



# NECLIME ANNUAL MEETING 2017

## YEREVAN, ARMENIA

### 1<sup>ST</sup> CIRCULAR

Dear colleagues and members of NECLIME,

It is our pleasure to invite you to the 2017 Annual NECLIME Meeting that will be held at the Botanical Institute of the National Academy of Sciences in Yerevan, Armenia, from **September 18 to 24, 2017**.

The main **scientific topics** to be discussed are:

- The environmental history of the Caucasus – flora, fauna, vegetation and climate
- Plant biodiversity in time and space
- Climate data from non-plant proxies: vertebrates, insects and geochemical proxies
- Early human environment
- Neogene climate evolution in Eurasia

#### **The environmental history of the Caucasus – flora, fauna, vegetation and climate**

The Caucasus is situated in the centre between Europe and Central Eurasia, lying between the marine climate to the west, influenced by the Atlantic Ocean circulation, and the today well established continental climate to the east. Thus, this area is of crucial interest for understanding the global climate system and its evolution during the Neogene. Moreover, the taxonomic composition of flora and fauna, their distribution and diversity in this region underwent severe changes since the Paleogene that reflect the complex geological and palaeogeographic history of the Caucasus.

#### **Plant biodiversity in time and space**

The evolutionary history of biodiversity and biodiversity hotspots in the world is important to understand the evolution of biodiversity under the current global climate change. Palaeobotanical studies profoundly contribute to the understanding of trends in plant species richness in the geological past. Moreover, palaeoenvironmental reconstructions provide crucial evidence for correlations between the diversification of biota and changes in climate and palaeogeography.

The Caucasus represents an important key area exemplifying the evolution of biodiversity and changes in biogeographic patterns and was an important refuge area for “Tertiary” relics throughout the late Neogene and Pleistocene cooling.



Comparisons with other Eurasian biodiversity hotspots such as addressed on the Lucknow (India) NECLIME meeting (E Himalayas, W Ghats) and Sino-German workshops on the Yunnan hotspot (Kunming, Xishuangbanna, Dresden) shed light on the underlying drivers of the evolution of biodiversity.

### **Climate data from non-plant proxies: vertebrates, insects and geochemical proxies**

Fossil vertebrates, insects and geochemical proxies provide crucial information on climate and environment. With this section we would like to encompass new proxies and methodologies that can contribute valuable data to the general NECLIME objectives.

### **Early human environment**

Vegetation represents an essential resource for people. People use vegetation in many ways, directly, as in the case of food and firewood, and make use of vegetation indirectly, for example as a habitat for animal life. To reconstruct vegetation and its dynamics in the course of past climatic changes therefore is crucial for understanding its impact on early humans, their migration routes and behavioral or cultural changes since the Early Pleistocene.

With the earliest evidence of hominids outside the African continent as documented at the famous fossil site Dmanisi in Georgia, and with its long record of human occupation the Caucasus is a crucial region to investigate early human-environment relationships.

Contributions on early human environment and resource availability reconstructions for areas and times relevant for Palaeolithic expansions, either from archaeological / paleoanthropological sites or from plant fossil archives, are welcome to join the discussion raised in the frame of the project ‘The Role of Culture in Early Expansions of Humans’ ([www.roceeh.net](http://www.roceeh.net)).

### **Neogene climate evolution in Eurasia**

As in each Annual NECLIME meeting, contributions on general topics related to NECLIME are welcome.

### **Preliminary schedule**

Sept 18 – arrival (most flights arrive early morning)

afternoon: registration, icebreaker and visit of the Botanical Institute and Garden in Yerevan

Sept 19 – scientific sessions at the Botanical Institute

Sept 20 – scientific sessions at the Botanical Institute

evening: conference dinner

optional: departure at night or stay for excursion

### **Proposed excursion**

Sept 21 – travel to Sisian, Southern Armenia: modern vegetation on a transect from lowland semi-desert to subalpine meadows, incl. stop at Kor Virap monastery and Areni winery.

Sept 22 – excursion in the Vorotan River Valley: plant fossil sites, geology, modern vegetation and culture

Sept 23 – excursion to Tatev monastery: plant fossil sites, geology, modern vegetation and culture



Sept 24 – travel back to Yerevan, incl. stops at the archaeological site of Areni Cave and Noravank monastery, with farewell dinner in Yerevan

Estimated costs for the excursion are **200.- Euro/person** including full board and accommodation.

The **conference fee** will be **60.- Euro** per Person to cover costs for conference facilities, abstract volume, coffee breaks, lunch, conference dinner, and airport transfers.

**Suggestions for accommodation** will be distributed with the second circular to be sent to you in May 2017.

The meeting will be organized by Ivan Gabrielyan, Astghik Papikyan, and Angela Bruch. Please do not hesitate to contact Ivan Gabrielyan ([ivangabrielyan100@gmail.com](mailto:ivangabrielyan100@gmail.com)) or Angela Bruch for any concern or with any suggestion.

Please send your abstract(s) together with the attached registration form before **April 15<sup>th</sup>, 2017** to **Ivan Gabrielyan ([ivangabrielyan100@gmail.com](mailto:ivangabrielyan100@gmail.com))**

**If you require an official invitation for your visa application, please ensure to timely inform Ivan Gabrielyan.**

### **Special Issue**

In the frame of this meeting we are planning to organize the next Special Issue of NECLIME on Neogene biodiversity and floral patterns in Central and Eastern Eurasia in the course of Cenozoic climate change. As a possible journal we think about Palaeoworld (Elsevier). More details will be appointed at the meeting. Contributions from last years' conference in Lucknow are still very welcome.

We are looking forward to seeing you in Armenia.

Yours,

Ivan Gabrielyan, Angela Bruch, Torsten Utescher