



## **NECLIME working group on taxonomy of Neogene palynomorphs**

12<sup>th</sup> NECLIME workshop on taxonomy of the Neogene palynomorphs

Faculty of Engineering, Akdeniz University in Antalya

Antalya, Turkey, October 18-19, 2023

[organized by M. Serkan AKKİRAZ & Erdal KOŞUN]

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The 12th NECLIME workshop on the taxonomy of the Neogene palynomorphs, hosted by M. Serkan AKKİRAZ and Erdal KOŞUN, was held at the Faculty of Engineering, Akdeniz University in Antalya. A total of 13 colleagues attended the workshop. After the opening speeches by the dean of the engineering faculty of Akdeniz University and the head of the geological engineering division, 8 papers were presented on October 18 (Wednesday). On the second day of the workshop (19 October), there were three presentations in the morning and a round table discussion in the afternoon. As usual, the participants shared their research results and discussed specific taxonomical issues, including some microscopic images of palynomorphs and NPP.

Core topics presented on Wednesday and Thursday

- Fossil palynomorph and NPP records

Presentations focused on palynomorph and NPP records of Eastern Mediterranean, Eurasia, Caucasus, and South America. The reports on southern Caucasus (Georgia) included on long-term climate trends and their impact on pollen diversity (Angela Bruch) and the relationship between ancient human activity, pollen and NPP (Eliso Kvavadze), detailed studies on middle-late Holocene lake level changes according to pollen and NPP by Narine Hayrapetyan and the relationship between the regional vegetation and the pollen record in the South Caucasus (Armenia) (Lisa Schiersch), detailed works on Eastern Mediterranean provided by M.Serkan Akkiraz about Eocene palaeoecology of the northwest Turkey and palaeoenvironmental indicators of NPPs from Anatolia (Nurdan Yavuz), a detailed work focussing on late Holocene landscape dynamics and human impact on them in Eurasia (western Russia) (Nikita Lavrenov) and a taxonomic study on the local vegetation of the Kamchatka River Valley in eastern Russia (Valerii Pimenov), a taxonomic work about a better determination of NPP from the late Miocene Beli Breg Coal Basin (Eastern Mediterranean, Bulgaria) (Dimiter Ivanov), detailed

taxonomic and palaeoecological works according to Anemiaceae, Sclereids and Trichomes from South America (Brazil) by Sarah Gonçalves Duarte.

- Round Table Discussion

The main topic of the discussion was the proper identification and ecological significance of Non-Pollen Palynomorphs. In the course of palynological studies carried out on Neogene sediments all around Eurasia a lot of Non-Pollen Palynomorphs (NPPs) could be identified. NPPs are microfossils normally included in Neogene sediments that are processed for palynological analysis. They are fossil remains of a great variety of organisms that can be sensitive to various ecological parameters. Most of them belong to different taxonomic groups of algae – e.g. Cyanoprokaryota, Bacillariophyceae, Chrysophyceae, Trebouxiophyceae and Chlorophyceae (Chlorophyta), Euglenophyceae, and others. The algal communities provide additional data concerning water ecosystems in addition to data for terrestrial ecosystems provided by fossil spores and pollen.