The 7th International Palaeontological Congress

Biogeography: ranging through a dynamic Earth

Understanding biogeographic development and decline is crucial for unravelling the evolution, diversification, and extinction of life throughout Earth's history. A central focus of this session is the identification of biogeographical transitions, where shifts in species distributions and bioregions unfold over time. These dynamic patterns result from a complex interplay of biotic factors (e.g., colonisation, dispersal, local extirpation) and abiotic conditions (e.g., sea level changes, climate shifts, volcanism) across various spatio-temporal scales. Recognising how spatial and temporal scales interact within and between bioregions is key to uncovering the drivers of biodiversity, as these zones reveal how ecological and evolutionary processes operate across many contexts.

However, studying transitions presents unique challenges, demanding methods and data that effectively target these areas while accounting for scale breaks and dynamic shifts. Taxic ranges and distributions are often constructed from point data, linked through co-occurrence across scales. This requires integrating local specimens into broader community, regional, and global patterns. Understanding these connections and discontinuities is vital for interpreting biodiversity dynamics. Consequently, this session will showcase innovative findings and methodologies to study biogeographic transitions, emphasising how biotic and abiotic factors interact to influence evolutionary trends.

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