INTRODUCTION

Wood has been used since time immemorial, undoubtedly since the origins of humanity to the present. Wood has been preferred, being versatile and renewable, as well as abundant over most of the earth’s surface. However the evidence for this use is sparse, due to the fragile and perishable nature of the material. Nevertheless, thanks to careful excavation, such remains are often retrieved in the form of preserved wood and charcoal. Once submitted to rigorous scientific analyses, they provide evidence for the diversity of vegetation over time and space as well as for the variable human behavior towards the environment and the diversified management of natural plant resources.

Woody plants are an important source of raw materials for a range of different purposes. Some of these are fundamental to everyday life, such as firewood for heat and light, cooking or socializing around the hearth. In the warmth of the fireplace, people work, exchange information, ideas and beliefs, and in so doing create culture. The remains of these common everyday activities, wood and charcoal recovered during excavation, are the subject of this volume. Past and present come together in the development of scientific methods through which we can interpret such organic remains, ultimately contributing to significant advances in wood and charcoal analysis. Various scientific domains draw from the increasing pool of data, hence the broad thematic framework of this volume, including amongst others, studies of wood anatomy, ethnography and taphonomy/preservation of plant remains.

Botanical identification of wood and charcoal combined with statistical analysis of the data, constitute a remarkable tool for the reconnaissance of past vegetation on a local scale and its relationship with global climate change. Moreover, since the studied materials originate from human activities, they are the product of cultural behavior and therefore provide us with key ethnographic information. Wood and charcoal are part of our biological and cultural heritage and it is through their study that we have the opportunity to document the diversity of this heritage through time and space.

Wood and charcoal from archaeological contexts has the potential to provide a range of information about ecology, ethnographic, taxonomic, chronological, etc. Some of the methods used to obtain this information are destructive, for example radiocarbon dating. Since the 1960s, archaeology and palaeoecology have used this method to date chrono-cultural sequences, climate change, or the appearance or disappearance of plants, amongst others. Wood and charcoal analysis follows a standard process in which no chemicals are used and therefore once the identification has been completed, the samples can be used for radiocarbon dating, during which they will be destroyed. By carrying out wood and charcoal analysis prior to dating, valuable data is secured. The analyses should be coordinated in such a way that none of the information is lost. This requires close collaboration between specialists who work with archaeobotanical materials and is one of the challenges for wood and charcoal analysis at present.

Wood and charcoal analysis focusing on a range of different issues has been consolidated and improved during the last 50 years. The scale of these advances was highlighted by the organization of the 5th International Meeting of Charcoal Analysis, in September of 2011 in Valencia (Spain). Ninety-four oral and poster presentations were made by participants from over thirty countries and five continents (see http://ojs.uv.es/index.php/saguntumextra/issue/view/108), demonstrating the enormous international interest that the discipline generates within
the scientific community. The idea for the present volume was the natural outcome of such a productive meeting.

This volume includes contributions by researchers from the humanities and sciences, with papers that highlight the diversity of data recorded through wood and charcoal analysis. Regional studies which span the Paleolithic to Middle Ages are included. These provide local scale evidence for the effects of global climate change, as well as the interaction between humans and the environment, and the intensification of production and its effects on the landscape. Each paper is a window to these past landscapes and their relationship with the humans who settled and managed them.

The first part of this volume includes papers presenting wood and charcoal analyses from archaeological contexts. These are ordered chronologically from the oldest to most recent. The studies are also organized within broad geographic areas. The second part of the book includes methodological contributions. It is thanks to the development of these that the discipline has progressed and reached its present position as a key source of palaeoecological and paleo-technographic information.

The publication of this volume would not have been accomplished without the enthusiastic collaboration of our colleagues and the support of various institutions. We express our gratitude to all of them for their great effort. We are particularly indebted to the Department of Prehistory and Archaeology of the University of Valencia and the Spanish Ministry of Science and Innovation for generous funding provided by the HAR2011-12827-E project.