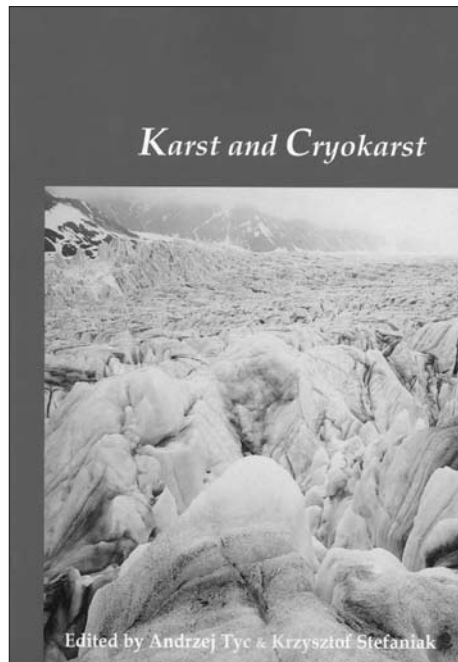


## A BOOK ON KARST IN ICE AND ICE IN KARST

(Andrzej Tyc & Krzysztof Stefaniak (editors): *Karst and Cryokarst*, Studies of the Faculty of Earth Sciences University of Silesia, 263 pp., Sosnowiec – Wrocław 2007)



This is in fact the book of proceedings of the 8<sup>th</sup> GLACK-IPR (Glaciers, Caves and Karst in Polar Regions) which was held in Silesia (Poland) in March 2007. The book is the publication No. 45 of the Studies of the Faculty of Earth Sciences of University of Silesia – it is a pity that there is not a list of other works, at least those dedicated to karst – and in the same time joint publication of the said faculty, Zoological Institute from Wrocław, commission Karst of the International Geographical Union and the commission GLACKIPR of the International Speleological Union. In the foreword A. Tyc explained that cryokarst is not meant as a synonym for thermokarst but is in fact pseudokarst in glaciers and ice. It is in accordance with the views and writing of the late Prof. Marian Pulina who strongly supported, by his deeds too, the second meaning. It has to be mentioned that the book is dedicated to Marian Pulina and to Teresa Wiszniowska. Pulina was well known karstologist and researcher of karst and cryokarst (or glacial karst) in high latitudes and he died in 2005 (see also *Acta carsologica*, .....

Beside short biographies and full bibliographies of T. Wiszniowska and M. Pulina and some “formal” contributions (Foreword, Greeting, Agreement...) there are 16 papers and two reports published in this volume. Six of them are dedicated to cryokarst as mentioned above

(pseudokarst features in ice and glaciers respectively) and the rest ten to karst proper. Among the authors of the first part there are well known names as Adolfo Eraso, Bulat Mavlyudov and Jacques Schroeder. The topics are glacier hydrology (internal drainage system, physiochemical characteristics of subglacier drainage, measurements of the glacier discharge) with special attention paid to the particular form in ice, the Moulin. Two of the papers are globally oriented: subpolar glaciers and global warming evolution and changes in an Antarctica icecap. The papers on glacier drainage and on moulins prove that the forms in ice, glaciers respectively have really a lot in common with the proper karst. From this point of view the term of cryokarst is absolutely adequate.

The rest of the papers dealing with karst in carbonate rock are partly connected with the ice and glaciation too. Such are papers on karst of Venetian Prealps, of Pyrenees, of Lublin-Volhynia chalk karst or the paper on the speleogenesis of Śnieżna (Snow) Cave in Tatra Mountains. Six papers towards the end of the volume are dealing with different types of karst and karst processes without connection with ice or glaciations. There are papers classified as regional ones focused on Sudetes Mts. Karst, Tatra Mts. and Guangxi province of China.

The paper of E. V. Trofimova is giving new data about the karst denudation in Siberia and Russian Far East, ranging between 1.1 and 62 mm per thousand years, which is much more than previously (Corbel 1957) thought. The research area is very large (125 river basins) and observations lasted several years. Relatively high values are due to the fact that in Siberia and Far East the karst in evaporites and salt prevails.

There are two papers which deserve a special attention from the theoretical point of view as well as from the technical one and can be important for the managers of show caves. The authors J. Piasecki and T. Sawiński presented the method, instruments and data analyses of acoustic measurements of airflow in speleo-climatological studies. The experiment of this method was carrying on for several years in some show caves and proved to be very efficient. At the end the authors proposed a “universal classification of cave air movements”. As this one also the topic of the next paper can be of direct use for show cave managers and for the organizers of mass visits to the caves. The authors M. Parise and M. A. Trisciuzzi contributed the paper on geomechanical characterization of carbonate rock masses in underground karst systems as a case study from Castellana-Grotte in Southern Italy. They

made an inventory of fall deposits in the cave and studied in details their geomechanical characteristics. According to them they determined the main mechanisms of instability in the cave of Castellana. According to them the zones and places where the collapses and rock detachments might occur are determined.

At the end of the volume there are two interesting reports about news from two Russian show caves. The first one described the “news in monitoring system and recommendations in development of use and protection of Kungur Ice Cave” from which it is worth to mention radiological research and the research of the speleothems of man-caused minerals (on old wall, columns, metal constructions, etc.). The second one in fact announced a new show cave: Ordinskaya Cave. It is quite unusual “show cave” and that is the reason why they call it “an object of speleotourism”. It is the longest underwater cave in Russia: 3.6 km out of 4 is filled by water. There is the longest (980 m) siphon in Russia. And what about the tourism? It is possible to hire diving equipment and an instructor!

The book is well illustrated, including colour figures. For a free ask the editor Andrzej Tyc (atyc@us.edu.pl). ISBN is 978-83-87431-89-1 and ISSN 1895-6777.

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