



## Bulgarian contributions to IGCP projects in the 21-st century (2005–2009)

### Българско участие в IGCP проектите през 21 век (2005–2009)

*Daria Ivanova, Iskra Lakova, Valeri Sachanski, Iliana Boncheva, Tatyana Dimitrova, Radostina Atanassova*

*Дария Иванова, Искра Лакова, Валери Сачански, Илияна Бончева, Татяна Димитрова, Радостина Атанасова*

Geological Institute, Bulgarian Academy of Sciences, Acad. G. Bonchev Str., Bl. 24, 1113 Sofia, Bulgaria;  
E-mail: [dariaiv@geology.bas.bg](mailto:dariaiv@geology.bas.bg); [lakova@geology.bas.bg](mailto:lakova@geology.bas.bg)

**Key words:** Bulgaria, IGCP, projects, activity, 21 century.

Bulgarian contributions to the IGCP activities in the period 2005–2009 were mainly in Palaeontology, Stratigraphy and Sedimentology (nine projects), and Mineralogy (one project). Bulgaria hosted three international IGCP Meetings: IGCP 469 Meeting in Sofia (2004) – papers published in the journal *Geologica Balcanica*; IGCP 486 Meeting in Kiten (2005) – the reports published in the periodical *Geochemistry, Mineralogy and Petrology*; Fourth Plenary Meeting of Projects IGCP 521 and INQUA 0501 in Bucharest, Romania and Varna, Bulgaria. The Bulgarian Working Groups (BWG) published a total of 94 articles and abstracts. Members of the Bulgarian IGCP Committee were involved in the various research and outreach during the International Year of Planet Earth – IYPE (2007–2009) activities.

#### **Project 458. Triassic/Jurassic boundary Events (2001–2005)**

*BWG:* D. Ivanova, P. Tchoumatchenco, K. Budurov, I. Zagorchev, L. Petrunova – Geol. Institute, BAS, Sofia.  
*Activities:* Study of Triassic and Jurassic rocks from the Eastern Stara Planina Mts. (Bulgaria). The study focused on biostratigraphy, sedimentology and tectonics, as well as problems related to the Triassic/Jurassic boundary. The BWG participated in the meeting in Krakow, Poland (2003), and the 5-th National Symposium of Paleontology, Bucharest, Romania (2005).

#### **Project 467. Triassic time and trans-Panthalassian correlations (2002–2006)**

*BWG:* D. Ivanova, K. Budurov, I. Zagorchev, L. Petrunova – Geol. Institute, BAS, Sofia.  
*Activities:* Stratigraphic problems associated with the Triassic in Bulgaria; study of foraminiferal associations from the GSSP that define the base of the Anisian Stage (Deşli Caira Hill, Romania); study of a middle-late Anisian carbonate platform in Central Southern Alps (Italy). Participation in the IGCP Symposium in St. Christina/Val Gardena, Dolomites, Italy (2003).

#### **Project 469. Variscan terrestrial biotas and palaeoenvironments (2003–2007)**

*Bulgarian Project co-leader:* Y. Tenchov; *BWG:* T. Dimitrova – Geol. Institute, BAS, Sofia.

*Activities:* Extensive data collection in palaeobotany, palynology, palaeozoology and sedimentology, in order to improve our understanding of the pattern and tempo of the environmental changes across the paleotropics during the Carboniferous. Participation in the 15-th International Congress on Carboniferous and Permian Stratigraphy in Utrecht, Netherlands (2003); Workshops: Sofia, Bulgaria (2004), Freiberg, Germany (2004), Cardiff, UK (2005), Halifax, Nova Scotia (2005), Bucharest, Romania (2005), Krakow, Poland (2006), Prague, Czech Republic (2006), Leiden, Netherlands (2007).

#### **Project 486. Au-Ag-Telluride-Selenide Deposits (2003–2007)**

*BWG:* K. Bogdanov – Sofia University; S. Strashimirov – University of Mining and Geology, Sofia; I. Bonev, R. Petrunov, P. Marchev, R. Atanassova, D. Dimitrova – Geol. Institute, BAS, Sofia.

*Activities:* The BWG studies focused on Au-Ag-telluride-selenide mineralization of all types (hydrothermal, magmatic, and metamorphic), and the understanding of geological processes associated with spatial and temporal accumulations of Au ( $\pm$  Ag) with Te and Se. Participation in meetings: “Golden Quadrilateral” in Alba Julia, Romania (2004), Kiten, Bulgaria (2005), Izmir, Turkey (2006), Espoo, Finland (2007).

#### **Project 497. The Rheic Ocean: its origin, evolution and correlatives (2004–2008)**

*BWG:* I. Lakova, V. Sachanski, I. Boncheva, S. Yanev – Geol. Institute, BAS, Sofia.

*Activities:* Study of various aspects of Ordovician, Silurian and Devonian stratigraphy (graptolites, conodonts, cryptospores and acritarchs) in sections from

the Balkan Terrane in Bulgaria and the Istanbul and Zonguldak terranes in NW Turkey, which are all considered of peri-Gondwana origin. Participation in the Final meeting of IGCP Projects 497 and 499, Frankfurt am Main, Germany (2008).

#### **Project 499: Evolution of Ecosystems and Climate in the Devonian (2004–2008)**

*BWG:* I. Boncheva, I. Lakova, V. Sachanski – Geol. Institute, BAS, Sofia.

*Activities:* Detailed study of Devonian faunas in order to refine the biostratigraphic schemes, and for inter-regional correlation of the Balkan Terrane in Bulgaria and other European terranes of Gondwana affinities. Special emphasis was put on common histories of the Balkan and Istanbul Terranes. Participation in: 4-th IGCP 499 Meeting and ICOS Leicester, UK (2006); Workshops: Istanbul, Turkey (2005), Prague, Czech Republic (2006) and San Juan, Argentina (2007); Final meeting of the IGCP Projects 497 and 499, Frankfurt am Main, Germany (2008).

#### **Project 503: Ordovician Palaeogeography and Palaeoclimate (2004–2008)**

*BWG:* V. Sachanski, I. Lakova, I. Boncheva – Geol. Institute, BAS, Sofia.

*Activities:* Further study of Ordovician and Silurian graptolites, acritarchs and cryptospores from Bulgaria and Turkey provided new biostratigraphic and palaeogeographic knowledge of southeastern Europe. Participation in international meetings: Glasgow, Scotland, UK (2006); Closing meeting of IGCP 503 in Copenhagen, Denmark (2009); 2-nd International Symposium on the Geology of the Black Sea Region, Ankara, Turkey (2009).

#### **Project 506: Marine and non-marine Jurassic (2005–2009)**

*BWG:* D. Ivanova, P. Tchoumatchenco, L. Metodiev, E. Koleva-Rekalova, I. Lakova, S. Petrova – Geol. Institute, BAS, Sofia.

*Activities:* The BWG studied the Pliensbachian–Lower Bajocian brachiopods and the Toarcian–Aalenian ammonites in Bulgaria; the T-R cycles of the Lower–Middle Jurassic; the stable isotope records ( $\delta^{18}\text{O}$  and  $\delta^{13}\text{C}$ ) of Lower–Middle Jurassic belemnites; microfossils and microfacies, environmental evolution and T-R cycles of the Callovian to Valanginian carbonate platform, and pelagic sections in Bulgaria. Participation in international meetings: 7-th International Congress on the Jurassic System in Krakow, Poland (2006); 8-th IGCP 506 Meeting, Bucharest, Romania (2009); 7-th Romanian Symposium on Palaeontology, Cluj-Napoca, Romania (2009).

#### **Project 521: Black Sea – Mediterranean Corridor during the last 30 Ky: sea level change and human adaptation**

*BWG:* M. Filipova-Marinova, S. Vergiev – Institute of Oceanology, BAS, Varna.

*Activities:* Study of the centennial-scale pollen stratigraphy from the central Bulgarian Black Sea zone for the last 10 000 years. Organization of the Forth conference and field trip of IGCP Project 521 in Bucharest (Romania), Danube River and the Bulgarian Black Sea Coast (October 2008). Conveners: M. Filipova-Marinova, S. Vergiev. Participation in the 5-th Joint Plenary Meeting and Field Trip, Izmir – Canakkale, Turkey (2009).

#### **Project 555: Rapid Environmental/Climatic Change in the Cretaceous Greenhouse World (2007–2010)**

*BWG:* P. Pavlishina – Sofia University.

*Activities:* Scientific research concentrated on the Late Cenomanian OAE 2, and particularly on an integrated biostratigraphy of calcareous nannoplankton and palynomorphs, stable isotope stratigraphy and sedimentology of the Ultrahelvetec Rehkogelgraben section, Eastern Alps, Austria. Participation in the RECCCE (Rapid Environmental/Climate Changes and Catastrophic Events in Late Cretaceous and Early Cenozoic) Workshop in Gams, Austria (2009).