

## **The best geotouristic objects of the Silesian Unit, Outer Flysch Carpathians in the vicinity of Krakow, Poland**

Doktor M., Golonka J., Waśkowska A. and Słomka T.

*AGH University of Science and Technology, Department of General Geology, Environmental Protection and Geotourism, Mickiewicza Ave 30, 30-063 Kraków; Poland, doktor@geol.agh.edu.pl, jan\_golonka@yahoo.com, waskowsk@agh.edu.pl; slomka@geol.agh.edu.pl*

The Outer Carpathians are built up of a stack of nappes and they are thrust over the southern part of the North European Platform. The Silesian Nappe occupies central part of the Outer Carpathians and it is built of sedimentary facies represented continues succession of Late Jurassic to Early Miocene times. In sedimentary profile are written successively stages of development of Silesian Unit on the background of evolutionary stadia of the geodynamic development of the Northern Carpathians from syn-, post-rift to synorogenic phase. The best outcrops (legible, good-preserved and accessible for the group of tourists) to examine the Silesian rocks are presented and included into the trail. The sites highlight stratigraphy and sedimentology of Silesian Unit, from Jurassic to Neogene, elements of structural geology, petroleum systems (source rocks, reservoir rocks, seals), geotouristic important objects and history of human activities in the Carpathians, especially of mining and oil industries. The proposed trail traverses the Silesian Nappe in Polish sector of West Carpathians between Kraków, Cieszyn and Ciężkowice area.

## **The management of a sustainable touristic activity at the Lacu-Roșu Touristic Resort – within the “Bicaz Gorge - Hășmașul Mare” National Park**

Dombay Șt., Magyari-Sáska Zs. and Seer M.

*Babeș-Bolyai University, Faculty of Geography, Gheorgheni University Extension, Str. Grădina Csiky Nr. 53, 535500 Gheorgheni, jud. Harghita, Romania, dombay.istvan@gmail.com, zsmagyari@gmail.com, seermihaly@yahoo.com*

The “Bicaz Gorge – Hășmașul Mare” Natural Park belongs to the Central Group of the Eastern Carpathians, it is located in the Hășmașul Mare Mountains. Due to its natural characteristics, geological, biological, zoological, components, these 2128 ha, in 1980, then in 1995, were denounced as Natural Reservation by the County Council. In 2000, under the 5<sup>th</sup> law, 3<sup>rd</sup> paragraph, of National Territorial Planning and Administration, the 6575 ha, of the “Bicaz Gorge – Hășmașul Mare” region was declared a Natural Park along with the Lacu Rosu Lake Tourism Resort. In the management of the “Bicaz Gorge – Hășmașul Mare” Natural Park we should consider three points of criteria: the management of the inland, the management of border areas (buffer areas), the management of the surrounding settlements, around the national park.

## **Geomechanical Database – description of rocks properties with GIS application**

Domonik A., Dziejdzic A., Jarzabkiewicz A. Łukasiak D., Łukaszewski P. and Pinińska J.

*Department of Geomechanics, Faculty of Geology, Warsaw University, Żwirki and Wigury 93, Warsaw, Poland, a.domonik@uw.edu.pl, artur.dziejdzic@uw.edu.pl, a.jarzabkiewicz@student.uw.edu.pl, dominik.lukasiak@uw.edu.pl, pawel.lukaszewski@uw.edu.pl, joanna.pininska@uw.edu.pl*

Geomechanical Database developed by Department of Geomechanics at University of Warsaw until recently, collected nearly 200 000 parametric data for Poland’s rock properties as well as respective non-parametric informations (descriptions, graphics) have been collected. The data concern rocks of different age and lithology from various regions of