



NECLIME working group on taxonomy, pre-meeting, 17. 03. 2010, Frankfurt/M, Germany

Summary of the discussion

The meeting held in Frankfurt on March 17, 2010 aimed to discuss frame and potential objectives of a NECLIME working group on taxonomy of the Neogene macrobotanical record to be proposed to a larger group of NECLIME members at the EPPC / Budapest.

The majority of the participating NECLIME members and invited colleagues approved to have a NECLIME working group on taxonomy.

Main topics discussed:

- One Plant Approach – taxa complexes in the Cenozoic plant record

The following complexes were outlined in detail by Zlatko Kvaček: *Taxodium dubium* complex, *Platanus neptuni* complex, *Cercidiphyllum crenatum* complex, *Craigia bronni* complex.

Additional inter-related form taxa were discussed. The discussion of relations between macro taxa and the microfloral record revealed considerable uncertainties and contradicting interpretations published so far.

In cooperation with palynologists of the NECLIME community efforts should be intensified to set up integrative studies on macro remains and pollen and spores from the same locality and horizon.

As regards European records Zlatko Kvaček kindly offers his expertise and advice.

- Nearest living relatives (NLRs) of Cenozoic plant taxa

To update taxonomy and NLRs cited in the Palaeoflora data base of NECLIME Neclime members and other colleagues should be asked to provide recent publications relevant in this context. Zlatko Kvaček kindly offers his expertise when more specific questions of NLR identification arise (European record). Volker Wilde kindly offers to provide relevant publications of his own work, and Svetlana Popova can be addressed concerning the palaeo-record of temperate genera of Vitaceae.



It is proposed to provide an additional column in the online version of the Palaeoflora data base containing comments on NLRs cited in literature by various authors

- Improvement of the NLR concept using plant molecular phylogenetic approaches

A possibility for improving the NLR concept for Cenozoic fossil taxa and thus of palaeoclimate reconstruction was outlined by Dieter Uhl. According to this the genetic distance of NLRs can be used to evaluate their reliability and to introduce a corresponding weighting factor in palaeoclimate analysis (e.g., in the CA). Alexandra Müllner kindly offers her advice as regards the selection of suitable phylogenetic trees and chronograms. Corresponding studies could be carried out e.g. in the frame of bachelor or master theses. Data relevant in this context are already available for the Meliaceae, and Sapindales (A. Müllner), in the near future also for temperate Vitaceae (S. Popova).

- Coordination of the working group

The subject will be discussed in Budapest

A short report on the meeting will be given at the NECLIME assembly held at the EPPC.

Participants:

Mark Hermann
Elena Herzog
Lutz Kunzmann (attending the Senckenberg WA meeting in parallel)
Zlatko Kvaček
Alexandra Müllner
Svetlana Popova
Dieter Uhl
Torsten Utescher
Volker Wilde