



# **NECLIME Annual Conference 2022**

## **2nd NECLIME online conference**

**21 – 24 Nov 2022**

### **Report**

#### **Main scientific topics**

Quantifying past plant biodiversity and vegetation history

- quantifying paleobiodiversity (diversity metrics, modern reference datasets, etc)
- quantitative biome reconstructions (new considerations on PFT approaches, biomization methods)
- ecological niche modelling in paleo-contexts
- reconstructing variations within fossil local/regional plant communities/formations

Reconstructing the extremes

- low and high latitude paleoenvironments and paleoclimate
- vegetation in extreme settings (extrazonal, mangroves, etc)

#### **Report**

As last year, again the NECLIME Annual Conference 2022 had to be held online and was organized by Angela Bruch, Torsten Utescher, Marianna Kováčová and Martina Stebich. With 60 registrations from 20 countries and 24 oral presentations the meeting gave a great overview on the research of the NECLIME community.

The topic of extreme environments has been highlighted by several contributions under the aspects of model-proxy comparison of arctic climate, modeling photosynthesis in arctic forests, and the evolution of plant diversity changes on the Tibetan Plateau. A number of presentations dealt with the question of Paleogene climate, plant diversity and vegetation patterns, and especially the role of the Indian subcontinent on plant biogeography. This was accompanied by contributions, which shed light on the marine signal from the Indian Ocean with significance for understanding Asian monsoon history.



Research on Neogene and Quaternary vegetation and climate reconstructions from different parts of Eurasia covered a range of methods such as pollen and NPPs, paleocarpology, and techniques of ecological niche modelling (ENM). Moreover, an agent based model (ABM) shed light on mammal dispersal across water barriers.

During the final discussion forthcoming events were introduced: the next annual conference in Matsudo/Chiba, Japan, August 30<sup>th</sup> to September 6<sup>th</sup> 2023, and the next pollen working group meeting 2023, Antalya, Turkey, 18-19 October, 2023 (details in the newsletter and on our website). Also a macrobotanical workshop is anticipated for next year.

We also identified some scientific focal topics for the next years, which fall within the general scope of the NECLIME objectives. They may be addressed on the next conferences, in topical workshops, or special issues etc.

- Extreme environments (e.g., high latitudes, high altitudes, high CO<sub>2</sub> world)

- Biogeography, climate, and evolution in the Paleogene

- Plant biodiversity and vegetation history

- Proxy-model-comparison (proxies for winter temperatures)

- Regime shifts in the climate system

- Regional signals of past climate and vegetation to be compared with future scenarios

Besides the zoom conference, also the technical option of the wonderroom again proofed to be a nice tool for lively discussions in smaller groups. Still, we miss the direct personal exchange and look forward to meet in person soon again.

The organizers

Angela Bruch, Torsten Utescher, Marianna Kováčová and Martina Stebich.