

# Integrating stratigraphy, sedimentology, paleoclimate and human evolution in- and out of Africa?

Convener: Verena Foerster | Co-conveners: Annett Junginger, Inka Meyer,  
Janina Bösken, Christian Zeeden

# Displays

SSP1.9

**Integrating stratigraphy, sedimentology, paleoclimate and human evolution in- and out of Africa?**

Co-organized by GM10

Convener: Verena E. Foerster ECS  | Co-conveners: Annett Junginger , Inka Meyer ECS , Janina Bösken , Christian Zeeden ECS 

► **Displays**  | Chat Fri, 08 May, 08:30–12:30

## Some practical information:

During the two time slots of our chat, on **Fri 8 May, 08:30–10:15 (Block I) and 10:45–12:30 (Block II)**, all of the -so far- 10 **abstracts with uploaded display material will be open for discussion**. The conveners will moderate the chat discussion. We will discuss the abstracts in the order in which they appear in the program and within the allocated time slot of the Block. After we call an abstract, we will ask the author to provide the chat room with a 1-2 line summary of their work (best to copy-paste a pre-written sentence). Then we can proceed to Q&A. We kindly ask all chat room participants to keep the chat on subject, and not to disrupt the Q&A.

Kindly try to upload your display no later than Thursday evening, to avoid technical difficulties during the session, and we will also make time to discuss your contribution too. Don't hesitate to share your science!

# Chat time: Friday, 8 May 2020, 08:30–10:15

Chairperson: Verena Foerster, Christian Zeeden

D796 | EGU2020-20138 ★

## [The Dynamic History of the Saharan Desert revealed by 11 Million Years of Exported Dust](#) ▶

Anya Crocker, B. David Naafs, Thomas Westerhold, Rachael James, Matthew Cooper, Ursula Röhl, Richard Pancost, Colin Osborne, David Beerling, and Paul Wilson

D797 | EGU2020-10826 ★

## [An ocean view of African climate change during the last 620,000 years](#) ▶ not presented

Stefanie Kaboth-Bahr, Asfawossen Asrat, Andrew S. Cohen, Walter Düsing, Verena Foerster-Indenhuck, Henry Lamb, Mark A. Maslin, Frank Schäbitz, and Martin H. Trauth

D798 | EGU2020-19743 ★ 

## [Palaeoenvironmental expression of humid phases in the western Nefud Desert over the past c. 500,000 years](#) ▶

Richard Clark-Wilson, Simon Armitage, and Ian Candy

D799 | EGU2020-7679 ★

## [A 260 000-year reconstruction of diatom community dynamics and photosynthetic pigments in Lake Chala, a tropical crater lake](#) ▶

Heidi Tanttu, Christine Cocquyt, Dirk Verschuren, and Elie Verleyen

D800 | EGU2020-11005 ★

## [Tectonic and geochemical controls on soil edaphic variability in the southern Kenya Rift, implications for early hominin land use](#) ▶

Simon Kübler, Stephen Mathai Rucina, Maurice Obunga, Eileen Eckmeier, Donjá Aßbichler, and Geoffrey Charles Plume King

D801 | EGU2020-4855 ★ 

## [Understanding modern kinetic isotope effect in Anjohibe cave, in Northwestern Madagascar: a key to calibrate speleothem \$\delta^{18}\text{O}\$ and \$\delta^{13}\text{C}\$](#) ▶

Ny Riavo G. Voarintsoa, Antsa Lal'Aina J. Ratovonanahary, Zafitafika Miandrisoa Rakotovao, and Steven Bouillon

D802 | EGU2020-1504 ★ | solicited | **Highlight**

## [Continental scientific drilling: A game changer for understanding ecosystem evolution in Africa](#) ▶

Andrew S. Cohen

# Chat time: Friday, 8 May 2020, 08:30–10:15

D803 | EGU2020-1724 ★ | **Highlight** 

## [Simulating Neanderthal extinction: the role of abrupt climate change, resource competition and interbreeding](#) ▶

Axel Timmermann

D804 | EGU2020-5588 ★

## [Palaeoenvironment of the earliest hominins in western Europe: the Guadix-Baza Basin](#) ▶

Hervé Bocherens, Hugues-Alexandre Blain, Mikael Fortelius, Juha Saarinen, Christian Sanchez Bandera, José Antonio García-Solano, Deborah Barsky, Carmen Luzón, and Juan Manuel Jiménez Arenas

D805 | EGU2020-10806 ★

## [Climate change and human lakeside adaptation in the Central Afar Region \(Lake Abhe basin, Ethiopia & Djibouti\) during the Later Stone Age - Neolithic transition: a multi-scalar and multi-proxy approach](#) ▶

Carlo Mologni, Lamya Khalidi, Marie Revel, Laurent Bruxelles, Jessie Cauliez, Fabien Arnaud, Emmanuel Malet, Eric Chaumillon, Thibault Colombier, Gourguen Davtian, Laure Schenini, Clément Ménard, and Isabelle Crevecoeur

D806 | EGU2020-7055 ★

## [Simulating multiple wave human dispersals out of Africa](#) ▶

Jiaoyang Ruan and Axel Timmermann

D807 | EGU2020-7304 ★ 

## [Revisiting Lake Garba Guracha, high altitude lake in the Bale Mountains, Ethiopia: reconstructing Late Glacial – Holocene lake level history using δ<sub>2</sub>H/δ<sub>18</sub>O biomarker analyses](#) ▶

Lucas Bittner, Marcel Bliedtner, Dai Grady, Graciela Gil-Romera, Catherine Martin-Jones, Bruk Lemma, Henry F. Lamb, Cindy De Jonge, Hanno Meyer, Bruno Glaser, and Michael Zech

D808 | EGU2020-5600 ★

## [Plio-Quaternary palaeoenvironments in West Turkana \(East African Rift System; Kenya\): palaeolake fluctuations, palaeolandscapes and controlling factors](#) ▶

Alexis Nutz, Mathieu Schuster, Doris Barboni, Ghislain Gassier, Jean-François Ghienne, and Jean-Loup Rubino

D809 | EGU2020-8481 ★ | solicited

## [Southern African hydroclimate during the Late Quaternary: integrating source to sink and multi-archive studies](#) ▶

Annette Hahn, Hayley Cawthra, Green Andrew, Humphries Marc, Schefuß Enno, and Zabel Matthias

# Chat time: Friday, 8 May 2020, 08:30–10:15

D810 | EGU2020-9748 ★

[One Million Years of Human-Landscape Interaction in the Ethiopian and Kenyan Rift-System](#) ▶

Annett Junginger and Simon Kuebler

D811 | EGU2020-22010 ★ 

[The characteristics and drivers of climatological precipitation over the Serengeti-Mara region](#) ▶

Josephine Mahony, Ellen Dyer, and Richard Washington

D812 | EGU2020-11488 ★

[Human responses to hydroclimate fluctuations over the last 200 kyr in Ethiopia](#) ▶

Frank Schäbitz, Verena Foerster, Asfawossen Asrat, Andrew S. Cohen, Melissa S. Chapot, Jonathan R. Dean, Alan Deino, Daniel M. Deocampo, Walter Duesing, Christina Günter, Annett Junginger, Stefanie Kaboth-Bahr, Henry F. Lamb, Christine Lane, Melanie J. Leng, Stefan Opitz, Rachel Lupien, Helen M. Roberts, Christopher Bronk Ramsey, and James Russell and the HSPDP and CRC806 Science team

D813 | EGU2020-5233 ★ 

[Advanced hyperspectral analysis of sediment core samples from the Chew Bahir Basin, Ethiopian Rift in the spectral range from 0.25 to 17 µm: support for climate proxy information](#) ▶

Gabriele Arnold, Claudia Szczech, Asfawossen Asrat, Andrew S. Cohen, Verena Foerster, Frank Schäbitz, Henry Lamb, and Martin H. Trauth

D814 | EGU2020-18292 ★

[Assessing the role of climate change in human evolution and dispersal: a 600,000-year record from Chew Bahir, southern Ethiopia](#) ▶

Verena E. Foerster, Asfawossen Asrat, Andrew S. Cohen, Melissa S. Chapot, Alan Deino, Daniel M. Deocampo, Walter Duesing, Christina Guenter, Annett Junginger, Stefanie Kaboth-Bahr, Henry F. Lamb, Christine Lane, Christopher Bronk Ramsey, Helen M. Roberts, Céline Vidal, Frank Schäbitz, and Martin H. Trauth

D815 | EGU2020-13026 ★

[Climate beats from Africa: a statistical analysis of the 620 kyr Chew Bahir climate record, eastern Africa](#) ▶

Walter Duesing, Asfawossen Asrat, Andrew S. Cohen, Verena S. Foerster, Stefanie Kaboth-Bahr, Hauke Kraemer, Henry F. Lamb, Norbert Marwan, Helen M. Roberts, and Frank Schäbitz

D816 | EGU2020-4660 ★

[Recurrence quantification analysis of the ~620 kyr record of climate change from the Chew Bahir basin, southern Ethiopia](#) ▶

Martin H. Trauth, Asfawossen Asrat, Andrew S. Cohen, Walter Duesing, Verena Foerster, Stefanie Kaboth-Bahr, Hauke Kraemer, Henry Lamb, Norbert Marwan, Mark A. Maslin, and Frank Schäbitz

# Chat time: Friday, 8 May 2020, 10:45–12:30

Chairperson: Annett Junginger, Janina Bösken, Inka Meyer

D817 | EGU2020-18611 ★

**Insights into the African Humid Period from fossil stromatolites and *Etheria elliptica* shells from the Chew Bahir Basin, southern Ethiopia**▶

Peter Nickolaus, Monika Markowska, Hubert Vonhof, Hervé Bocherens, Ashley Martin, Bahru Zinaye, Markus Fischer, Asfawossen Asrat, and Annett Junginger

D818 | EGU2020-2975 ★

**A 25-kyr record of East African monsoon variability: Insights from grain-size distributions and end-member modeling of siliciclastic sediments from Lake Chala**▶

Inka Meyer, Maarten Van Daele, Niels Thange, Dirk Verschuren, and Marc De Batist

D819 | EGU2020-12966 ★

**Geoarchaeology and chronology of Sodicho – insights into site formation processes and human activity in a volcanic rock shelter, SW Ethiopia**▶

Elena A. Hensel, Ralf Vogelsang, Tom Noack, and Olaf Bubenzer

D820 | EGU2020-10635 ★

**Sedimentology, paleohydrology and geo-archaeology of southeastern Arabia during the Late Pleistocene and its implications for modern human dispersal Out of Africa**▶

Mahmoud Abbas, Stephanie Neuhuber, Roman Garba, Denis Štefanisko Štefanisko, Dominik Chlachula, and Zhongping Lai

D821 | EGU2020-1756 ★

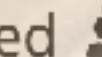
**Possible dispersal routes based on individual-based modeling forced with past climate conditions.**▶

Elke Zeller and Axel Timmermann

D822 | EGU2020-15470 ★ | solicited

**Simulating human mobility with a Lagrangian Constraint Random Walk Model based on climatic and environmental conditions**▶

Konstantin Klein, Yaping Shao, and Masoud Rostami

D823 | EGU2020-3401 ★ | solicited 

**Peninsular Thailand as a part of the Pleistocene savanna corridor: isotopic evidence of mammalian tooth enamel from the cave of Tham Phedan**▶

Kantapon Suraprasit and Hervé Bocherens

# Chat time: Friday, 8 May 2020, 10:45–12:30

D824 | EGU2020-20692 ★

[Exploring the climate signal in tree-ring density of Clanwilliam cedar, South Africa](#) ▶

Valerie Trouet, Tom De Mil, Matthew Meko, and Jan Van den Bulcke

D825 | EGU2020-2944 ★

[Calibration of  \$\delta^{2}H\$ -alkane and  \$\delta^{18}O\$ -sugar for paleoclimate reconstructions in South Africa and its first application to peat sediments from Vankervelsvlei](#) ▶

Paul Strobel, Roland Zech, Marcel Bliedtner, Julian Struck, Bruno Glaser, Michael Zech, Michael E. Meadows, and Torsten Haberzettl

D826 | EGU2020-11782 ★ | solicited  

[Modern environment characterization of interdunal lakes in Inhambane province \(SE Mozambique\) as an analogue to understand past environmental changes](#) ▶

Ana Gomes, Simon Connor, Maria João Martins, Brandon Zinsious, Célia Gonçalves, Delminda Moura, Elena Skosey-LaLonde, João Cascalheira, Jonathan Haws, Judite Nhanombe, Mussa Raja, Paulo Fernandes, Reginelinda Mauelele, Roxane Matias, Sónia Oliveira, Susana Costas, and Nuno Bicho

D827 | EGU2020-11485 ★

[Biogeochemical analysis of newly dated lacustrine cores: a first look at Quaternary paleoenvironment in coastal Mozambique](#) ▶

Elena Skosey-LaLonde, Ana Gomes, Maria João Martins, Simon Connor, Mussa Raja, Brandon Zinsious, Roxane Matias, Reginelinda Mauelele, Jonathan Haws, Delminda Moura, Gideon Hartman, Célia Gonçalves, João Cascalheira, Sónia Oliveira, Paulo Fernandes, Susana Costas, and Nuno Bicho

D828 | EGU2020-21437 ★ | solicited

[Lake level changes and their paleo-climatic implications at the middle Pleistocene excavation of MAR-1, southern Greece](#) ▶ **not presented**

Ines Bludau, Max Weiss, Ellen Schnabel, Nicholas Thompson, Vangelis Touloukis, Panagiotis Karkanas, Eleni Panagopoulou, Katarina Harvati, and Annett Junginger

D829 | EGU2020-8414 ★ 

[The diatom flora of Lake Lisan \(Israel\): a preliminary investigation](#) ▶

Hannah Hartung, Jane M. Reed, and Thomas Litt

D830 | EGU2020-7706 ★

[Human environmental interactions during the Neolithization of the Ammer Valley: first results integrating paleo-ecological and bio-archaeological evidence](#) ▶ **not presented**

Shaddai Heidgen, Elena Marinova, Raiko Krauß, Oliver Nelle, Martin Ebner, Stefan Klingler, Tatiana Miranda, Jörg Böfinger, Elisabeth Stephan, and Annett Junginger

# Chat time: Friday, 8 May 2020, 10:45–12:30

D831 | EGU2020-22297 ★

## Geological and geomorphological investigations in the Early Pleistocene paleontological multi-site of Olteț River Valley, Romania

Alexandru Petculescu, Virgil Drăgușin, Anca Avram, Sabrina Curran, Luchiana Faur, Radu Irimia, Ionuț Mirea, Chris Robinson, Marius Robu, Ionuț Șandric, Barbara Soare, Claire E. Terhune, Alida Timar-Gabor, and John Woodhead

D832 | EGU2020-2925 ★

## Luminescence dating challenges: about hiatus and methodological considerations in the Urluia and Vlasca loess-paleosol sequences, Romania

Janina Bösken, Nicole Klasen, Daniela Constantin, Ulrich Hambach, Daniel Veres, Christoph Schmidt, Stephan Pötter, Christian Zeeden, Frank Lehmkuhl, and Alida Timar-Gabor

D833 | EGU2020-4723 ★

## Lower Danube loess - a crucial palaeoclimatic archive for the last glacial cycle in Southeast Europe

Stephan Pötter, Janina Bösken, Igor Obreht, Philipp Schulte, Daniel Veres, Ulrich Hambach, Christian Zeeden, Slobodan Marković, and Frank Lehmkuhl

D834 | EGU2020-18353 ★

## European Standard Loess as baseline for paleoenvironmental interpretations of loess granulometric variations

Philipp Schulte, Tobias Sprafke, and Frank Lehmkuhl

D835 | EGU2020-681 ★ 

## Combined rock-magnetic and colorimetric stratigraphy for a 430 ka- covering loess-palaeosol sequence in the vicinity of Belgrade, Northern Serbia

Christian Laag, Ulrich Hambach, Christian Zeeden, Mladjen Jovanović, and Slobodan Marković

D836 | EGU2020-13340 ★

## Evolution and stratigraphy of the Nakdong River valley deposits in response to late Quaternary sea-level change

Dong-Geun Yoo, Seok-Hwi Hong, Gwang-Soo Lee, Jin-Cheul Kim, Gil-Young Kim, and Yun-Soo Choi