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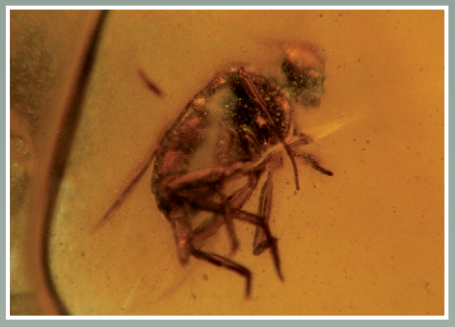

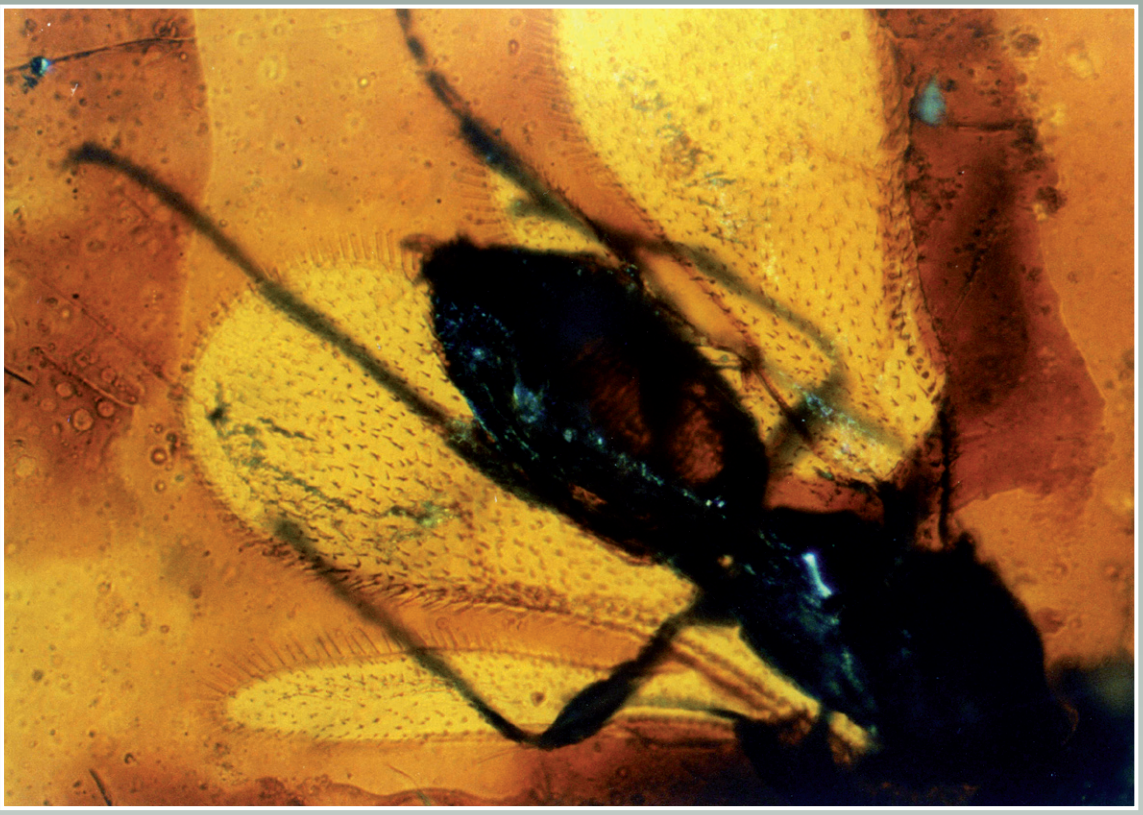

SPANISH GEOLOGICAL FRAMEWORKS AND GEOSITES

An approach to Spanish geological heritage of international relevance

MINISTERIO
DE CIENCIA
E INNOVACIÓN

Instituto Geológico
y Minero de España

SPANISH GEOLOGICAL FRAMEWORKS AND GEOSITES

An approach to Spanish geological heritage of international relevance

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From top to bottom and left to right, dipterid of the Psychodidae family (amber from Peñacerrada II, Álava), fly of the genus Alavesia (amber from Caleyu, Asturias), himenopterid of the Scelionidae family (amber from Peñacerrada I, Burgos), and detail of an exceptional preservation of wasp wings of this same family (amber from Peñacerrada II, Álava).

Photos: E. Peñalver.

FOREWORD

The publication of this work culminates the development of the *Global Geosites* project in Spain. This project, promoted by the European Association for the Conservation of Geological Heritage (ProGEO) within the International Union of Geological Sciences (IUGS) and sponsored by UNESCO, aims to establish a global inventory of internationally relevant Sites of Geological Interest (the so-called *Global Geosites*) to develop subsequent geoconservation activities, and to support other programs such as UNESCO's Global Geopark Network.

In 1996, the Geological Survey of Spain (IGME) was commissioned by the Geological Society of Spain (SGE), the Spanish Society for the Defense of Geological and Mining Heritage (SEDPGyM), the Spanish Society of Environmental Geology and Urban Planning (SEGAOT) as well as by experts in geological heritage, to coordinate efforts towards the development of the *Global Geosites* Project in Spain. This assignment undoubtedly meant an acknowledgement of IGME's pioneer work in this field, originated by the efforts of Dr. Emilio Elízaga, who in the late seventies was the only voice wasting its breath in the defense of this line of research.

Certainly, research in geological heritage is one of the most recent lines of work undertaken by the Earth Science community. Nevertheless, its importance is growing and is taken as an essential measure towards the sustainable development of resources which are mostly non-renewable. The progress that research in geological heritage and geodiversity will experiment in the future is already being assumed by European geological surveys, whereas other regions are taking their first steps based on the experience of pioneer countries.

The Strategic Plan of IGME for the period 2005-2009 included a strategic line to consider *"studies oriented to define and characterize the geodiversity of the Spanish territory, to undertake inventories, studies and public outreach of its geological and historical mining heritage, and to set and develop the relationships between natural stone and the preservation of historical architectural heritage. Also included is the geoscientific study of significant natural areas, particularly those within the European Natura 2000 Network"*. This Strategic Plan also *"includes the mineralogical and paleontological research needed to keep, update and educate on the portable heritage of the Museo Geominero (museum of IGME), together with all that relates to scientific culture, and in particular to the preservation and popularization of geological-cultural resources and their significance, including historical bibliography and cartography archives"*.

This book attempts to offer a summary of the results obtained through eight years of development of the *Global Geosites* project in Spain, and is oriented to the public interested in our geological heritage. The results provide a good base to relaunch the inventory, study and public outreach activities related with our rich geological heritage. In the near future, and within what is programmed in the project, we will keep working on the definitive selection of the *Global Geosites*, first in coordination with the Portuguese working group, and later on with the rest of the European countries grouped within ProGEO.

José Pedro Calvo Sorando
Managing Director of IGME

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