

>NEWS FROM ATAPUERCA IN ENGLISH



**>TRIPLE "CUM LAUDE" for Atapuerca research**  
**New doctorates at New York, Burgos and Santiago universities**  
**>The Duques de Soria and Atapuerca Foundations funded the studies**

**>ROLF QUAM in New York.** Rolf Quam was awarded a doctorate for his research into Evolution of the Temporal Bone and Auditory Capacity in Fossil Humans on May 17. Defending his thesis at the Anthropology Department of the New York State University in Binghamton in the presence of leading figures Juan Luis Arsuaga and Philip Rightmire, Quam is the first US PhD to be directly involved in the study of human bones from Atapuerca. Rolf Quam has previously published several articles about Spanish hominids. In particular he has worked on Neanderthal remains from Valdegoba (Huérmedes) and Cova Negra (Xàtiva), ancient Homo sapiens remains from Malladetes (Barx, Valencia), and remains from the Bones Pit in Atapuerca.

His thesis is the first global study of the anatomic and evolutionary variation in outer and middle ear structures and the auditory implications for the human fossil record. It is thus the first time that an aspect of sensorial perception in a fossil human species has been reconstructed. He studied original bones from the Australopithecus, Paranthropus and Homo genera found at sites in Africa, the Middle East and Europe, spanning a period from 3 million BP to the present day. The human bones from the Atapuerca Hills (Homo antecessor and Homo heidelbergensis) were a central part of the thesis. The study revealed that the anatomical changes in the drum membrane and the tiny bones in the middle ear are, like bipedalism, one of the first human traits to appear in the fossil record. Quam was also the first person to identify specialised features of the middle ear bones in the Neanderthal line.

**>MARÍA MARTINÓN in Santiago.** María Martínón-Torres presented her PhD thesis at the Medicine Faculty of the Santiago de Compostela University on 9 May. Her research, entitled "Evolution of dentition in hominids: Study of Pleistocene human teeth from the Atapuerca Hills (Burgos)" was jointly directed by Dr. José M<sup>a</sup> Bermúdez de Castro, co-director of the Atapuerca Sites and director of the CENIEH in Burgos, and Ángel Carracedo, Professor of Medicine at the University of Santiago de Compostela.

María Martínón has several publications on the study of hominid teeth at Atapuerca and on the demographic implications of the data gleaned from the Bones Pit. Her thesis is the most extensive and up-to-date study of the evolution of hominid dentition, and encompasses most of the African and Eurasian Pleistocene fossil record. In addition to the magnificent collection of human teeth recovered from the Bones Pit sites and Level TD6- Gran Dolina sites, her work covers other original collections such as the Dmanisi sites in the Republic of Georgia, where she was digging last summer. According to Martínón, it is highly likely that the Homo genus originated in Asia and that these initial populations spread towards Africa at a later date.

**> MARTA NAVAZO in Burgos.** Marta Navazo Ruiz successfully defended her thesis at the Burgos University Humanities Faculty. She is the first Doctor on the Atapuerca research team to graduate from the young Burgos University. Her thesis, directed by Dr. Carlos Díez, is titled "Hunter-gatherer societies in the Atapuerca Hills during the middle Palaeolithic: Settlement patterns and mobility strategies" and the tribunal was chaired by Prof. Eudald Carbonell from Tarragona University, co-director of the Atapuerca excavations. Navazo's thesis analyses Technolo-

# A selection of highlights from the previous issue

gical Mode 3 open-air sites in the environs of the Atapuerca Hills, discovered on the basis of archaeological prospecting studied using above-ground collections and test digs.

Her work integrates a classic study of technological processes with an understanding of the land that was traversed and occupied by hominids in the Neanderthal lineage, geomorphological analysis and the classification of technical aspects and post-deposition events.

She concludes that at the time, the Pico River was a core territory for groups of Atapuerca hunter-gatherers, with intensive spatial occupation, clear territoriality and minimal technical variations. Hominids occupied the whole area and visited the same places repeatedly for economic reasons.

Marta Navazo is already the author of a several books on the Atapuerca Hills, and has been the director of archaeological excavations at several Middle Palaeolithic sites in the region. She currently holds a post-doctoral fellowship from the Atapuerca Foundation and conducts her research at the History and Geography Department of Burgos University.

**Editorial**

**>A HOME IN THE HILLS**

Antoni Canals. Archaeologist. Universitat Rovira i Virgili, Tarragona. Member of the ARG

>There is no question that the archaeological excavations at a site serve to reveal bones, skulls (human and others), teeth, tools and a wide range of artefacts that describe the people who lived there, what they knew and how they organized their domestic chores: in other words,

network, a type of organization, is a response to the environment, from which people have to draw the necessary energy for subsistence, both individual and collective. Non-industrialized societies are trapped in this close relationship between social group and territory.

>How can we identify activities and relate them to social behaviour? This is the entire focus of social and territorial archaeology. Time is constantly running out for archaeologists in their search for an answer to this

Hills and brought to the cave, probably a well-sheltered point. Later, level TD10 in Gran Dolina was occupied by groups of hunters who made what could be a more rational use of the space if the archaeological materials really did accumulate at the back of the cave when discarded.

>The Gallery site, judging from its use by the inhabitants of these Hills, was never a human habitat but rather a place for meat processing and provisioning. The Main Cave Porch (Portalón de Cueva Mayor) and

on the Atapuerca Hills after Francisco Jordá and Geoffrey Clark. He worked primarily on Main Cave Porch (Portalón de Cueva Mayor) and Flint Gallery (Galería del Sílex) from 1973 to 1983. In conjunction with José Luis Uribarri, he published El Santuario de la Galería del Sílex in 1976, the first book about an Atapuerca site.

**— What do you remember about your first contact with the archaeological world?**

— I became interested in archaeology under Prof. Martín Almagro Basch. He gave me the chance to dig in Ampurias and to get modest grants to visit areas in southern France and see prehistoric art. I saw Lascaux in 1955, and that made a tremendous impression on me.

**— How did you first come to Atapuerca?**

— In 1972, Martín Almagro told me, "You have to see what has just been discovered in Burgos, the Flint Gallery". When I saw that sanctuary, I was astonished. Then José Luis Uribarri showed me the materials from the dig that Clark and Strauss had done in the Porch Cave (Cueva del Portalón). I noticed that they were practically identical to what I had

dug up in the Los Huesos cave in Álava. So that triggered a question in my mind: Could the people who occupied the Basque Country, downstream from the Ebro River watershed, also have occupied Atapuerca and the northern sub-highlands? Or were there broader organizations within this 'cave population'? When I told Uribarri about the enormous similarities in both the sequence and the actual materials, he asked, "Couldn't you dig at Atapuerca?"

**— You then designed a research**



question, and it astutely and patiently camouflages each and every one of the elements that allow us to show particular activities done on the study site (stone carving, hide curing, animal processing, etc.).

>Space and time are thus two basic concepts for the study of how a site was frequented and the design of the best model, almost opportunistic, for the archaeological material left in situ. In other words, we have to define the best stratigraphic relationship between the synchrony of

Lookout Cave (El Mirador) were exploited by shepherd communities in an intelligent mixture of habitat in the strict sense and production zones (flocks, craft making activity, etc.).

>However, the most surprising thing about the Atapuerca Hills in terms of their habitats, both internal (site) and external (territory), is the concept of a territorial NETWORK that arose from a diversified use of a specific space in a specific territory. The Bones Pit expresses this idea powerfully: the deliberate accumula-

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## THE HUMAN COLONISATION OF EUROPE: WHERE ARE WE?

**WIL ROEBROEKS**

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>About a decade ago, my colleague Thijs van Kolfschoten and I launched a 'short chronology' for Europe, which had only a short life in its original formulation (Roebroeks and van Kolfschoten, 1994). We stressed the differences in the European archaeological record before and after 'Boxgrove' (i.e. roughly marine isotope Stage (MIS) 13) and concluded that Europe saw its first unambiguous traces of a human presence only around half a million years ago. However, this scenario was partly refuted by the finds from Atapuerca TD6 (Carbonell et al., 1995), which point to a somewhat earlier presence of hominins in

Spain, as also suggested by the finds from the Orce basin, in Spain (Oms et al., 2000). The discussions on long versus short chronologies of the last decade or so have resulted in a kind of consensus that the European archaeological record changes significantly around 500 to 600 kyr, with an increasing number of sites in the Mediterranean as well as elsewhere in Europe indicating a more substantial occupation than in the period before. Until the recent finds from East Anglia, most workers also agreed that north of the mountain chains of the Pyrenees and Alps the first unambiguous traces of human occupation were from 500 to

600 kyr BP. The new finds from Pakefield, East Anglia (Parfitt et al., 2005) demonstrate that England saw a somewhat earlier presence of hominins, possibly for only a short period. In contrast to the finds from Atapuerca TD6, the Pakefield assemblage dates from within the Brunhes period, and thus might postdate the final Matuyama Atapuerca TD6 finds (see also Pare's et al., 2006). Hence, the Mediterranean probably witnessed some earlier human presence than the more northern areas, though the exact age difference between the southern and more northern parts of Europe remains to be established.

what they did at the place, how they did it and even why they did it, if we are very lucky.

>In spite of the increasingly complex human social organisation, at least from an evolutionary perspective, the support structures -sites, homes-, have changed little: first there was the nest, soon after the campsite and finally the village, often growing and turning into a city.

>Along the way there is an important common denominator for archaeologists: when we return home, we bring part of our territory with us: its animals, its plants, its stones transformed into tools and a variety of objects. Social space and territory thus form a mesh that is difficult to separate: an operative social

an accumulation and the diachrony of a deposit. Archaeostratigraphy is specifically devoted to the study of this relationship, and the quality archaeologists' spatial, social and territorial interpretations depends on its correct interpretation.

>Such "moments" interpreted through archaeostratigraphy, summarise and synthesise actions or events that happened in a given period of time. They tell us about the way people used the caves, those "lucky homes" in the Atapuerca Hills, 800,000 years ago in Gran Dolina, Homo antecessor took refuge to eat, in a disorderly way and in what seems to have been a unique episode - a short-term event -, animals and other congeners hunted down in the

tion, possibly for more than one generation, of individuals from a group that itinerantly used a territory it controlled. Based on what we know from other Pleistocene territories like the Caceres Complex, they could not abandon this territory due to its richness and their emotional bonds with it.

**Interview**

**>JUAN MARÍA APELLÁNIZ. ATAPUERCA DIRECTOR 1973-83**

**>"CUEVA MAYOR WAS A CLAN CAPITAL"**

Juan María Apellániz Castroviejo (Bilbao, 1932), PhD in Geography and History, and Senior Lecturer at Deusto University (Bilbao), was the third archaeologist to focus his research

**project that spanned 10 years, starting in 1973. What sort of team did you have?**

— Organising the digs was not at all easy back then. We had a team of about 14 students, mainly from Deusto University and the Burgos University College. We also had the help of the Edelweiss Caving Group.

**— How did you come to explore Flint Gallery?**

— To get into the Gallery I had to drag myself down like a ramrod, without moving, almost brushing the rock with my nose. I had never done anything like that before. I was in an area that had not been trodden since its discovery, and everything was intact - it was a prehistoric sanctuary. It contained what was pro-

bably one of the most wonderful things for me, which was what we later called the Neolithic deposit. After passing the large outwash fan of the necropolis, there was a small ramp that entered a sort of pocket, very small, where there were five or six large vases, all broken and left there piece on top of piece, a polished hand axe and a sheep bone; in other words, all the characteristics of the Neolithic: shepherding, stone polishing and ceramics. That was an incredibly sacred place. It couldn't be touched. We then discovered a burial site with vases in a bend that you could only get in and out of with a ladder. That area had been used for rites that required the construction of some small, low monuments. They must have built big bonfires there to have left that amount of charcoal. And then there were the engravings and paintings on the Big Panel where there was not one square centimetre that had not been scraped repeatedly, overlaying figures on top of each other. In the middle there was a scene that definitely represented livestock herding. It was a human figure drawn with the ease of a specialist hand. Whenever I have had to talk about Main Cave or Flint Gallery, I have always said that this was the grand master. I felt a special emotion in its presence, what you could say was an artistic emotion. It is a masterpiece. The best modern painters have been unable to surpass the ones in the Gallery.

**— For 10 years you worked in Cueva Mayor and Flint Gallery. Did you get to know any other caves?**

— Yes, I saw everything, but Cueva Mayor was so important and so basic for what I was seeking that I decided to focus on it exclusively. For the shepherd population, Cueva Mayor was a sort of provincial capital which today we might regard as a clan capital, a confederation of clans or tribes.

**— How do you think Cueva Mayor was used?**

— Caves are places where related groups -clans, tribes, etc.- met for initiation or other types of ceremonies. Data seems to show that two types of space coexisted in Cueva Mayor. One was a place for inhabitation, "El Portalón", which was used from the Neolithic to the end of the Bronze Age by the shepherd population. And then there was an incredibly powerful sanctuary, the Flint Gallery, which is related to artistry, where there were regular meetings related to the organization of this shepherd population. The caves were abandoned in 800 BC and that lifestyle only reappeared sporadically, for example in the 4th century AD, at the end of the Roman Empire when problems of insecurity due to attacks by gangs made the population seek refuge there. That explains the discoveries of Roman materials in caves.

**— Do you remember any special anecdote from that time?**

— The most curious thing was the visit by Trinidad Torres in 1976 when he came to me asking for permission to dig. He told me he was looking for Ursus deningeri. After four days he had a human jawbone in his hands. He came to show it to me, and I told him it was pre-Neanderthal, without a doubt. Trino said, "I think that too, but I'm scared of saying so." That was the first human jawbone to come out of Atapuerca.

**— In 1977, Emiliano Aguirre designed a new project. How did both of them coexist?**

— The excavation sites and the settlements were different. We had little to do with each other, but our mutual collaboration was always good.

**— What has Atapuerca meant for your life?**

— I met many, many people here. I struck up many wonderful friendships in Burgos, and I still have a fraternal relationship with Salvador Domingo. From the artistic perspective, my contact with Flint Gallery made me understand abstract art.

**"I AM TRYING TO RECONSTRUCT PALAEOLITHIC ART"**

— Now I am starting a book about Neolithic art, and I am working on experimentation with Palaeolithic figures, etching on bone with flint chisels. I started in 2000 and I am still scanning figures and analysing them statistically. I don't know if I will have time. I began to compile the results six years ago and I still haven't finished. Will I have time to finish?