

Confirming Human Antiquity: Spain and the Beginnings of Prehistoric Archaeology

Confirmando la antigüedad humana: España y los comienzos de la arqueología prehistórica

Francisco PELAYO LÓPEZ

Instituto de Historia, CCHS (CSIC)
C/ Albasanz 26-28, 28037 Madrid, Spain
francisco.pelayo@cchs.csic.es

Rodolfo GOZALO GUTIÉRREZ

Dpto. de Geología, U. de Valencia
Dr. Moliner 50, E46100 Burjassot, Spain
Rodolfo.Gozalo@uv.es

Recibido: 22-12-2012
Aceptado: 21-07-2013

ABSTRACT

During his first visit to Spain in 1862, Louis Lartet together with Edouard de Verneuil and the Spanish mining engineer Casiano de Prado visited the San Isidro archeological site in Madrid. There they obtained a worked silex tool, which the former two then described and illustrated in the Bulletin de la Société Géologique de France. Three years later, Edouard Lartet together with Henry Christy and Hugh Falconer designed a project to extend the exploration in the field of prehistoric and archaeological works to the Iberian Peninsula. After Christy's death at the beginning of 1865, and Edouard's illness, it was Louis Lartet who undertook the research program of Prehistoric Archaeology South of the Pyrenees. He conducted excavations in caves in Álava and the Cameros Mountains (La Rioja region, Spain). At the same time as these excavations, an influential group of geologists was emerging in Spain who disseminated the findings, principles and practices of the new discipline.

KEY WORDS: *History of Prehistoric Archaeology. Nineteenth century. Lithic industry. Fossils. Spain.*

RESUMEN

Durante su primera visita a España en 1862, Louis Lartet, junto con Edouard de Verneuil y el ingeniero de minas Casiano de Prado, visitó el sitio arqueológico de San Isidro en Madrid. Allí descubrieron un instrumento tallado en sílex que publicaron en el Bulletin de la Société Géologique de France. Tres años más tarde, Edouard Lartet, junto con Henry Christy y Hugh Falconer, diseñaron un proyecto para llevar a cabo investigaciones prehistóricas y arqueológicas en la Península Ibérica. Tras la muerte de Christy a principios de 1865, y debido a la enfermedad de Edouard, fue Lartet quien llevó a cabo dicho programa de investigaciones prehistóricas al sur de los Pirineos. Bajo su dirección, se llevaron a cabo excavaciones en cuevas de Álava y en la Rioja. Al mismo tiempo, emergió en España un grupo de geólogos influyentes que consolidaron los principios y las prácticas de la nueva disciplina.

PALABRAS CLAVE: *Historia de la arqueología prehistórica. Siglo XIX. Industria Lítica. Fósiles. España.*

1. Introduction

The development of prehistoric archaeology into as a scientific discipline began in the late 1850's (O'Connor 2007; Rowley-Conwy 2007). Hugh Falconer visited Abbeville in November 1858, where he was able to verify *in situ* evidence of the lithic industry that Jacques Boucher de Perthes attributed to the *antediluvian man* (Cohen & Hublin 1989). Later inspections made in 1859 by British and French geologists and paleontologists confirmed the evidence that testified to the great antiquity of human on Earth (Grayson 1983; Van Riper 1993; Groenen 1994). The following year at the *Académie des Sciences* in Paris, Edouard Lartet proved the coexistence of humans and extinct fauna (Richard 1992). To consolidate the new discipline, researchers aimed to confirm the French-British consensus on the antiquity of the human race and to extend its presence in the rest of the continent; what was necessary for this were new findings in other European countries (Díaz-Andreu 2007).

New materials supporting the existence of prehistoric manmade tools were discovered in Spain. The new evidence was found April 1862 in the palaeolithic site of San Isidro near Madrid; the team of researchers comprised the Spanish mining engineer Casiano de Prado and the French geologists Edouard de Verneuil and Louis Lartet. This finding marked the beginning of Spanish prehistoric studies by Prado.

2. The emergence of prehistory in Spain

The geologists trained in Spain during the reign of Isabel II (1843-1868) assimilated the new ideas coming from France with precautions. An external factor for Spanish natural science, which conditioned the reception of theories and scientific developments in the country, was the influence of the most intransigent Catholics on government policy, which restricted the freedom of education and promoted a rigid official censorship. This reactionary environment limited the circulation of printed issues that could prove troublesome for the dominant political status; in other words, it was difficult to question Biblical chronology and Genesis' creation story. The *Sexenio Revolucionario* (1868-1874) established a more liberal policy and the *Ley de Libertad de Enseñanza* of 1872 helped to overcome the ideological barriers that in previous years had affected the studies related to the origins of Earth and life.

Although the scientific community assumed the antiquity of the human race, the religious opposition remained strong. One of Spain's first ad-

vocates for prehistory was Juan Vilanova (Pelayo & Gozalo 2012), professor of geology and paleontology at the University of Madrid. A conservative and ant Darwinist Christian, Vilanova defended prehistoric studies against the Catholic apologist F. Caminero Muñoz, who rejected the study of prehistory, denying the evidence of human fossil remains and its lithic industry (Pelayo & Gozalo 2012).

In the 1860s the works of Boucher de Perthes, Charles Lyell, Edouard Lartet, Christy, Marcel de Serres, amongst others, established a new chronology that extended the narrow time limits assigned to humanity by the Biblical account of creation. These new ideas were spread within Spain via the *Revista Minera*, the publication of the Mining Engineers, and the *Revista de los Progresos de las Ciencias*, an organ of the *Real Academia de Ciencias Exactas, Físicas y Naturales*.

Casiano de Prado, a member of the Geological Society of London and the *Société Géologique de France*, was the main character in the introduction of prehistory to Spain. He maintained scientific relations with Georg Busk, Falconer and Edouard Lartet. Prado received the first two in the fall of 1864 at *Escuela de Minas* in Madrid (Prado 1864: 184, 218). Busk and Falconer returning from Gibraltar after having examined the fossil remains of Genista Cave, Windmill Hill (Falconer 1868: 554). Busk and Falconer had previously stopped at Seville where they had met with Antonio Machado Núñez, professor of natural history at the University of Sevilla (Machado 1869). Prado and E. Lartet maintained a scientific relationship with the exchange of letters and materials. Prado's letters are preserved in the personal files of Edouard and Louis Lartet at the *Bibliothèque de l' Arsenal, Université de Toulouse*, as well as the papers of the Edouard and Louis with their notes, drawings, sketches etc on Spanish caves and the work done by L. Lartet in San Isidro and in the caverns of Peña Miel and Lobriga Cave, La Rioja¹.

After the death of Casiano de Prado in 1866, Vilanova was the main figure in the Spanish academic world of the emerging prehistory; this was mostly due to his work of synthesis, *Origin, nature and age of man*, written in 1868 but not published until 1872 (Pelayo & Gozalo 2012).

Previously, Machado wrote a letter in late July 1868 to Busk, which was published in the proceedings of the International Congress of Prehistoric Archeology of Norwich, in which he regretted not being able to attend the congress and pointed out the importance of studying the origin and evolution of the human race:

I should have been glad of an opportunity of explaining these circumstances at a congress of men of science, in order to stimulate my indifferent countrymen to shake off their indolence, which may be attributed to the climate, together with the ignorance and fanaticism under which we have been weighed down for the last 300 years. I should also have wished to lay before the meeting certain questions of primary importance; that is to say, if there be in London sufficient scientific liberty and so much love of truth as to render men willing to encounter illegitimate beliefs

1. What is the origin of man? Is the race descended from a single pair; or did the creative force produce simultaneously numerous individuals of both sexes at different points of the globe?

2. Is the human species a modification of other animals effected in the course of incalculable ages, and due to the evolutions of the medium in which it has been created? Or is it derived from a single trunk, morphologically identical, or presenting only slight alterations?

3. If man has undergone slow and progressive improvement in space and time, why is it that animals have not been subjected to the same law, as regards their instinctive and intellectual faculties? (International Congress of Prehistoric Archaeology 1869: 80-81).

3. The paleolithic site of San Isidro

The French naturalist and prehistorian Louis Lartet is known in the field of history of science for his significant role in the propagation of the study of human fossils, especially in relation to the discovery of Cro-Magnon man (Lartet 1869; Laurent 1996).

In 1862, after studying in Paris, Louis Lartet worked at the *Muséum National d'Histoire Naturelle* (Cartailhac, 1903-1908; Laurent, 1996). That same year he travelled to Spain, accompanied by his tutor Edouard de Verneuil. During this visit, which was his first to Spain, Lartet, Verneuil and Prado visited the San Isidro archeological site in Madrid. They obtained a silex tool, which the two French naturalists described and reproduced the following year in an illustration in the *Bulletin de la Société Géologique de France* (Verneuil and Lartet 1863b). The paper, presented by L. Lartet for the society, starts off by stating that Spain had become the third European country, after France and England, in which worked silex had been uncovered in quaternary sediments. After acknowledging the

value of the geological work of Casiano de Prado, who had kindly offered to be their guide in the field, Verneuil and L. Lartet described the geological cross-section from the San Isidro site where the Spanish geologist had taken them. The article continued with the presentation of the silex discovery – a matter that fueled what was already a well-established controversy – and offered a corresponding, detailed description of that piece. The authors also explain that in the diluvial terrains of Madrid they had found fossil remains of *Elephas africanus*, a pachyderm that at the time of the article lived only in the central and southern regions of Africa. They concluded from the prehistoric and paleontological data that humans lived in Spain at the same time as the quaternary aluvial sediments were depositing in France and England, where objects of human industry were later uncovered, along with the remains of extinct mammals such as *Elephas primigenius*. The silex axe from Madrid was found in sediments that had been formed in circumstances analogous to, and very possibly synchronised with, the aluvial sediments in France and England. It was therefore shown that also in Spain had humans been a contemporary of the ancient pachyderms, in this case of an elephant species that was still alive, which disappeared from the European continent at an unknown period and passed from the Mediterranean zone of Africa to the central and southern regions of that continent. The paper ends by adding that Casiano de Prado had recently informed the authors that another piece of worked silex had been found in San Isidro (Verneuil and Lartet 1863b).

Louis Lartet's relative importance in the search for and identification of prehistoric tools, and his role in Spain as precursor of studies in this science, has been much debated and has given rise to a controversy whose origins lie in the French naturalists' own statements. In a footnote in his article on the research in the Cameros Mountains caves, L. Lartet (1866a) claimed that in 1862 he had been lucky enough to receive an axe worked from silex, similar to those from Saint-Acheul and Abbeville, from the hands of a labourer at the San Isidro archeological site. He added that this had attracted the attention of Casiano de Prado, who would afterwards obtain other worked silex pieces from the same site, which C. de Prado described in his geological paper on the province of Madrid. The reference to these obtained pieces is the following (Lartet 1866a: 115, note 1):

Nous avons déjà acquis quelques notions sur l'existence de l'âge de la pierre en Espagne. Ainsi, lorsque j'accompagnai, en 1862, mon savant maître, M. de Verneuil, dans son dernier voyage dans la Péninsule, j'eus la

bonne fortune de recevoir des mains d'un ouvrier des sablières de San Isidro, près de Madrid, une belle hache en silex taillé, analogue à celles de Saint-Acheul et d'Abbeville. Elle se trouve décrite et figurée dans une note que M. de Verneuil et moi avons présentée à la Société géologique de France (Bull. de la Soc. géol. de France, 2^e série, t. XX, p. 684, pl. X, 1863). M. Casiano de Prado, dont l'attention fut éveillée par ce fait, a, depuis lors, obtenu de ces mêmes assises de sables quaternaires de San Isidro, d'autres silex taillés qu'il a fait figurer dans son grand et beau travail géologique sur la province de Madrid (Descripción física y geológica de la provincia de Madrid, p. 188, 1864).

It must be pointed out that Lartet made a double mistake in the references to silex in the above mentioned article. Page 684 corresponds to the beginning of another article that he published along with Verneuil, which was in the preceding pages (Verneuil and Lartet 1863a). Furthermore, the silex piece shown in the illustration was not that of plate X but plate XI.

In this version by Lartet, which was mostly an attempt to establish himself professionally in the emerging new discipline, he was describing the silex that he himself had previously published with Verneuil in the *Société Géologique de France*. In their article they did not attribute a key role to any one of the three researchers; they only indicated, without specifying who, that one of them had asked the Galician workman at the quarry if during the excavations he had found anything of interest, without specifying to the workman what sort of things they were looking for. What stands out in Verneuil and Lartet's story is the answer they said the workman gave. The French geologists described how the workman went off to find a stone he had uncovered some time before from a level he was able to point out with great precision, at the same time as saying that the stone looked as if it had been shaped by man. In their account of the events, Lartet and Verneuil confirmed that they corroborated the workman's opinion and were immediately able to identify the stone as a silex axe similar to those that had been found in the diluvial terrains at Abbeville and Amiens (Verneuil and Lartet 1863b: 699).

Lartet's interpretation contradicted the account of the silex discovery that C. de Prado published in his book on the geological description of Madrid (1864). The Spanish geologist specified that it was Verneuil who had gone up to the workers to ask them if they had come across any particular stone of interest. He went on to confirm that the supervisor, after having answered their question affirmatively,

showed them not one but various pieces he had set apart, of which only one matched the silex piece they wanted to find (Prado 1864: 300-301). On this point Prado differs from L. Lartet's version, as at no time does Lartet suggest that they had gone to the Madrid site to look for any specific piece of lithic or paleontological material. On the contrary, the Spanish geologist gives the impression that the intention of the three was to check whether there were any remains of human lithic industry at the San Isidro site.

A few pages further on, Prado publicly declares the reality of man's great antiquity on Earth. Going even further than the antediluvian chronology of Boucher de Perthes, he claimed it likely that the human species had appeared in the Tertiary era, or at least in the final stages of it. Prado's justification for this was the possible indications of Tertiary lithic remains described the previous year in 1863 by Jules Desnoyers. Prado also added that Gabriel de Mortillet was considering checking and documenting Desnoyer's data and publishing the results in his journal *Matériaux pour l'histoire positive de l'homme* (see Prado 1864: 306) appendix entitled *Breves reflexiones sobre la antigüedad del hombre y su supremacía entre los demás seres*. However, even if Mortillet had previously supported the existence of man in the Tertiary, he subsequently changed his mind and from 1873 onwards claimed that the evidence unearthed in that period was in fact evidence of the activity of a human precursor (Pelayo 2009).

4. The excavations in the Cameros Mountains

Louis Lartet returned to Spain in the summer of 1865, this time accompanied by his father Édouard Lartet. After arriving in the Iberian Peninsula, Édouard Lartet was unable to start his work due to an illness, so Louis began the exploration of various caves in Álava and the Cameros Mountains. His work on human and animal bone fossils, lithic industry and pottery published in the *Revue Archéologique* (Lartet 1866a) had repercussions in French scientific societies and specialist magazines and in Spain, it was spread by geologists.

In the introduction to his work, Louis justified his explorations, in the first place because of the great interest that existed among geologists and paleontologists for the comparative study of zoological geography of quaternary fauna, which had coexisted with the earliest human groups. There was thus a desire to check whether the Pyrenees had formed an insurmountable barrier to the mammals whose habitat at that time was restricted to the arctic regions. As a second objective, it was

important to verify whether species of elephants and hairy rhinoceroses, whose fossil remains could be found from Siberia to the Pyrenees, had in the past been able to extend their habitat and reach the Iberian Peninsula. Finally, it was necessary to see whether in Spain, as in France, caves had served as a refuge for the first humans of that region. On that point, Lartet included the previously mentioned note in which he gave his own particular version of the search for worked silex in San Isidro (Lartet 1866a: 114-115).

Lartet attributed Falconer and Christy with the origin of the project to go to Spain and set up an exploratory camp on the peninsula from which to carry out the three above-mentioned objectives. After his father had been associated with the project, L. Lartet said that he had included him so that he could participate in the explorations. After the plans had already been made and the departure date set, however, Falconer died in January 1865 and Christy three months later. L. Lartet decided to go ahead with the plan prepared in association with the two deceased men (L. Lartet 1866a: 115).

It was important, L. Lartet continued, to search for evidence in those areas clearly situated to the south of the Pyrenees ranges and to their western extensions in the north-west of the Iberian Peninsula. With this aim, Edouard and Louis left Bayonne in August 1865, reaching Vitoria, the capital of the province of Álava, where they began their research. But the intense heat and the onset of an indisposition prevented Edouard from taking an active part in the exploratory work, leaving Louis to carry on the work without his guidance.

The reconnaissance and cores undertaken in some of the caves in the area around Vitoria, following the indications of a bookseller from a town called Egaña, produced no results. So they went on to another area in the Iberian system rich with caves. On arrival in Logroño they contacted Ildefonso Zubía, teacher of Natural History at the Logroño Institute; having explored the area himself, Zubía gave them precise indications about caves situated in the area around Torrecilla de Cameros, among them the Lóbrega Cave. L. Lartet knew of its existence because C. de Prado had referred to it in his work on the geological description of Madrid. L. Lartet spoke enthusiastically of Zubía, who kept a collection of local objects in the Logroño Institute, classified methodically and scientifically, the likes of which there were very few of in Spain, (L. Lartet 1866a: 116).

L. Lartet, after crossing the monotonous Ebro plain in a stagecoach, entered the Cebollera Mountains, making his way towards Torrecilla, where he was due to meet up with his father. In Torrecilla the pharmacist Pedro Blanco told him of the existence

of a great number of caves in the surrounding area, more than L. Lartet expected. He managed to explore twenty caves in the area around Torrecilla de Cameros; the principal ones known collectively by the name of the Lóbrega Cave, although they also inspected the so-called Cruz de Hierro, grouped around the Peña de la Miel in Nieva, and caves in Ortigosa. Although only three of these caves provided any evidence of value on quaternary fauna in that part of Spain, he was lucky in that the bone remains were from three different ages, which corresponded to the three chronological divisions used for the caves in France (L. Lartet 1866a: 119).

The first and oldest of the ages was uncovered in one of the higher caverns in the Peña de la Miel, in the form of bone remains from a rhinoceros of a different species than *Rhinoceros tichorhinus*, and abundant bones from very large oxes, possibly *Bos primigenius*, common deer and roe deer. Some of the bones were fractured, which suggested human intervention; however, that was very doubtful because there was no worked silex to be found, nor any other remains of human industry or settlement.

The second of the ages was represented in one of the lower caverns in the Peña de la Miel. The remains of ashes were found along with numerous bones that were very fragmented, some of them showing signs of having been subjected to the cut of a rough instrument. He found mixed in with these remains were irregularly worked silex pieces, all with cutting edges. In a more modern deposit L. Lartet found silex pieces shaped in the form of scrapers and blades, better worked than those found in the deeper layers, which made him think that they could not have been the work of the cave dwellers and must have been brought in from another place. The animal remains identified in this cave belonged to herbivores. The bones of a very large ox were found, possibly *Bos primigenius*, along with deer, roe deer and horse; in his opinion, these must have served as food for the primitive inhabitants of Spain. L. Lartet pointed out that neither in this cave, nor in any of the previous caves that were inspected, had they found the remains of reindeer, great Irish deer, cave bear or any of the other species that characterized the deposits in the caves in France. For him, however, the cave in the Peña de la Miel was comparable to the French caves classified as belonging to the Reindeer Age. The similarity was based on the presence and form of the worked silex pieces, in the way in which the bones were split and in the absence of the remains of domesticated animals. He regretted that quaternary paleontological research in Spain was not very well developed; without having any references with which to compare, it was not appropriate to draw any definitive conclusions from

the isolated results on which his observations were based (L. Lartet 1866a: 121).

The third age was characterized by a more modern civilization and its remains were found in two caves known as the Lóbrega Cave (Lartet 1866a: 121). It was in this cave system where Lartet, accompanied by Pedro Blanco and two labourers made their archeological excavations. After describing the interior of these two caves in his article, Lartet mentioned that in the higher part of the excavations they had found ashes, the remains of vessels, broken animal bones and work tools. In the surface layers they had uncovered animal bones, two jaws and, nearby in a small natural cavity, a dolicocephalic skull with a degree of conservation similar to one of the two jaws mentioned. They also discovered the skeleton of a newly born child. As these remains were found at a very shallow depth, Lartet was cautious about whether any of these remains could be dated as belonging to the time of ancient industry. He only went as far as to point out that there was a significant difference between one of the jaws, which belonged to a brachycephalic type, and that of the other human remains, which had not been found at such a deep level. L. Lartet (1866a: 123, note 2) mentioned that Pruner-Bay, after examining the human remains, had established that the skull and one of the jaws, although from different individuals, belonged to the Celtic type, while the other jaw showed characteristics that suggested identifying it as a young brachycephalic female (Pruner-Bay 1866b).

The associated fauna seemed to correspond to a species domesticated by man. Lartet mentioned that his father had recognized two small breeds of ox and one or two breeds of goat. There was an abundance of boar and pig bones and those of deer and roe deer were also unearthed. The horns of these ruminants had been put to various uses, as there were carvings and visible signs that they had been sawn. The most characteristic feature of the fauna in this cave was the presence of numerous canine remains, clearly distinct to other carnivores such as wolves, jackals or foxes. It was not possible to tell if this animal had come under domestication. The bones in the Lóbrega Cave were less fragmented than those found in the lower cave of the Peña de la Miel. Some of the bones of the Lóbrega Cave were burnt and others showed signs of human work, as they had been smoothed and made into different types of tools. Near the cavity where the human cranium had been found, two large flat pieces of sandstone were collected, which had been worked into circular shapes, seemed to have been subjected to fire and were blackened at the centers as if they had been used for cooking food. There were also

harder sandstone pebbles and originating from the same place as the previous ones, which had probably been collected from the river. Some of them were broken as if they had been heated at high temperatures and later submerged in cold water. Lartet also found the remains of charcoal scattered among the ashes, which indicated the use of logs from the abundant oak trees in the area, and acorns, which must have served as food. Likewise, there were sandstone pebbles that were worn down on one side as if they had been used as mill stones to grind the acorns into powder. Other objects uncovered in the cave included well-preserved clay vessels, cups, fragments of large decorated jars and worked bones for piercing and polishing meant in his opinion, for the preparation of skins, a slender bone stick, arched and perforated in one of its two extremities and a slab of baked clay with three holes in it whose function was not clear. What he did not find were any possible silex or metal weapons, which he thought might have been used by the inhabitants of the Lóbrega Cave (Lartet 1866a: 124-126).

Louis Lartet accompanied this article with two illustrations comprising 32 figures that showed all the materials mentioned in the text – rounded edges, stone and bone tools and clay vessels. The clay vessels were the most noteworthy evidence of the relatively advanced industry of the inhabitants of the Lóbrega Cave; they had been made by hand and the clay must have been baked in the open air and not in an oven. Judging by the small size of the fingermarks, they most likely had been made by women. This type of pottery – being soft clays from a smooth mix, sandy-clay, calcareous, imperfectly fired and easily scratched by iron – would fit the first of the classifications for fired clays established by Alexandre Brongniart in his *Traité des arts céramiques, ou des poteries* (1844). As the firing had been imperfect, the colour varied from a dull brown-grey to black and red (L. Lartet 1866a: 127).

Lartet finished by concluding that in the study of the cave floor it had been possible to identify the three paleontological ages previously mentioned. The first was that of the *Rhinoceros* and the *Bos primigenius* in the upper cave of the Peña de la Miel; it was doubtful whether humans had ever inhabited the cave at this time. The second was that of the *Bos primigenius* in the lower cave; there was the presence of human inhabitants without any domesticated species and was noteworthy for the absence of reindeer and the majority of mammals associated with the French caves of this age. Humans used bones, fragmenting them with silex and splitting them into shapeless fragments, which at the end of the period were replaced by scrapers. The third age was that of domesticated animals, noteworthy for a

new species of very carnivorous dog. When humans become dedicated to shepherding, they increase the number of tools and perfect the use of bones. The biggest step in progress that separated the inhabitants of the Lóbrega Cave from those of the Peña de la Miel was their knowledge of the art of pottery. According to Lartet, in the absence of bronze objects, the pottery – similar to that from the stone and bronze ages in Denmark and that of the lake-dwellings in Switzerland and Italy – must be dated at the end of the stone age (L. Lartet 1866a: 130-132)

The archaeological study in the Cameros Mountain that L. Lartet carried out had repercussions in France and Spain. Extracts from it were taken and distributed by Mortillet in March 1866 in his magazine *Matériaux pour l'histoire positive et philosophique de l'homme* (Mortillet 1866). It was also presented and reviewed by Franz Pruner-Bey in the May 1866 session of the *Société d'Anthropologie* in Paris (Pruner-Bey 1866a). Similarly, that year in the *Bulletin de la Société Géologique de France* another extract from L. Lartet's work was published, in which he referred to his research in the caves of the Ebro basin, where he had collected fossils of mammal bones and remains of human industry (Lartet 1866b).

5. Final remarks

The finding of a lithic tool in San Isidro (Madrid) in 1862 implied the existence of human beings in the distant past over a thousand kilometers south of the excavations in France and England where the first evidence of the antiquity of man had been found. This discovery of worked flint in Spain was a result of the existing interest for the setup of the new discipline among a small but influential nucleus of mining engineers, palaeontologists and natural-

ists. They were very active and well informed and they were linked to relevant scientific institutions of their time such as the School of Mines, the Universities of Madrid and Seville and the Royal Academy of Exact, Physical and Natural Sciences. They were responsible for transmitting the work on evidence of the remote presence of the human race on Earth. At the same time they built a network of contacts with French and British colleagues, with whom they exchanged materials and conducted joint fieldwork.

In this context, the Iberian Peninsula was considered an important geographical area for the emerging European prehistorians. Not only because of the identification of human fossil remains in Gibraltar, but also due to the materials that could be provided by the exploration of Spanish caves, so as to be compared with those found in southwest France. The program designed by Edouard Lartet, Falconer and Christy for the study of prehistoric archaeology in the south Pyrenees should be understood in the framework of the international scientific relations, for which (ideally) there were no political boundaries. This program of work was essential in the pursuit of when and how human activity in southwestern Europe had originated.

After excavating in the archaeological sites of San Isidro and Cameros Mountain, where the French paleontologist had found materials that confirmed the great antiquity of humans in Spain, the *Ministerio de Instrucción Pública* appointed Louis Lartet to verify the authenticity of the discovered prehistoric remains in the Cro-Magnon Cave (Eyzies, Dordogne). He presented his study on 21 May 1868 to the *Société d'Anthropologie de Paris* (L. Lartet 1869), giving an expert description of the geological and archeological surroundings in which the bone remains of five individuals were found, dating their age as immediately preceding the period when prehistoric art had begun.

NOTES

1. <http://www.biu-toulouse.fr/tolosana/lartet>. "Edouard et Louis Lartet: pionniers des études préhistoriques". Album iconographique. Manuscrits et dessins divers ms. 199071. Correspondances reçues par Édouard et Louis.

BIBLIOGRAPHICAL REFERENCES

- CARTAILHAC, E. (1903-1908): Éloge de M. Louis Lartet. *Mémoires de la Société Archéologique du Midi*, XVI: 9-18.
- COHEN, C.; HUBLIN, J.-J. (1989): *Boucher de Perthes. Les origines romantiques de la Préhistoire*. Belin, Paris.
- DESNOYERS, J. (1863): Note sur les indices matériels de la coexistence de l'homme avec l'Elephas meridionalis dans un terrain des environs de Chartres. *Comptes Rendus hebdomadaires des séances de l'Académie des Sciences de Paris*, 56: 1073-1083.

- DÍAZ-ANDREU, M. (2007): *A World History of Nineteenth-Century Archaeology: Nationalism, Colonialism, and the Past*. Oxford University Press, New York.
- FALCONER, H. (1863): On the Fossil contents of the Genisa Cave. *Palaeontological Memoirs and Notes of the Late Hugh Falconers*, London, II: 554-563.
- GRAYSON, D.K. (1983): *The Establishment of Human Antiquity*. Academic Press, New York.
- GROENEN, M. (1994): *Pour une histoire de la Préhistoire*. J. Million, Grenoble.
- INTERNATIONAL CONGRESS OF PREHISTORIC ARCHAEOLOGY: TRANSACTIONS OF THE THIRD SESSION. NORWICH, 1868 (1869): Mr. Busk communicated the following extract from a letter of Don Antonio Machado, Dean of Faculty of Sciences at Seville, dated July 29, 1868, London: 79-81.
- LARTET, L. (1866a): Poteries primitives, instruments en os et silex taillés des cavernes de la Vieille Castille (Espagne). *Revue Archéologique*, XIII: 114-134, Pl. III et IV.
- LARTET, L. (1866b): Note de M. L. Lartet. [M. L. Lartet offre à la Société un exemplaire d'un travail relatif aux recherches qu'il a entreprise, l'été dernier dans les grottes du bassin de l'Ebre en Espagne]. *Bulletin de la Société Géologique de France*, XXIII: 1866, 718.
- LARTET, L. (1869): Une sépulture des troglodytes du Périgord (crânes des Eyzies). *Bulletins de la Société d'Anthropologie de Paris*, III: 335-349.
- LAURENT, G. (1996): Louis Lartet 1840-1899. *Dictionnaire du Darwinisme et de l'Évolution* (P. TORT, dir.), PUF, Paris, II: 2582-2583
- MACHADO NÚÑEZ, A. (1869): Trabajos de arte y despojos humanos hallados en las cavernas de Gibraltar. *Revista Mensual de Filosofía, Literatura y Ciencias de Sevilla*, I: 368-372.
- MORTILLET, G. (1866): Louis Lartet. Poteries primitives, instruments en os et silex taillés des cavernes de la Vieille Castille (Espagne). Paris 1866. Extrait de la *Revue Archéologique*, Février, 1866. *Matériaux pour l'histoire positive et philosophique de l'homme*. Septembre 1865 à Décembre 1866: 281-286.
- O'CONNOR, A. (2007): *Finding Time for the Old Stone Age. A History of Palaeolithic Archaeology and Quaternary Geology in Britain, 1860-1960*. Oxford University Press, New York.
- PELAYO, F. (2009): ¿"Hombre terciario" o precursor humano? Transformismo, sílex y los orígenes de la humanidad. *Darwinismo, Meio Ambiente, Sociedade*, (H. M. Bertol et al orgs.), Via Lettera / MAST, Sao Paulo / Río de Janeiro: 161-176.
- PELAYO, F.; GOZALO, R. (2012): *Juan Vilanova y Piera (1821-1893), la obra de un naturalista y prehistoriador valenciano*. SIP del Museo de Prehistoria de Valencia, Valencia.
- PRADO, C. (1864): *Descripción física y geológica de la provincia de Madrid*. Imprenta Nacional, Madrid.
- PRUNER-BEY, F. (1866a): Séance du 1 Mars 1866. Poteries primitives, instruments en os et en silex taillés des cavernes de la Vieille Castille (Espagne). *Bulletins de la Société d'Anthropologie de Paris*, I: 198-199.
- PRUNER-BEY, F. (1866b): Objets offerts à la Société. Crâne d'Aubussargues. *Bulletins de la Société d'Anthropologie de Paris*, I: 203-206.
- RICHARD, N. (1992): *L'invention de la Préhistoire. Une anthologie*. Presses Pocket, Paris.
- ROWLEY-CONWY, P. (2007): *From Genesis to Prehistory. The Archaeological Three Age System and its Contested Reception in Denmark, Britain, and Ireland*. Oxford University Press, New York.
- VAN RIPER, A. B. (1993): *Men among the Mammoths*. University of Chicago Press, Chicago.
- VERNEUIL, E. DE; LARTET, L. (1863a): Sur le calcaire à Lychnus des environs de Segura (Aragon). *Bulletin de la Société Géologique de France*, XX: 684-698, pl. X.
- VERNEUIL, E. DE; LARTET, L. (1863b): Note sur un silex taillé trouvé dans le diluvium des environs de Madrid. *Bulletin de la Société Géologique de France*, XX: 698-702, pl. XI.