

Elephants in the archaeological sites of Aridos (Jarama valley, Madrid, Spain)

M. Santonja¹, A. Pérez-González², P. Villa³, E. Soto⁴, C. Sesé⁴

¹Museo de Salamanca, Salamanca, Spain - musal@helcom.es

²Departamento de Geodinámica, Universidad Complutense de Madrid, Spain

³University of Colorado Museum, Boulder, Colorado, USA - villap@stripe.colorado.edu

⁴Museo Nacional de Ciencias Naturales, Madrid, Spain

SUMMARY: Aridos 1 and Aridos 2 are archaeological sites of similar age in the Arganda I Formation, in the Jarama river valley (Madrid). Aridos 1- in primary context within low energy floodplain deposits - presents the disarticulated remains of an adult, female specimen of *Elephas antiquus*, in association with Acheulean lithic artefacts. Aridos 2 yielded part of an *Elephas antiquus* skeleton corresponding to an adult male also associated with Acheulean stone artefacts. The remains in Aridos 2 lie on the consolidated surface of a floodplain and were covered by river channel deposits that have partially eroded the site. Based on the Aridos 1 microfauna, these sites can be dated to isotope stages 9 or 11, with climatic conditions similar to the present.

1. INTRODUCTION

Aridos 1 and Aridos 2, excavated in 1976 (Santonja *et al.* 1980), are situated within the Arganda Formation I (Fig. 1). This formation, about 30 m thick, is part of a terrace sunken syndepositionally due to an underlying karst (Pérez-González 1971). Based on its relative position in the terrace system of the Jarama valley and correlations with other terrace systems of the central Iberian Peninsula, Arganda I has been dated as Middle Pleistocene (Pérez-González 1994).

The fauna found in this formation, especially the microfauna of Aridos 1 (López Martínez 1980), is considered to be of a younger age than Cúllar-Baza and older than the TD 10 and G II levels of Atapuerca, and represent climatic conditions similar to the present (Sesé & Sevilla 1996). According to chronological estimates proposed for Atapuerca (Pérez-González *et al.*, in press), the age of the Aridos sites might correspond to isotope stages 9 or 11.

2. ARIDOS-1

In Aridos 1, the remains of an adult female elephant - *Elephas (Palaeoloxodon) antiquus* (Soto 1980) - were found scattered over an area of some 50 m². They include the cranium and both jaw bones, both tusks, 12 vertebrae, parts of 9 or 10 ribs, both shoulder blades, the left pelvis and a metacarpal (Fig. 2).

Close to the elephant remains, 331 lithic pieces of flint and quartzite were found, all unabraded. Given that some of the pieces fitted together (60, or over 18%), these were interpreted as being derived from the knapping or shaping of 21 nodules or tools. Also, based on external features, some could be ascribed to the same block. At least three stone percussors and two bifaces were used at the site. The bifaces were actually transported away from the area but their presence is indicated by two-biface tip resharpening flakes. Most of the artifacts were flint flakes with natural or lightly retouched edges, and a few quartzite choppers.

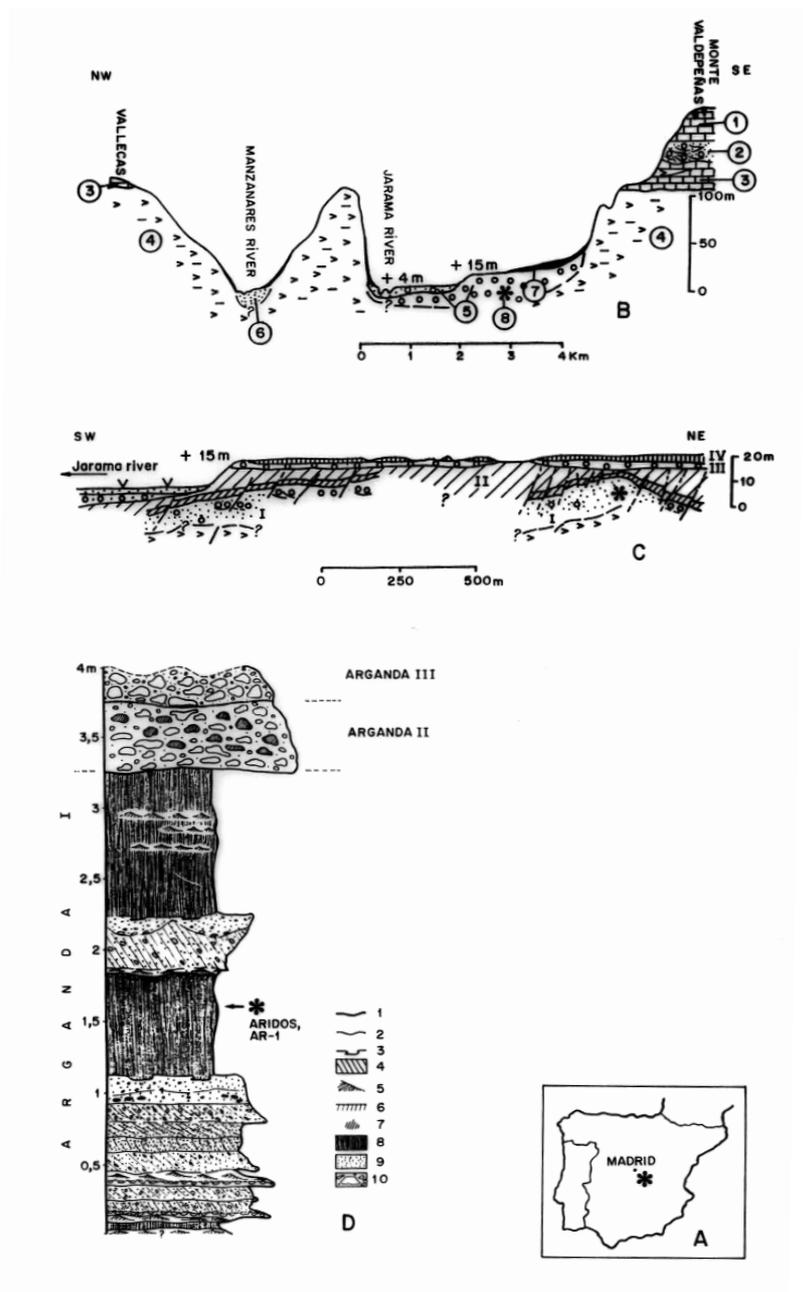


Fig.1 - Aridos site morpho-stratigraphical position in the synsedimentary sinking and inversion of the terraces of the Jarama river in Arganda. A: Aridos site SE of Madrid, central Spain. B: 1, limestones of the La Alcarria Paramo. 2, gravels and sands of intra-Miocene fluvial facies. 3 and 4, Miocene limestones, marls and gypsum. 5, sunken terraces of the Arganda alluvial plain and facies of gravels, sands and silts of the floodplain. 6, sands and clays of the sunken terraces of the river Manzanares. 7, Alluvial fans. 8, Lower Palaeolithic Aridos site. C: I, II, III and IV, relative geometry of sunken and overlapping alluvial deposits in the Aridos archaeological site. D: 1, unconformity. 2, erosive contact. 3, load structures. 4: fluvial sand dune. 5, ripples. 6, oxidation level. 7, Mn patches. 8, silt + sand + clay. 9, fine to coarse sand. 10, gravel, pebble to boulder.

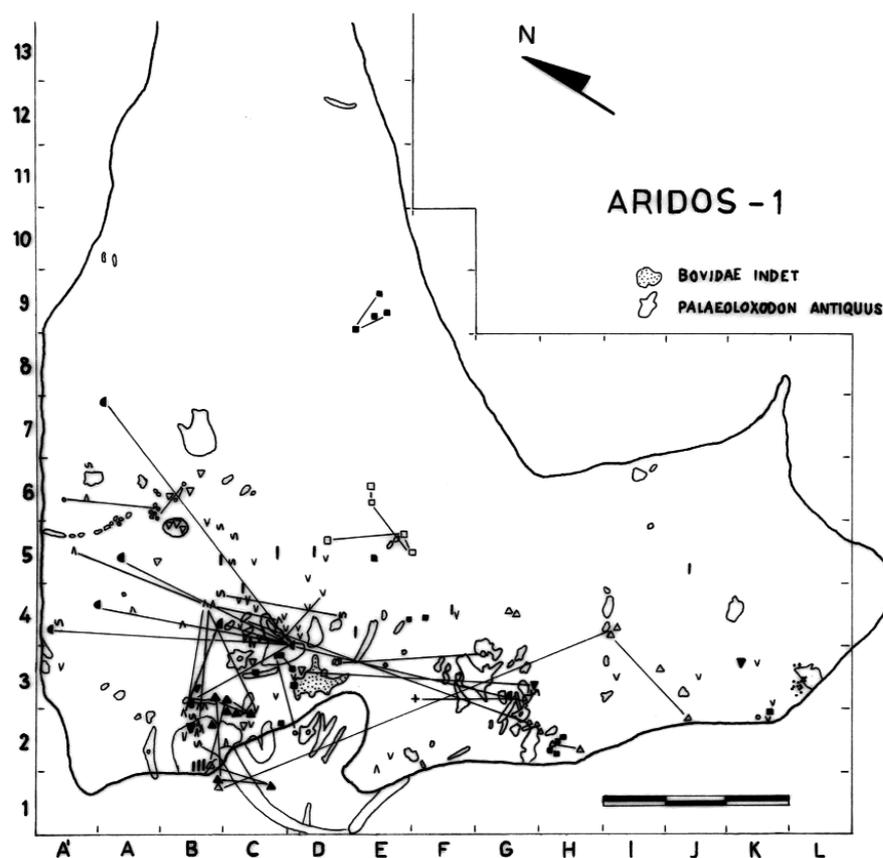


Fig.2 - Aridos 1: the excavated area.

The complex was interpreted as a typical butchering-site that has been fairly well preserved due to rapid covering by fine floodplain sediments (Santonja *et al.* 1980; Villa 1990; Santonja & Villa 1990).

3. ARIDOS-2

Aridos 2, which is close to the former site, is situated in a similar stratigraphic position within the Arganda I unit. The remains are deposited on the surface of an ancient floodplain. It is covered and partially eroded by river channel deposits of gravel and sand and is therefore not as well preserved as Aridos-1.

Before its discovery, the site was intensely affected by quarrying activities; thus, only 12 m² of the original surface were preserved.

In this second locality, the central part of the

skeleton of an adult, male elephant – *Elephas (Palaeoloxodon) antiquus* – is preserved in anatomical connexion (Fig. 3): 24 cervical, dorsal and lumbar vertebrae and the ribs of the right side (Soto 1980). Quarrying activities destroyed most of the left ribs (only three remain). Thirty four associated lithic artefacts were found, including a biface and a cleaver.

4. CONCLUSIONS

Significant differences can be seen between the two sites. In Aridos 1, the skeletal remains of an adult elephant were found spread over a relatively small area – some 50 m² – that was partially preserved. These remains were clearly associated with lithic artefacts mainly related to knapping and resharpening activities conducted at the site. The entire complex was covered by

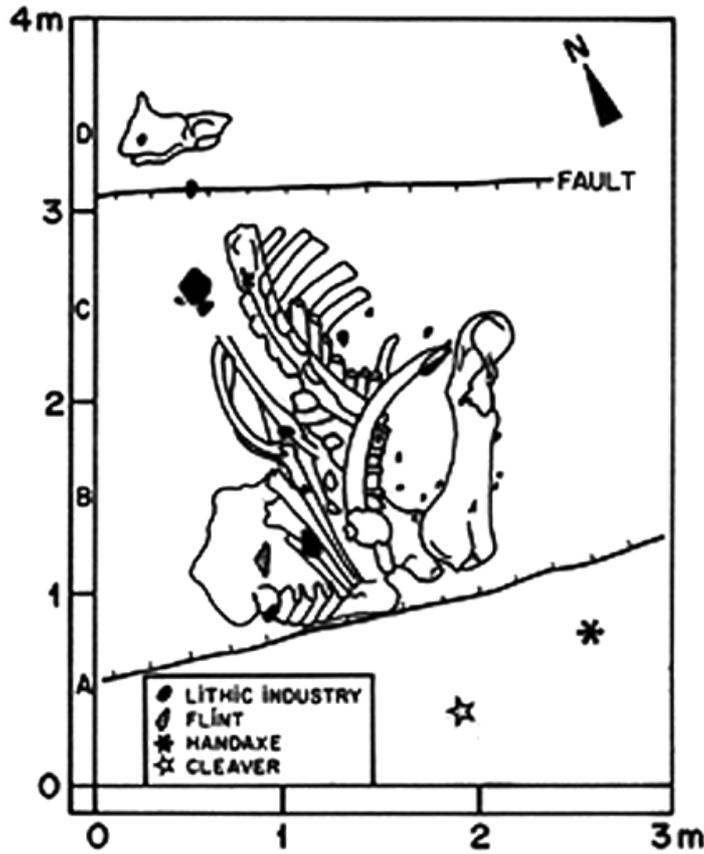


Fig.3 - Aridos 2: the excavated area.

fine sediments. It was therefore unaffected by hydraulic forces capable of displacing the remains, thus bone splinters and minute lithic debris were preserved.

The partial skeleton preserved in Aridos 2 had not been dispersed, either as a consequence of human activity or of fluvial energy. The bones remained in anatomical articulation on a consolidated surface whose oxidation indicates a certain time of exposure to the atmosphere. A river channel established later in the area may have removed some of the associated lithic artefacts. A few of these, with unabraded or only very slightly abraded edges, perhaps trapped by the bone remains, may be those identified in the excavation. Aridos 2 shows limited contextual integrity compared to Aridos 1, and although the exposed area is much smaller, it is obvious that human activities did

not lead to a systematic dispersion of remains as it occurred at Aridos 1.

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