



Geological evolution of the Western Carpathians: new ideas in frame of inter-regional correlations

International conference organized at the occasion of 60th anniversary of the Geological Institute, Slovak Academy of Sciences

Scope of the conference:

The conference **"GEEWEC 2013 - Geological evolution of the Western Carpathians: new ideas in frame of inter-regional correlations"** will be held in the Smolenice Castle on 16-19 October 2013.

The meeting will begin in the afternoon with a plenary session where the most important achievements in the geological research of the Western Carpathian realm since the edition of monograph **"Geodynamic model of the Western Carpathians"** (1998) will be discussed.

The conference will take place in the course of 3 days and will consist of plenary and topical sessions, and will include one short excursion to the Pezinok-Pernek tectonic line in the Malé Karpaty Mts.. We expect that the talks will allow the vigorous discussion of new developments and perspectives in geological studies and the definition of new goals and questions that need to be addressed in order to make a progress in the geological research in the Western Carpathians.

We invite proposals for two types of presentations: **oral presentations** (15 minute formal presentations and slides) and **poster presentations** (informal presentations). **Plenary presentations** (invited) will last 30 minutes.

The official language of the conference is English.

The abstracts of the conference talks and posters will be distributed at the registration desk, later a thematic issue of selected papers will be published in the journal *Geologica Carpathica*.

The talks that should present new ideas or views at the evolution of the Western Carpathian will be presented in three panels:

PANEL A: Variscan evolution of the Western Carpathians

Many new aspects due to the array of modern isotopic and CHIME datings in the crystalline basement within last 15 years occurred. The pre-Cambrian rocks are proven on several localities and discovery of high pressure eclogites pointed to the character of collisional event within Variscan orogeny. Robust subduction related granite production on the Devonian/Carboniferous boundary is now believed. Other granite are Permian in age formed in two groups: orogenic and anorogenic. Evidences on low pressure and medium temperature Permian metamorphic events enlarged the knowledge on metamorphism of West-Carpathian fundament as well low grade overprint of crystalline basement in the Tatric unit through FT datings. New facts on mineral stability in fluid-rich-world during superimposed metamorphism were used as indicators on geotectonic regimes.

Themes:

- A1:** Granitic rocks: windows to the Variscan orogen evolution
- A2:** Metamorphic evolution of crystalline basement
- A3:** Mineral equilibria, metasomatism and mass transport in fluid-rich regime
- A4:** Accessory minerals: indicators of geotectonic evolution



PANEL B: Alpine evolution of the Western Carpathians

Multiple tectonic, climatic and oceanographic events during the Mesozoic and Cenozoic significantly affected temporal evolution of depositional environments and marine and terrestrial ecosystems in the Western Carpathians, including events at the end of the Triassic, changes in pelagic carbonate production in the Late Jurassic and Early Cretaceous, mid-Cretaceous oceanic anoxic events, and the cooling at Eocene/Oligocene boundary. These changes were also frequently connected with changes in oceanographic circulation and thus changes in biogeographic distribution patterns. This panel should present contributions that focus on advances with new geochemical, paleoecological and paleobiogeographic approaches that constrain timing and causes of these events in the Western Tethys.

Themes:

- B1:** Structure and Alpidic tectonic evolution of the Western Carpathians and related orogenic belts
- B2:** Paleogeographic and paleoclimatic problems at the Triassic/Jurassic and Jurassic/Cretaceous boundaries
- B3:** Sedimentological and paleogeographic evolution in Cenozoic time
- B4:** New perspectives in paleobiogeography of the Mesozoic and Cenozoic
- B5:** Ichnofossils: new insight to paleoenvironments

PANEL C: Dating and evolution of rocks, minerals, ores & tectonic processes

Time is always recognised as a key variable in the Earth sciences through the constraint that chronological informations providing on rates of physical mechanisms for Earth processes. Modern techniques enabled that geochronologists are able to determine various processes on Earth including metamorphism, magmatism, metallogeny and tectono-deformation events. The time informations can achieve their full potential in contributing to progress in understanding the dynamics of mountain belts, especially in the Alpine - Himalaya belts where the pre-Mesozoic polycrystalline basements are incorporated into young Alpine structure. Knowledge of time history of minerals and rocks is a very important constraint for tectonic interpretation of orogenic processes within poly-orogenic belts like Alps & Carpathians. The Western Carpathians are such belt where unravelling of the orogenic processes is impossible without help of modern geochronology.

Themes:

- C1:** Geochronology: timing of geological processes
- C2:** Evolution of volcanic/magmatic and hydrothermal systems

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