Archaeological charcoal: natural or human impact on the vegetation

Protohistoric Anthracology in the middle valley of the rivers Guadiana and Tajo (Extremadura, Spain)*

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Summary: We report here anthracological data obtained from proto-historic archaeological sites in the middle valleys of the Guadiana and Tajo over the past two decades, articulated in two laboratory areas: Vegas Altas-La Serena in the Guadiana and Penillanura Cacereña in the Tajo.

Key words: Anthracology, palaeoecology, palaeoenvironment, timber, Final Bronze, Early Iron Age, Second Iron Age, Romanization.

INTRODUCTION

One of the shortcomings and differences accused of archaeological research in the area SW of the Iberian Peninsula has to do with the scarcity of archaeobotanical studies, including anthracological studies.

Since the 90's of last century, thanks to a lever of the move by our university by Dr. Gil-Mascarell, began to integrate the archaeological research projects of the Department of Prehistory at the University of Extremadura this type of issues (Rodríguez, 1998 and 2004), first establishing a framework for collaboration with researchers from the University of Valencia (Grau et al., 1998) and later with the training of researchers for doctoral theses (Hernández, 1999; Duque, 2004a).

The result of all this, we bounded geographical frameworks within this vast territory with anthracological sequences spanning the I millennium BC. One of them is in the regions of Vegas Altas-La Serena in the south of Extremadura, in the middle valley of the Guadiana with archaeological studies of sites such as Magacela (Badajoz) - VIII century BC, II-I centuries BC and I century AD-, Manzanillo (Villar de Rena, Badajoz) - VII-VI centuries BC-, La Mata (Campanario, Badajoz) -VI-V centuries BC- and Entrerríos (Villanueva de la Serena, Badajoz) - IV-III centuries BC- (Duque, 2004a and in press; Duque and Pérez, 2009). In the northern region of Extremadura, associated with the valley of the Tagus, the Penillanura Cacereña, we are implementing an action plan that, in the immediate future, we will obtain an anthropological sequence comparable to that of the Guadiana from the results already obtained in the Sierra del Aljibe (Aliseda, Cáceres) (Grau et al., 1998; Grau, 1999; Duque, 2004) -VIII-V centuries BC and II-I BC-, the ongoing work of La Ayuela (Aldea del Cano, Cáceres) -VII-V centuries BC-, and the possible archaeological interventions in the pre-Roman settlement of Sansueña (Aliseda, Cáceres) -IV-III centuries BC-.

DATA AND RESULTS

The anthropological study all of these sites have been based on microscopic analysis of light reflected from 24,482 pieces of coal which have obtained a taxonomic list of 37 determinations sites scattered as shown in Figures 1 and 2.

DISCUSSION

The anthracological data obtained so far for the moment let us point out in summary form a range of issues such as greater diversity and complexity that shows the structure of the vegetation when compared with the series of current vegetation of these areas: oak acidophilic and basophilic in the Vegas Altas-La Serena and holm oak and cork for the Penillanura Cacereña. On the contrary, these are recurrent in all the analytical elements are present that show trees and shrubs or a greater diversity of vegetation series in the past or greater complexity of these (Figures 1 and 2).

On the other hand, the presence of conifer Mediterranean type is evident in most of the analytical although residual values. Matter that makes us once again propose the presence of the same naturally in the vegetation of these areas. A circumstance which also can be seen clearly in the use of these species is to build at different times of the early history (Duque, 2004b and in press).

Another interesting comment is about the dynamic that show anthracological diagrams which in general is a greater impact on the environment as we approach the final centuries of the I millennium BC. Circumstance that we can correlate with the agricultural economy of these spaces in addition to the livestock and the cultivation of cereals and pulses, we observe the development of arboriculture at least from the V century BC.


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