

Life and Planet 2025

Burlington House, London
July 2025

Day 1 - Monday, July 14th

9:30 – 9:50 Arrivals and discussion (catered)
9:50 – 10:00 Introductory remarks

Session 1

10:00 – 10:15* **Highlight Talk: Modelling plant evolutionary strategies and its impact on the Phanerozoic biosphere**
Khushboo Gurung, Benjamin Mills, Alexander Hetherington

10:15 – 10:30 **SMITE - Biosphere recovery after the K-Pg impact**
William Amir, Benjamin Mills, Khushboo Gurung, Stephen Hunter

10:30 – 10:45 **Data-Driven Exploration of Phanerozoic Paleogeography and Paleoclimate Reconstructions**
Dongyu Zheng, Ying Cui, Alexander Krause, Benjamin Mills

10:45 – 11:00 **End-Palaeozoic Perturbation: A Poetic Reimagining**
Kate Simpson

11:00 – 11:30 **Break (not catered)**

Session 2

11:30 – 11:45* **Highlight Talk: Earth's Descent into 'Snowball Earth': Fire and Ice revisited**
Elias J. Rugen, Fred Bowyer, Benjamin Mills, Lin Yuan, Isaac Onyett, Xi Chen, Andrew Merdith, Ian Fairchild, Anthony Spence, Ying Zhou, Tom Gernon, Thea Hinks, Guillaume Le Hir, Graham Shields

11:45 – 12:00 **Dynamic Carbon-Sulfur Cycling and Weathering Feedbacks in the Early Cambrian Ocean: Insights from Potassium Isotopes**
Liu Willow Yang, Jin Wang, Weiqiang Li, Tao Yang, Hong-Fei Ling

12:00 – 12:15 **Progress in Cambrian chronostratigraphy and global correlation**
Fred Bowyer, Marissa Betts, James Holmes, Timothy Topper

12:15 – 12:30 **Driving mechanisms for the oxygenation of Proterozoic surface environments**
Darwinaji Subarkah, Alan Collins, Morgan Blades, Ruoheng Li, Cris Cruz, Juraj Farkas

12:30 – 14:00 **Lunch Break (not catered)**

Session 3

14:00 – 14:15* **Highlight Talk: Deep time evolution of the Latitudinal Diversity Gradient: insights from mechanistic models**
Manon Lorcery, Laurent Husson, Tristan Salles, Sébastien Laverne, Oskar Hagen, Alexander Skeels

14:15 – 14:30 **Threshold Dynamics in Mass Extinction Events**
Ivan Sudakow

14:30 – 14:45 **Fitness landscape roughness promotes morphological disparity**
Charles Bates, Russell Garwood, Luke Parry, Thomas Smith, Frances Dunn

14:45 – 15:00 **Tectonic regime shapes microbial biosynthetic potential across global geothermal systems**
Ana Clara Pellicciari Silva, Donato Giovannelli

15:00 – 15:30 **Earth System Science Group Annual Business Meeting**

15:30 – 18:00 **Poster Session**
(catered)

Presenters by posters 16:30-17:30
Alcoholic drinks available from 17:00

15:30-16:30

'Things I wish I had known' Workshop
Discussion session focusing on some of the practical lessons, challenges, and unspoken realities of navigating a career in Earth system science research

Life and Planet meeting code of conduct

All attendees are expected to behave in a professional manner and to treat each other with respect. The Conference organizers reserve the right to remove any attendee who violates this code of conduct without a refund. If you believe another attendee is in violation of the code of conduct, please contact the organizing committee at info@lifeandplanet.com.

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* Highlight talks selected by the organizing committee



Day 2 - Tuesday, July 15th

9:30 – 10:00 **Arrivals and discussion (catered)**

Session 4

10:00 – 10:15* **Highlight Talk: Biophysical Climate Feedback of Vegetation Since the Late Cretaceous**
Tianyi Chu, Daniel Lunt

10:15 – 10:30 **Nitrogen cycle response in western Tethys during the Toarcian Oceanic Anoxic Event**
Ruize Liang, Tianchen He, Robert Newton, Man Li, Jiangsi Liu, Yinggang Zhang

10:30 – 10:45* **Highlight Talk: Contrasting vegetation and climate regulation at the Permian-Triassic and Triassic-Jurassic hyperthermals**
Zhen Xu, Khushboo Gurung, Alexander Farnsworth, Paul Wignall, Jason Hilton, Andrew Merdith, Stephen Hunter, Alexander Krause, Yuxuan Wang, Jianxin Yu, Benjamin Mills

10:45 – 11:00 **Slimehead size through time: testing the temperature-size relationship in Late Cretaceous Trachichthyidae**
Chloe Griffiths, James Witts, Julie Brown, Emma Bernard, Richard Twitchett

11:00 – 11:30 **Break (not catered)**

Session 5

11:30 – 11:45* **Highlight Talk: 3D ocean modelling resolves spatiotemporal variability in Neogene organic carbon burial**
Aspen Sartin, Richard Stockey, Pam Vervoort, Eelco Rohling, Thomas Gernon

11:45 – 12:00 **Constraining the timing and quantity of volcanism over the Paleocene-Eocene Thermal Maximum**
Sev Kender, Erica Mariani, Michael Pribil, Kara Bogus, Gunver K. Pedersen, Karen Dybkjær, Melanie J. Leng, James B. Riding, Stephen Hesselbo, Andy Ridgwell

12:00 – 12:15 **Using Cadmium Isotopes To Quantify Marine Organic Carbon Burial during the PETM**
Ross Whiteford, Hannah Corinne Elms, Alexander J. Dickson, James Brakeley, Sev Kender, Ying Cui

12:15 – 12:30 **Rapid release of methane hydrates in the continental margin triggers the Paleocene-Eocene thermal maximum**
Guolin Xiong, Feifei Zhang, Yibo Lin, Esteban Fernández, Hua Zhang, Wenqian Wang, Hai Cheng, Gary Shaffer, Shu-zhong Shen

12:30 – 14:00 **Lunch Break (not catered)**

Session 6

14:00 – 14:15* **Highlight Talk: Climatic controls on coral reef biodiversity hotspots through the Phanerozoic**
Alison Cribb

14:15 – 14:30 **Investigating the influence of the supercontinent cycle on planetary habitability**
Hannah Woodward, Hannah Davies, Michael Way

14:30 – 14:45 **Devonian and modern reefs - new views on their ecological affinity**
Aleksander Majchrzyk, Mikołaj K. Zapalski

14:45 – 15:00 **A climatic framework for Ediacaran animal evolution**
Thomas Wong Hearing, Thomas M. Vandyk, Benjamin H. Tindal, Lin Na, Thomas H. P. Harvey, Alexandre Pohl, Alex G. Liu, Mark Williams

15:00 – 18:00 **Poster Session**
(catered)

Presenters by posters 16:30-17:30
Alcoholic drinks available from 17:00

15:30-16:30

'Publishing in Earth system science'
discussion

Discussion session with journal editors

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* Highlight talks selected by the organizing committee



Day 3 - Wednesday, July 16th

9:30 – 10:00 Arrivals and discussion (catered)

Session 7

- 10:00 – 10:15* **Highlight Talk: Symbiotic fossils from the early Ediacaran Weng'an biota in South China and their implications for early lichenization**
Hanzhi Qu, Qing Ouyang, Tian Gan, Shuhai Xiao, Xunlai Yuan, Ke Pang
- 10:15 – 10:30 **The biomarker for animals in the ancient sedimentary record**
Ilya Bobrovski, Jochen J. Brocks
- 10:30 – 10:45 **Reconstructing paleoenvironments of the Ediacara Biota in South Australia**
Karol Faehnrich, García-Bellido D.C., Droser M.L., Gaines R.R., Gehling J.G.
- 10:45 – 11:00 **Revisiting the oxidant budget of the Shuram/DOUNCE event using global carbon isotope records**
Yinggang Zhang, Benjamin Mills, Maoyan Zhu
- 11:00 – 11:30 **Break (not catered)**

Session 8

- 11:30 – 11:45 **Searching for traces of Archean life in the 3.22 Ga Moodies Group, Barberton Greenstone Belt, South Africa and Eswatini**
B. R. Johnson, Lara, Y.J., Lambion, A., Javaux, E. J.,
- 11:45 – 12:00 **Endolithic Microboring as a Micritizing Force and Early Diagenetic Step in Microbialites**
Victoria C. Cassady, Mengshi Liu, Ariel McCormack, Kelsey Perez, Victoria A. Petryshyn, David A. Bottjer, Frank A. Corsetti
- 12:00 – 12:15 **Microfossil diversity in the ca. 1 Ga Torridon Group: New insights into early non-marine eukaryotes**
Edwin Rodriguez, Corentin Loron, Heda Agić, Sherri Donaldson, Pamela Knoll, Sean McMahon
- 12:15 – 12:30 **Insights into potential biosignatures associated with endolith gypsum habitats in the high Arctic.**
Sonia Papadaki, Anne D. Jungblut, Ozge Eyice, Dominic Papineau, James Bradley
- 12:30 – 14:00 **Lunch Break (not catered)**

Session 9

- 14:00 – 14:15* **Highlight Talk: Investigating the long-term impact of nutrient supply on global oceanic primary production.**
David Stappard, Jamie Wilson, Andrew Yool, Toby Tyrrell
- 14:15 – 14:30 **Sedimentary zinc in the Palaeoproterozoic: implications for the chemical conditions of early eukaryote habitats**
Maxwell Lechte, Malcolm Wallace, Ashleigh Hood, Christopher Reed, Nicola Cawood, Andrea Reed
- 14:30 – 14:45 **Episodic intensification of marine phosphorus burial over the last 80 million years**
Jinzhong Peng, Dengfeng Li, Simon W. Poulton, David Chew, Timothy D. Herbert, Pete Hollings, Xiaoming Sun
- 14:45 – 15:00 **Nutrient and Weathering controls on Oceanic Anoxic Event 2**
Chiara Krewer, S. W. Poulton, S. Hunter, R. J. Newton, B. J. W. Mills
- 15:00 – 15:30 **Big Questions discussion: themes voted for on registration form**
- 15:30 – 17:00 **Departures and discussion**
(not catered)

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