19. Jahrestagung Gesellschaft für Biologische Systematik

Vienna, 11th - 14th February 2018

Abstracts

Cathrin Pfaff, Dominique Zimmermann & Jürgen Kriwet

universität wien
Faculty of Earth Sciences, Geography and Astronomy

naturhistorisches museum wien

GfBS Gesellschaft für Biologische Systematik

Talk (Keynote)

The Eocene cartilaginous fishes from the Bolca Lagerstätte, Italy: New insights into the adaptive fish radiation after the End-Cretaceous extinction

Giuseppe Marramà [1]

The Paleogene represents a critical interval in the development of the current global climatic patterns. This period was characterized by a thermal maximum at the Paleocene-Eocene boundary, extensive greenhouse conditions during the Early Eocene Climatic Optimum, a late Eocene transition from greenhouse to icehouse conditions, and a final cooling phase at the Eocene-Oligocene boundary, resulting in biotic turnovers in marine and terrestrial faunas and floras. Although the general patterns of abiotic disruptions during the Paleogene have been extensively documented and the fossil record documents profound changes in both marine and terrestrial ecosystems across the PETM, little is known about the impact of the global changes on overall biodiversity, particularly on organisms occupying the higher trophic levels in marine ecosystems. In particular, the evolutionary and diversity dynamics of cartilaginous fishes (Chondrichthyes) during the Paleogene has received little attention, mostly because their study is hindered by the nature of their fossil record, which is rich but heavily biased towards isolated teeth. Few Paleogene localities yielded fully or partially complete articulated skeletal remains of cartilaginous fishes, which are crucial in order to properly understand their evolutionary trajectories and morphological patterns during this part of the Cenozoic history. The celebrated Eocene (Ypresian) Bolca Konservat-Lagerstätte from northeastern Italy is one of the few fossiliferous sites in which fossils of sharks and rays are exquisitely preserved. In addition to isolated teeth, fossils include complete and fully articulated skeletal remains, in which delicate mineralised cartilaginous structures and soft tissues are easily preserved and recognizable. Recent revisionary studies on taxonomy and systematics of selachians and batoids from the Bolca Lagerstätte contributed to the knowledge of the outstanding paleobiodiversity of this deposit, providing new information about the biotic turnovers that involved the high trophic levels of the marine settings after the end-Cretaceous extinction, and new insights into the early Palaeogene rise of new feeding strategies in fishes associated with reefs.

[1] Department of Palaeontology, University of Vienna, Althanstraße 14, 1090 Vienna, Austria; e-mail: giuseppe.marrama@univie.ac.at.

universität wien

Fakultät für Geowissenschaften, Geographie und Astronomie

Institut für Paläontologie
Dipl.-Biol. Dr. Cathrin Pfaff
Althanstrasse 14; UZA II; Geozentrum
A-1090 Wien

Tel.: +43 (1) 4277-535 21
Mail: cathrin.pfaff@univie.ac.at

Certificate for Dr. Giuseppe Marramà

Vienna, February 2018

The Organizing Committee certifies that Dr. Giuseppe Marramà was invited as the keynote speaker (‚The Eocene cartilaginous fishes from the Bolca Lagerstätte, Italy: New insights into the adaptive fish radiation after the end-Cretaceous extinction') at the „19. Jahrestagung der Gesellschaft für Biologische Systematik – GfBS", which was held in Vienna (Austria) from the 11th to 14th February, 2018.

Cathrin Pfaff

Cathrin Pfaff on behalf of the Organizing Committee