



Foreword for the thematic issue of the First Workshop on Iberian Palaeobotany and Palynology

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Editorial: First workshop on Iberian Palaeobotany and Palynology

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This special volume of *Geobios* compiles key papers presented at the first workshop on Iberian Palaeobotany and Palynology, which was held at the Botanical Garden of Cordoba, on February 22, 2017. In this event, up to fifteen communications were exposed, eight dedicated to palaeobotany and seven to Devonian to Miocene palynology. Exposed works were based on the Iberian fossil record or established collaborations between international and Iberian research groups of palaeobotany and/or palynology, in order to provide a broad overview of the research focus of the different Iberian teams. The contributions to this special issue are (in chronological order) as follows.

Pereira et al. (2018) provide new palynological data from the northern sector of the Pulo do Lobo Domain. They studied a large sample compilation from different sections in Portugal and Spain which have provided valuable data about the age of studied outcrops. For instance, reported evidence suggests that the Pulo do Lobo Formation can be considered Frasnian (Upper Devonian) in age. The same age is also suggested for the Ribeira de Limas Formation, while the Santa Iria and Horta da Torre formations yielded a Famennian spore assemblage. The authors suggest a close affinity with NW European palynofloras and place the Pulo do Lobo Domain within the Avalonian palaeobiogeographical province.

Machado et al. (2018) provide a study of the Buçaco Basin (Porto-Tomar-Ferreira do Alentejo shear zone), a basin that separates Ossa-Morena and Central Iberian in central Portugal. The authors document alluvial sediments dominated by *Triquitrites* spp., *Densosporites* spp., *Laevigatosporites* spp., among others. Interestingly, results show also an abundant diversity of a peatland microflora including sporomorphs, e.g., such as *Endosporites* spp. and *Lycospora* spp. The evidence suggests that the sampled levels correspond to the late Stephanian (Pennsylvanian), which represents an important data for the Iberian record.

Juncal et al. (2018) reconstruct the evolution of the depositional environments of Triassic series based on new data from the Sancerre-Couy (Paris Basin, France). Juncal et al. (2018) document up to four different palynological assemblages, including the three classical palynofloras of this area, which are in-depth described. However, most importantly, new data provided herein allow reassessing the previously assigned ages of sampled horizons from Ladinian to Rhaetian, which substantially increases our knowledge about these late Triassic outcrops.

Correia et al. (2018) report a comprehensive study of the Early Jurassic stratigraphical palynology of the Lusitanian Basin (western Portugal). This study is mainly focused on dinoflagellate cysts. The material comes from the Sinemurian-Toarcian time interval. Among the described diversity, there is evidence of, e.g., *Luehndea spinosa*, *Mendicodinium microscabratum*, or *Scriniocassis priscus*. The authors conclude that phytoplankton recovery after the Toarcian-Oceanic Anoxic Event was prolonged in the Lusitanian Basin.

Santos et al. (2018) report on the South Xiangshan Formation (Nanjing area, China). This formation belongs to the lower part of the Xiangshan Group, which has been studied for more than one century. A rich flora has been described, including ferns, Equisetales, Cycadophytes and Ginkgoales, but to date, no palynological data is known. The authors provide here evidence of more than 50 fossil species belonging to 30 genera of spores and pollen, including, e.g. *Polycingulatisporites triangularis*, *Quadraeculina anellaeformis* or *Callialasporites turbatus*. Based on this, a late Early Jurassic is suggested for this formation, which is consistent with previous data.

Blanco-Moreno et al. (2018) provide new insights into the Lower Cretaceous fern *Weichselia* based on a comprehensive morphometric analysis of Iberian and worldwide material, as well as from the whole literature on the genus. This study provides key inference from the Aptian environments and suggests a link between *Weichselia* frond morphology and climate conditions.

Rodríguez-Barreiro et al. (2018) document a new palynological assemblage from the Lower Cretaceous Peñaferruz Formation (Asturias, NW Iberian Peninsula). The palynoflora includes, e.g., *Trilobosporites hannonicus*, *Cicatricosisporites venustus* or *Ephedripites dudarensis*. On this basis, the authors indicate an age no older than the Aptian for sampled levels, which changes the known sequential relationships between regional formations and furthermore suggests a lateral change of facies into this study area.

Finally, Sender (2018) reports the first report of *Cycadeoidea marylandica* (Bennettitales) from the Cretaceous of Eurasia is presented. Evidence comes from the Albian deposits of

Utrillas Formation (Teruel, Spain). It supports the hypothesis that floristic exchange occurred between North America and the islands that composed the Iberian Plate during the late Early Cretaceous. Moreover, Sender et al. (2018) provide new megafossil data on Ginkgoales from the same area, through a leaf analysis of *Sphenobaiera*. In this work, the authors propose an interesting palaeoenvironmental reconstruction of the different types of Albian Ginkgoales from Spain.

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