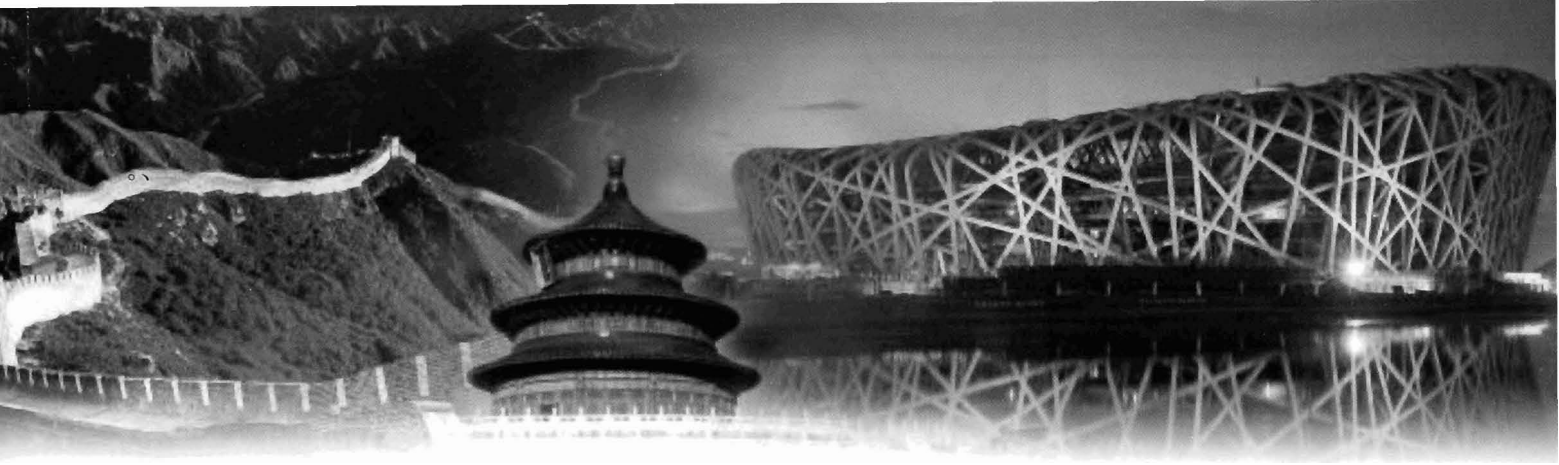


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PROGRAM & ABSTRACT

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DIVERSITY OF HYMENOPTERAN FAMILIES IN THE EARLY CRETACEOUS AMBER FROM SPAIN

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During the last 15 years, three highly productive Spanish amber outcrops have been discovered and excavated in three areas: Álava-Burgos boundary, Teruel Province and Cantabria, all of them dating from the Early Cretaceous (Early-Middle Albian). One of the most abundant groups of organisms in these ambers is the order Hymenoptera, as in many other amber outcrops. Currently, all hymenopteran groups identified have been studied and already published or in process of publication and the indeterminate Hymenoptera loaned by museums has been identified. Techniques used for their study vary from common compound scope observation and line drawing interpretation thanks to camera lucida drawings, to the use of advanced techniques such as Synchrotron imaging for the observation of minute details. Finally, the assemblage of hymenopteran families recorded in Spanish amber are Anaxyelidae (the only symphytan), Bethylidae, Braconidae, Chrysididae, Cynipidae, Evaniidae, Falsiformicidae, Gallorommatidae, Megalyridae, Mymaridae, Mymarommatidae, Platygastridae, Serphitidae, Sphecidae, Stigmaphronidae and Trigonalidae (or possibly Maimetshidae, sensu APR and VP), plus new mymarommatoid and ceraphronoid families. Although the descriptive work is done and paleoecological, paleogeographical and in some cases phylogenetic information has been supplied, we still have different questions of diverse nature to solve. Some of the most interesting observations are that Late Albian French amber is very similar in age, geographical position and family-level composition (as actually the generic composition is surprisingly different in most of the arthropod orders) but with two bizarre differences: Spanish amber reveals no ants (Formicidae) while French amber does. In contrast, the commonly present Cretaceous family Stigmaphronidae is the second most abundant group in Spanish amber while there is no confirmed record in French amber. So, why we have these important differences in the assemblages? Does it have a paleogeographic explanation (keep in mind that in Early-Middle Albian Iberian Peninsula was isolated from the continent but the Pyrenees were still not developed)? Or does it have a taphonomic explanation (although other groups are very similarly represented)? These are some of the questions to be solved in future studies. This is a contribution of the project CGL2008-00550/BTE of the Spanish Ministry of Science and Innovation.