

3rd joint NECLIME workshop, September 25 – 28, Sofia, Bulgaria

This extended workshop was organized in association with the 9th meeting of the NECLIME working group on "Taxonomy of Neogene Palynomorphs" and the 4th meeting of the NECLIME working group on "Taxonomy of the Neogene Macrobotanical Record of Eurasia". The workshop was held at the Institute of Biodiversity and Ecosystem Research of the Bulgarian Academy of Sciences and was hosted by Dimiter Ivanov and his team. It focused on Climate and vegetation evolution in the Paratethys and Eastern Mediterranean realms, and included a three-day field trip to Cenozoic basins of Southwest Bulgaria.



The presented topics included a wide range of topics, spanning a region extending from NE China to the W Mediterranean, and covering the time-span from the Paleogene to the Holocene. A clear focus of the presented studies was on records of the Eastern Paratethys, taxonomy of micro- and macrofloras, and palaeoclimatic and palaeoenvironmental reconstructions using various palaeobotanical and geochemical proxies. Programme and abstracts of all oral and poster contributions presented in Sofia are available for download from the NECLIME website.

The post-conference field trip took place from September 28 to 30, and was brilliantly guided by Dimiter Ivanov, Daria Ivanova, and Vladimir Bozukov. Big thanks go also to Miroslav Ivanov for sharing his expertise and for guiding through recently discovered outcrops in the Blagoevgrad Basin.

The field trip provided an excellent introduction to the geology and palaeobotany of Southwestern Bulgaria. Fluvio-lacustrine and paludal successions and palaeoenvironments of the Cenozoic were presented in various basins. The visit of the late Paleogene to early Neogene Pernik Basin introduced the important local browncoal measures and the ecology of the past swamp forest communities,

and included a guided tour through the show mine of the old mining town Pernik providing insight into historical techniques of underground browncoal mining. Outcrops in the Blagoev Graben allowed for discussing Pontian to Dacian deposits of the area and newly recovered palaeobotanical findings. Moreover, the sedimentary facies of the Neogene fluvial environments in the reaches of the modern Struma Valley could be addressed in detail, based on recently detected outcrops. Based on the interpretation of pebble spectra, palaeo-transport directions are assumed that significantly differed from modern. Pontian lacustrine sedimentation was exemplified in various outcrops in the Gotse Delchev Basin located close to the Greek border. The diatomites of the Baldevo Formation contain a rich palaeobotanical record that has been studied in detail with respect to taxonomy, palaeoecology and – climate. Several new exposures were presented where leaf materials are presently collected and studied by our Bulgarian colleagues. Early to middle Miocene lacustrine strata were presented in the Satovcha Halfgraben, located in



the Western Rhodopes. The Palaeogene to early Neogene basin experienced considerable uplift since the deposition of the sediments, and the abundance of diatomites points to extensive volcanic activities. The diverse leaf flora recovered from the diatomites of the Sivik Formation already yielded thousands of specimens, kept at the collection in Sofia. The ongoing recovery of exceptionally well-preserved materials still provides new taxonomic evidence and findings. A palaeoclimatic interpretation of this flora will be presented soon. The last geological stop of the field trip took us to the Pliocene Park at Dorkovo in the Western Rhodopes where an exceptional museum was erected, right on this important mammal site marking the beginning of the Pliocene in Eastern Europe. Apart from this great insight into regional geoscientific highlights, the field trip also introduced to us the outstanding natural beauty of the area. Moreover we experienced a wide range of historical places, from Thracian, Roman, and medieval Christian remains to heritage of the Balkans history in the 19th and 20th century and to traditional rural settings of the Rhodope Mountains.

We are very grateful to Mitko and his team for organizing this extended workshop, for providing all facilities, and for greatly supporting NECLIME for another time.