

The 7th International Palaeontological Congress



The Precambrian: the earliest chronicles of life on Earth

The Precambrian rock record is a critical repository for understanding the early emergence of microbial life on Earth. Although, for most parts of our early Earth's history, the fossil record is scarce, which hampers our understanding of the earliest microbial evolution. Despite this, unique assemblages of early microbial life have been reported from the Archaean record of Australia, South Africa, and India. During the Proterozoic times, the fossil record was comparatively abundant, with microfossil assemblages that provided a unique window into early Eukaryotes and more complex life during the Ediacaran times. This has implications for a global understanding of the redox state of the early transitional oceans, planktonic versus benthic microorganisms, Fe-rich to Fe-poor ocean conditions, oxidative stress, nutrient supply in sub-aquatic settings, etc. We invite contributions on related topics largely focusing on the Precambrian paleontological record, with emphasis on the emergence of early life, geobiological insights on early cellular microstructures, implications towards understanding oxygenation events, biogeochemical cycling, productivity, and/or the state of the ancient oceans. We welcome the state-of-the-art advancement in the field of high-resolution imaging of mega/(micro)fossils using micro-CT, Raman spectroscopy, Focused Ion Beam (FIB) cut studies together with Synchrotron analyses, nano-XRF, XANES, SIMS, nano-SIMS, Phase Propagation Contrast tomography, transmission electron microscopy (TEM), attenuated total reflectance-Fourier transform infrared spectroscopy (ATR-FTIR), and so forth.

Conveners:

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If you are interested in this symposium, please contact the convenors.