet looks at fossil material from East Asia, particularly six facial fragments and the facial portions of two partial crania from the Zhoukoudian Lower Cave. The results of this analysis are then compared with material from Indonesia and Africa and with modern material. The conclusion is that Weidenreich's original description and reconstruction of this material was biased to make them appear more primitive. In fact, Vialet concludes that the modern facial morphology was already present in this sample and that only the large superior width of the nasal bones in comparison to the facial width distinguishes the Zhoukoudian sample.

Gibert and colleagues present the archaeology and hominin fossil material from sites in Southeast Spain. They argue on the basis of faunal correlations and paleomagnetic data that several sites in this area, including Venta Micena, Barranco León, and Feuntenueva-3, are likely as old as 1.5 mya. Lithics from two of these sites are shown in photos. In addition, four hominin specimens are reported. One of these, a skull fragment from Venta Micena, has previously been reported as non-hominin. They argue, however, that it should be classified as hominin. The remaining specimens include a partial humerus, a molar fragment and a phalanx.

Walker and colleagues present work at the Neandertal sites of Sima de las Palomas del Cabezo Gordo (SPCG) and Cueva Negra del Estrecho del Río Quípar, both also in southeast Spain. This is a dense presentation of two sites with incredibly complex histories of geological formation and sedimentation processes that are further complicated by relatively difficult logistical issues for excavation and uncertain histories of recent exploitation. Each has yielded stone tools, fauna, and hominin fossil material. SPCG in particular has yielded 90 hominin specimens. In this instance, the lack of figures in the article makes it impossible to fully appreciate the efforts the authors put into establishing the context, including the date, of this material.

In summary, one of the strengths of this volume is that it pulls together a number of papers that present evidence for very early occupation of Europe. There are, of course, various issues with many of these sites, their context, and their dates, and the paper presentations compiled here are naturally too short to provide enough data to effectively evaluate these issues. The papers are also quite variable in the quality of the supporting figures and tables, and the quality of the copy-editing and translations is also highly variable. All that said, it is nevertheless very useful to have these papers published. Many of the sites presented are

already well known, but many are not, and the bibliography associated with each provides an excellent resource. I suspect that most archaeologists interested in the early Paleolithic of Europe will find this volume a useful reference or point of departure. Based on the number of hominin papers and on the report-like nature of the archaeological papers, I am less certain whether physical anthropologists will find this volume particularly useful.