



## > IN THE SITE

**WE ARE ALL AWARE OF THE KEEN INTEREST IN ATAPUERCA OUTSIDE SPAIN** > One of the steps we are taking to publicise our research is a summary page of the previous issue in English.



**THE ANTHROPOPHAGY DEBATE 800,000 YEARS OF CANNIBALISM** > Anthropologist Beth A. Conklin from Vanderbilt University (USA) has spent more than ten years studying the Amazon Wari tribe which practised cannibalism until the 1960's, after which government and religious pressure forced them to give up the practice. Her book, *Consuming Grief: compassionate cannibalism in Amazonian Society*, has caused a scandal in the scientific community because it presents cannibalism as a positive cultural phenomenon without any barbaric connotations. Her research is tremendously useful for understanding prehistoric cannibalism, especially at Atapuerca, given that the lack of present-day cases of peoples who regularly consume their peers prevents archaeologists from providing convincing explanations about the meaning of such customs in the past.

**DEBATING THE CAUSES OF CANNIBALISM** > Evidence of anthropophagy is not often found in the archaeological record. Since the 1980's, most researchers have thought twice before advancing such hypotheses. Complaints by indigenous peoples and a Rousseauian vision of pre-industrial tribes have ensured that cannibalism is now only mentioned indirectly when there is irrefutable proof. There are several sites where archaeologists have found fragmented human remains and cut marks in their bones, seeming to indicate the existence of anthropophagy in prehistoric peoples. The oldest proven case of cannibalism was discovered on level TD-6 at the Gran Dolina site in the Sierra de Atapuerca, dated at around 800,000 years BP and practised on a small group of Homo antecessor. Six individuals (two children and two young adults) were cut up, fractured and consumed by other hominids. Recent analysis of remains from

more than a million years could, however, support the idea that these feeding habits were practised from the outset of the Homo genus. New evidence of cannibalism has been suggested in relation to bones from Ethiopia (Bodo) and France (Aragó) dated at 600,000 and 400,000 years respectively. However, the habit only appears to have become widespread in Neanderthal times, 100,000 years ago, with a number of sites containing bones that bear evidence of the custom. Zafarraya in Spain, Abri Moula, Marillac and Combe Grenal in France, Krapina and Vindija in Croatia and several others are good examples. Anthropophagy has not only survived to the present day amongst tribal societies. Famines in Africa and political revenge during the WWII occupation of China are the best known cases of a habit which is now fortunately a taboo. When researchers try to interpret the type and causes of cannibalism, they rely on ethnographic comparisons, i.e., the study of peoples where the treatment of human bodies has been described. Parallels have been sought amongst the Aztecs in Mexico, the Foré in Papua-New Guinea, the Anasazi in North America, communities in Fiji, and a number of causes leading to the manipulation of bodies have been found. Some of the most frequent hypotheses suggest causes such as subsistence, rituals, warfare, etc. which have contributed to the image of wild peoples far removed from the present mores that regard anthropophagy as unbecoming human beings. In the case of Gran Dolina, Atapuerca researchers have suggested that humans ate their fellows for nutritional causes other than the need for subsistence. While we do not know whether there was any foregoing violence, the evidence clearly suggests that H. antecessor groups were part of the more or less regular diet of these

hominids. Conklin's research, however, points in the opposite direction. The Wari's cannibalism is practised in two forms: on their enemies as an expression of hatred, but also as an indication of respect and admiration for their closest deceased relatives. In the latter case, the survivors try to erase every trace of them, even burning their belongings, forgetting their names or changing everything that reminds them of the deceased. The latter concept of 'absence' is where cannibalism fits in, given that the body is an extremely powerful reminder of the deceased. Conklin believes that if we can regard cannibalism as a way of managing our grief over the loss of a loved one, we may start to view a practice that is traditionally stigmatised and denigrated by our culture in a positive and more human light. In a similar context, the Dolina bones might not be evidence of either a violent act or the consumption of meat regarded as a food resource like any other. Perhaps these hominids just wanted to be as close to their deceased as they had been in life.

### EDITORIAL > ATAPUERCA: INITIAL RESULTS. Antonio Rosas.

I am writing these lines from the distant perspective of a generation who came to dig at Atapuerca for the first time as fourth year students in the early 1980's. To our surprise, we immediately became an active part of the flux of ideas, goals, gruelling physical work and intellectual rigour that shaped the definition of the Atapuerca Project. Decades later, we are now active members of one of the world's leading Quaternary research teams. What have we achieved in the meantime? Many things, but let us first briefly review some of the lines of research involved in the project. > Firstly, the aspects relating to man's physical evolution. The results have been most impressive in this field. An enormous wealth of human bones uncovered at Atapuerca as a result of massive amounts of work and visionary leadership. After unearthing the fossils, which we hope will continue, their careful analysis has led to a hitherto unimagined depth of understanding of the origins and evolution of the Neanderthal group.



The proposal of a new species, H. antecessor, placed Spanish palaeontology in the centre of the world stage. Another area has covered the technical, functional and zoo-archaeological aspects of human cultural evolution. Here we must mention the analytical system developed by members of our team and also the models of environmental resource usage in different space-time episodes. This area included the documentation of one of the earliest known episodes of cannibalism in the history of humanity. > Palaeoecological recon-



struction and the transformation of the physical environment is another important aspect of the project: this is the backdrop to the series of stages where human evolution was played out in southern Europe. We now know a lot more about climate fluctuations, animal communities and physical evolution in the series of caves in our Sierra, and we are beginning to understand more about the sedimentation processes and their cycles in the Atapuerca assemblages. All of this has become a compulsory point of reference for Quaternary research everywhere in the world. > Finally, I would like to stress again that the outstanding results of our work have been achieved by a large group of researchers driven by the incessant desire to understand a little more about the origins, the world and the culture of our lineage. Far from being satisfied with these achievements, we are now being driven even more powerfully by new questions and curio-

sities that prevent us from resting on our laurels.

### ROSELL AND VALLVERDÚ, NEW PH.D.S FOR THE ATAPUERCA TEAM

> Research by Jordi Rosell, primarily based on the analysis of animal biomass usage patterns, has enabled the team to study the different types of behaviour patterns found at the lower and middle Pleistocene levels in Gran Dolina. After a detailed diachronic analysis of levels TD6 and TD10, this young doctor has concluded that there were numerous sporadic visits at the lower level with occasional usage of meat from a wide range of animals and, it seems, humans as well. In time, these visits became longer. Together with evidence of more specialised hunting of larger adult animals, primarily cervids and equids, and clear evidence of differentiated processing and consumption patterns which

### SCIENCE UNIT

**Research into fossil DNA** > Juan Luis Arsuaga and the Atapuerca research team working at the Complutense University in Madrid have signed a contract to establish a joint medical research unit with the Carlos III Health Institute, part of the Spanish Health Ministry. The contract will initially run for 10 years and employ a team of 25 scientists. They will be grouped into several lines of research into the biological nature of the human being: an evolutionary line aimed at understanding the present on the basis of our knowledge of the past; a genetic line including research into fossil DNA; and neuroscience, which will be joined by Psychobiology Professor Manuel Martín-Loeches.

The outstanding state of the fossils unearthed in Sima de los Huesos (Bones Pit) has made it possible to extract their DNA, opening the door to understanding of a multitude of aspects including evolutionary hypotheses and even the individuals' physical appearance, eye and skin colour, etc.

### Castrillo del Val residents protect their natural environment

> Castrillo del Val residents have mobilised after learning of the application for a mining permit by Piedras y Mármoles S. L. to quarry limestone on 500 hectares of protected natural land. Concern about damage to the area's natural and archaeological values, less than 8 km from Sierra de Atapuerca, has led the locals to form an association that will co-ordinate the campaign against the permit.

### Tribute to José Manuel Cerdá

> The Fourth Conference Session on Sierra de Atapuerca, organized by Amigos de la Sierra de Atapuerca as a posthumous tribute to its former chairman, José Manuel Cerdá, was held in March.

### First Experimental Archaeology Sessions at Burgos University

> The Prehistory Area at Burgos University, funded by the "Caja de Burgos" Humanistic Studies Workshop, organised the First Experimental Archaeology Sessions on 24 and 25 April. Under the guidance of four experts, the student participants relived early fire-making techniques, hunting, art and stone tool making.

### Exhibitions, debates and theatre to celebrate Atapuerca's 25th anniversary

> The Atapuerca Foundation has designed a busy programme of events for the coming months to celebrate the 25th anniversary of the first digs in Sierra de Atapuerca. They include more than 45 lectures by members of the research team regional towns with more than 5,000 inhabitants, a commemorative exhibition at the San Juan Monastery entitled Atapuerca Expo25, and the production of a CD-ROM that creates a vir-



tual visit to the sites. Two plays are also planned to mark the start and the end of the events. The first one, *Primitives*, was presented by the group Arca in the Principal Theatre in Burgos. The closing ceremony is expected to be designed by the controversial company La Fura del's Baus.

### NAVARRO BALDEWEG PRESENTS DRAFT PROJECT FOR HUMAN EVOLUTION MUSEUM

> Works to begin in 2003. Architect Juan Navarro presented the draft plan of the Museum of Human Evolution (MHE) in Burgos. The design proposes simultaneous construction of all three buildings in the complex: the MHE, a Research Centre and a Conference and Exhibition Centre.

The Museum building will have 8,000 m of floor space and four sections to house a replica of the railway trench. The corridors inserted between the sections will hold a series of educational exhibits about the archaeological site and the final section will display the unearthed items. A lookout with views over the Burgos Cathedral and the old quarter of the city will be part of the exterior of the complex. The unit has been designed to be bathed in natural light, with the profuse usage of aluminium, steel and glass, although stone will also be used on the floors and skirtings.

### ATAPUERCA BECOMES PART OF A JOINT GENETIC