

Editorial¹

The 1st International Congress on Stratigraphy—STRATI 2013—took place between 1 and 7 July 2013 and was held at the Calouste Gulbenkian Foundation in Lisbon (Portugal). The event was organized by the Department of Earth Sciences and Centre for Research in Geological Science and Engineering of the Universidade NOVA de Lisboa under the aegis of the International Commission on Stratigraphy (IUGS).

The Congress was attended by 280 participants from 41 countries, with 197 oral papers and 77 posters being presented by over 800 authors. The theme “At the cutting edge of Stratigraphy” aimed to address recent advances in the field of stratigraphy, new methodologies and approaches, applications in natural-resource prospecting (including oil and gas), and geological heritage.

To show Congress participants aspects of Portuguese geology and stratigraphy, a field-trip programme was devised comprising five pre-Congress and five post-Congress field-trips.

Pre-Congress Field Trips

- SFT-01 - Origin and evolution of late Neoproterozoic–early Palaeozoic sedimentary basins associated with supercontinent cycles: a perspective from the Northern Gondwana margin (SW Iberia). In the footsteps of Francisco Gonçalves. Coordinators Martin Chichorro, Manuel Francisco Pereira, Ana Rita Solá, Jorge Medina, and Luís Lopes.
- SFT-02 - Palaeozoic sequence (Neoproterozoic to Carboniferous) of the Valongo–Arouca region (northern Portugal). Coordinator Artur Sá.
- SFT-03 - From the Variscan end to the Atlantic beginning in SW Portugal: from the structure to the lithostratigraphy. Coordinators Rui Dias, Rogério B. Rocha, and José Carlos Kullberg.
- SFT-04 - Stratigraphy, sedimentary patterns, and reservoir characteristics of Jurassic carbonate successions in the Lusitanian Basin. Coordinators Ana Cristina Azerêdo, and Luís Vítor Duarte.
- SFT-05 - The Lower Tagus Basin. The North Atlantic Cenozoic Basin. Coordinators Paulo Legoinha, Pedro Cunha, António Martins, and João Pais.

Post-Congress Field Trips

- SFT-06 - The Lower Jurassic at Peniche (Lusitanian Basin): recent advances in stratigraphy and sedimentary geology. Coordinators Luís Vítor Duarte, Emanuela Mattioli, Rogério B. Rocha, and Ricardo L. Silva.
- SFT-07 - The tectono-stratigraphic evolution of an Atlantic type-basin: an example from the Arrábida sector of the Lusitanian Basin. Coordinators José Carlos Kullberg, and Maria Carla Kullberg.
- SFT-08 - The Lourinhã Formation: the Upper Jurassic to lowermost Cretaceous of the Lusitanian Basin, Portugal – landscapes where dinosaurs walked. Coordinators Octávio Mateus, Jorge Dinis, and Pedro Cunha.
- SFT-09 - Stratigraphy and sequence correlations in the Lower Cretaceous around Lisbon. Coordinators Jacques Rey, and Paulo Caetano.

¹ Editor's Note: between the date that João Pais, the former Editor of *Ciências da Terra*, wrote this text and the publication of this issue, he unfortunately passed away in February 2016. Thus, his original editorial is published here (with minor modifications), and his obituary is also published in the electronic version of this issue.

- SFT-10 - The Atlantic–Mediterranean transition domain – The Cenozoic of the Algarve platform and the Guadalquivir Basin. Coordinators Paulo Legoinha, and José A. González-Delgado.

Given the interest in the fieldguides for the fieldtrips that took place, which give excellent accounts of particularly interesting and key aspects of Portuguese geology, it was decided to publish the guides. These guides are particularly useful to all those interested in stratigraphy and geology in general, whether senior researchers or advanced students, geologists of public or private entities (including from natural-resource prospecting companies), or those simply interested in Earth’s history. In addition, teachers and students engaging in geoscience courses can benefit from the texts, learning about general aspects of geology and geological units of different regions and ages, helping direct them to the best places for observing examples and features of the stratigraphy and geological history of the Alpine cycle in Portugal.

This is the case of the guide dedicated to “Stratigraphy, sedimentary patterns, and reservoir features of Jurassic carbonate successions of the Lusitanian Basin”. In this guide, a unique, well-exposed, onshore, mostly marine Jurassic infill of a North Atlantic Basin is examined. The succession is particularly interesting for understanding the opening of the North Atlantic Ocean and for following its evolution through time. Also, the sediments allow the source and reservoir potential to be interpreted and inferred in carbonate ramp successions, with examples from the Early, Middle, and Late Jurassic, showing the interaction of tectonics and eustasy in controlling facies, diagenesis, sedimentary patterns, and stratigraphic evolution.

The guide for “The Lower Jurassic at Peniche (Lusitanian Basin): recent advances in stratigraphy and sedimentary geology” examines the most important and continuous section of the Lower Jurassic of Portugal. This section provides a record of around 20 million years of geological history (Sinemurian to Toarcian) of the Lusitanian Basin, located on the Western Iberian Margin. As a measure of the importance of the stratigraphic record in this section, the Pliensbachian–Toarcian boundary has been classified by the IUGS as the Toarcian Global Boundary Stratotype Section and Point (GSSP).

The guide for “The tectonic and stratigraphic evolution of an Atlantic basin type: an example from the Arrábida sector of the Lusitanian Basin” provides a complete cross-section through some key outcrops that illustrate important moments in the tectonic and stratigraphic evolution of the first stages of the North Atlantic opening (Atlantic-type basin).

The guide entitled “The Upper Jurassic to lowermost Cretaceous of the Lusitanian Basin – landscapes where dinosaurs walked” provides insights into the depositional palaeoenvironments, palaeontology, and diagenesis of one of the most productive areas for Late Jurassic dinosaurs and other vertebrates in Europe, namely, the Lourinhã Formation, which is coeval with the Morrison Formation, of the Midwest USA.

The visit to “The Lower Cretaceous of the Lisbon region” highlights the organization of sequences and environments during the Early Cretaceous in the Lusitanian Basin. They are characterized by a wide variety of sedimentary deposits (siliciclastics and carbonates) and environments (from open distal platform to river systems and palaeosols), in which the tectonic events linked to the first episodes of the northward propagation of the Atlantic opening and the cyclic variations in sea level at the second and third orders are well documented.

At the end of the volume (in the online version only), five obituaries are presented in tribute to:

- António do Nascimento Joaquim (1933–2013), an expert in fossil ostracoda and, for 22 years, a researcher at the Department of Earth Sciences of the Faculty of Sciences and Technology, Universidade NOVA de Lisboa.

- Charles André Mangold (1933–2014), who passed away in Lyon (France) and who was an expert in Bathonian–Callovian stratigraphy and in the study of ammonoids as well as being an excellent field geologist. He worked in Portugal with R. Mousterde, H. Tintant, S. Elmi, C. Ruget, R. B. Rocha, and J. Thierry on Cabo Mondego Bathonian–Callovian stratigraphy and later also with R. B. Rocha in the Sagres region.
- Mike O’Hara (1933–2014), a foremost petrologist, who studied lunar rocks from the Apollo missions. He was supervisor of Manuel Bravo’s (also recently deceased) PhD at Edinburgh University, from the Department of Earth Sciences of the Faculty of Sciences and Technology, Universidade NOVA de Lisboa.
- Jacques Thierry (1941–2014), a leading expert in Callovian–Oxfordian stratigraphy and palaeontology and in Jurassic palaeobiogeography. He worked in Portugal with R. Mousterde, H. Tintant, C. Ruget, and R. B. Rocha on Cabo Mondego and Candeeiros Callovian stratigraphy.
- Manuel Bravo (1933–2015), a renowned teacher of crystallography, mineralogy, and petrology and a great friend and colleague over 23 years of activity at the Department of Earth Sciences of the Faculty of Science and Technology, Universidade NOVA de Lisboa. He was Sub-Dean of the Faculty and Vice President of the Instituto Nacional de Investigação Científica.

João Pais †