

SSP1.3

Earth System Paleobiology: closing the geological and biological gap

Convener: Kenneth De Baets | Co-conveners: Emilia Jarochowska^{ECS}, Martin Schobben^{ECS}, Melanie Tietje^{ECS}

This is a short description of how we will handle our session chat. We have allocated at least 4 minutes of time to discuss individual contributions after a brief introduction (5 minutes). We will finish our session with an open discussion (min. 25 min) allowing for more questions for individual talks (if necessary) as well as more general remarks on topics related with our session.

We hope that all participants will be available to take questions, but upon writing some contributions are still missing. In our opinion, chat only makes sense to hold detailed discussions during chat for contributors uploading materials or at least being present during the chat. We have therefore decided to use the time of presentations without material or contributors present, to discuss other contributions at greater length and/or a more open discussion about topics related to our session. We will introduce the contributions and have prepared at least one question per contribution. We hope to have a lively discussion on the 4th of May between 8:30 and 10:15.

The is our preliminary program:

8:30 – 8:35: Introduction

8:35 – 8:40: Morphology in time and space: how does shape change with sequence stratigraphic architecture? - D1040 | [EGU2020-832](#)

Judith Sclafani, Max Christie, Marjean Cone, Brooke Roselle, Audrey Bourne, Caroline Gazzé, and Monika O'Brien

8:40 – 8:45: Downcore Decline in Skeletal Disintegration Risk in Holocene Environments - D1041 | [EGU2020-126](#)

Niklas Hohmann and Adam Tomašových

8:45 – 8:50:

Cenozoic plankton diversity dynamics and the impact of macroevolution on the marine carbon cycle - D1043 | [EGU2020-3456](#)

Johan Renaudie, David Lazarus, Sarah Trubovitz, Volkan Özen, Gabrielle Rodrigues de Faria, Gayane Asatryan, and Paula Noble

8:50 – 8:55

The impact of the Messinian Salinity Crisis on marine biota - D1044 | [EGU2020-5799](#)

Konstantina Agiadi, Niklas Hohmann, Giorgio Carnevale, Elsa Gliozzi, Constanza Faranda, Francesca Lozar, Mathias Harzhauser, George Iliopoulos, Antonio Caruso, George Kontakiotis, Marco Taviani, Alan Maria Mancini, Enrico Borghi, Ildefonso Bajo Campos, Pierre Moissette, Danae Thivaiou, Stergios Zarkogiannis, Eva Besiou, Daniel Garcia-Castellanos, and Angelo Camerlenghi

8:55 – 9:00:

Combining palaeontological and geochemical data to reconstruct environmental gradients, a case study from the Jurassic Sundance Seaway - D1046 | [EGU2020-9795](#)

Silvia Danise, Steven Holland, and Gregory Price

9:00 – 9:05:

Are modern chemosynthesis-based communities a ‘glimpse of antiquity’? The changing fate of bivalves and brachiopods at ancient methane seeps as recorded in the Middle Palaeozoic of Morocco - D1047 | [EGU2020-22640](#)

Michał Jakubowicz and Krzysztof Hryniewicz

9:05 – 9:10:

Macrobenthic community response to long-term climate change in the Adriatic Sea (Italy)

Daniele Scarponi, Michele Azzarone, Rafal Nawrot, and Michał Kowalewski - D1048 | [EGU2020-20678](#)

9:10 – 9:15:

Micropredators skulking in Silurian oceans? - D1049 | [EGU2020-650](#)

Isabella Leonhard, Bryan Shirley, Duncan Murdock, and Emilia Jarochowska

9:15 – 9:20:

High-resolution assessment of the Valgu event: conodont diversity and $\delta^{18}\text{O}$ during the early Telychian (Silurian) in the Baltic Basin - D1050 | [EGU2020-950](#)

Monica Alejandra Gomez Correa, Emilia Jarochowska, Peep Männik, Axel Munnecke, and Michael Joachimski

9:20 – 9:25:

You Are Where You Live: Using the size of conodont dental tools to shed light on environmental conditions and community complexity - D1051 | [EGU2020-1057](#)

Laura Mulvey, Bryan Shirley, Fiona Pye, Nussaibah B. Raja, and Emilia Jarochowska

9:25 – 9:30:

Current palynological pattern of steppe-tundra at the Altai highland depressions - D1054 | [EGU2020-7245](#)

Ivan Strelkov, Ekaterina Nosevich, Mikhail Amosov, and Kirill Chistyakov

9:30 – 9:35:

The impact of the Pliensbachian-Toarcian crisis on belemnite diversity and size distribution - D1055 | [EGU2020-7873](#)

Kenneth De Baets, Patrícia Rita, Luís Vítor Duarte, Pascal Neige, Laura Piñuela, José Carlos García-Ramos, and Robert Weis

9:35 – 9:40: *Optimization of SIMS-based stable isotope measurements with regression diagnostics* - D1056 | [EGU2020-7994](#)

Martin Schobben and Lubos Polerecky

9:40 – 9:45: *Pliocene-Pleistocene stratigraphic paleobiology at Altavilla Milicia (Palermo, Sicily): tectonic, climatic and eustatic forcing* - D1057 | [EGU2020-9271](#)

Stefano Dominici, Marco Benvenuti, Vittorio Garilli, Alfred Uchman, Francesco Pollina, and Arpad David

9:45 – 9:50: Primary productivity, deoxygenation, and the Gulliver-absence effect determine bivalve body size following the end-Permian mass extinction - D1058 | [EGU2020-10213](#)

Melanie Tietje, **William J. Foster**, Jana Gliwa, Clara Lembke, Autumn Pugh, Richard Hofmann, Sara Varela, Louise C. Foster, Dieter Korn, and Martin Aberhan

9:50 – 9:55: Extreme reefs: Analyses of modern bryostromatolite ("bryolith") reefs from marginal environments in the Netherlands with comparisons to ancient analogues - D1060 | [EGU2020-22617](#)

George William Harrison, Lene Claußen, Christian Schulbert, and Axel Munnecke

9:55 – 10:00: Modeling the transition of death assemblages from surface to subsurface: predicting the effects of burial, mixing, and disintegration on time averaging - D1045 | [EGU2020-7099](#)

Adam Tomašových, Susan M. Kidwell, and Ran Dai

10:00 – 10:15: Open Discussion

Contributions without materials or contributor present (22h; 3.5.2020):

Reconstruction of the trophic levels of a fossil fish community from the Late Jurassic Solnhofen Archipelago - D1042 | [EGU2020-1049](#)

Danijela Dimitrijevic, Martin Ebert, Martina Kölbl-Ebert, and Axel Munnecke

Determinants of Mollusk Abundance in Quaternary cores of Po Basin, Italy - D1052 | [EGU2020-21707](#)

Michał Kowalewski, Rafał Nawrot, Daniele Scarponi, and Michele Azzarone

Microbial regeneration and respiration of Fe(III) outcompetes sulphate respiration in ferruginous, high-sulphate oligotrophic ecosystems - D1053 | [EGU2020-9349](#)

Ingrid Steenbergen, Roman Špánek, Dagmara Sirova, Jakub Borovec, and Daniel Petrash

Bryozoan-rich stromatolites ("bryoliths") from the Silurian of Gotland and their relation to climate-related perturbations of the carbon cycle - D1059 | [EGU2020-22300](#)

Anna Lene Claussen, Axel Munnecke, and Andrej Ernst