HUMAN FOSSIL REMAINS FROM THE GRAN DOLINA LOWER PLEISTOCENE SITE (SIERRA DE ATAPUERCA, SPAIN)

José María Bermúdez de Castro, Antonio Rosas, Jan van der Made & Jesús Rodriguez

The Gran Dolina (TD) Lower Pleistocene site in the Sierra de Atapuerca (Burgos, Spain) has provided clear evidences to demonstrate the presence of hominids in Western Europe more than 780,000 years ago (Carbonell *et al.*, 1995). Thus, the hypothesis that a settlement of Europe took place less than 500,000 years ago (Roebroeks & van Kolfschoten, 1994) is rejected.

The 18 meter section of the TD karst filling can be divided into 11 lithological levels, numbered from bottom to top. Excavation of a 6 m square meters planar section in the TD site was begun in 1993. During the 1994 season, excavation had reached level 6 and one of the TD6 strata, the so-called Aurora stratum, yielded a rich faunal and lithic assemblage. The top of the Aurora stratum is about one meter below the Matuyama/Brunhes boundary (Parés & Pérez-González, 1995). Excavation of the Aurora stratum finished in 1996, and a total of 85 human fossil remains have been identified. The TD6 human hypodigm includes numerous postcranial remains representing different skeletal parts, as well as some facial, neurocranial, mandibular, and dental specimens. Based on dental evidence, a minimum of six individuals have been identified in this human assemblage.

Because of the presence in the current TD6 human hypodigm of an unique combination of cranial, dental, and mandibular traits we have named a new Homo species, *H. antecessor*, to include these human fossil remains (Bermúdez de Castro *et al.*, 1997). We contend that the new species represents the last common ancestor of the Neandertals and modern humans. That is, *H. antecessor* is the origin of two evolutionary lines, one of them exclusively European and formed by two chronospecies, *H. heidelbergensis* and *H. neanderthalensis*, whereas the other led to *H. sapiens*, probably in the African continent.

References

BERMUDEZ DE CASTRO J.M., ARSUAGA J.L., CARBONELL E., ROSAS A., MARTINEZ I. & MOSQUERA M., 1997. A hominid from the lower Pleistocene of Atapuerca, Spain: possible ancestor to Neandertals and modern humans. *Science* 276:1392-1395.

CARBONELL E., BERMÚDEZ DE CASTRO J.M., ARSUAGA J.L., DÍEZ J.C., ROSAS A., CUENCA G., SALA R., MOSQUERA M & RODRÍGUEZ J., 1995. Lower Pleistocene hominids and artifacts from Atapuerca-TD6 (Spain). *Science* 269:826-830.

PARES J.M. & PEREZ-GONZALEZ A., 1995. Paleomagnetic age for hominiod fossils at Atapuerca archaeological site, Spain. *Science* 269:830-832.

ROEBROEKS W. & VAN KOLFSCHOTEN T., 1994. The earliest occupation of Europe: a short chronology. *Antiquity* 68:489-503.