

Assoc. Prof. Ing. **Róbert Marschalko, DrSc.**



Robert Marschalko was born on 5th September 1929 in Rosina-Žilina in a teacher's family. He studied at the secondary school in Žilina (1948), and graduated from the Technical University (mining engineering) 1952 in Bratislava. As Senior Research Assistant he started at the newly established Technical University in Košice where he taught basic geology, stratigraphy and sedimentary ores. In 1956 he left Košice for the Geological Institute of Dionýz Štúr in Bratislava where he became fully engaged in sedimentary geology and the regional mapping of Mesozoic and Tertiary basins. Since 1965 he has worked as a scientific worker in the Geological Institute of the Slovak Academy of Sciences (GU SAV) in the Department of Lithology.

The sedimentology of the clastic rocks became Robert Marschalko's main interest. He applied the theory of turbidite currents in the analysis of the geodynamic evolution of Mesozoic and Tertiary flysch and molasse basins in the Carpathians and Alps. He emphasized the physical aspects of sedimentary processes and sedimentary environments and looked for possible applications of sedimentology to relevant geological problems, such as the formation of sedimentary structures in relation to the hydraulics of water streams, syndepositional tectonics of basins, geometry of sedimentary basins, their structural and bathymetrical axes (works from 1961, 1963, 1966, 1970, 1972, 1973).

On the basis of detailed study of the sedimentary structures R. Marschalko pointed to the important role of episodic sedimentation during sudden (catastrophic) processes, such as floods, seismicity-induced deformations of the continental shelf and submarine deltas (works from 1969, 1977, 1982). He stressed the possibility of ideal time correlations of these geologically instantaneous sedimentary events having profound sedimentary effects on vast areas of the surface and sea floor in the Earth's past.

R. Marschalko introduced the mapping of structures in paleocurrent and structural basinal analysis and in quantitative paleogeography (works from 1961, 1970, 1975, 1980, 1986). He contributed to the knowledge of the sedimentary model of submarine fans by the analysis of the so called marginal flysch facies occurring at the base of continental shelf in front of submarine canyon mouths (i.e. Šarišská pahorkatina Mts., Šambron Belt, Bánovce Basin). Thick complexes of coarse conglomerates become sought-after objects for oil prospecting companies.

The focal points for paleogeography, another important aspect of R. Marschalko's work, became the sedimentological studies of large basins, structural belts, and the Klippen zone of the Western Carpathians (works from 1976, 1979, 1986) where he pointed to the processes of tectonic shortening and estimated the width of buried source belts and marginal facies. He argued that the Carpathian Cretaceous flysch basins originated in a collision zone.

He estimated the depths of flysch seas by the study of ichnofossils (1973) and clastic foraminifers, the types of pelagic and hemipelagic sediments (1986) and the sedimentation rate of hemipelagic clays depending on depth.

At present R. Marschalko is working in new areas (Slovak and Moravian Carpathians) mainly with the emphasis on Upper Cretaceous movements and Gossau basins (1993, 1994, 1995).

Robert Marschalko was active in many international projects (International Geodynamic Project 1979–1980), IGCP Project 190 (1990). He worked in the field in the Balkans (Bulgaria), Eastern Carpathians (Ukraine, Romania). He was a member of scientific expeditions to the Caucasus (1975), Pamir, Tyan Shan (1985) and the Italian Apennines, Austrian and Swiss Alps.

He was active on the editorial boards of the *Sedimentary Geology* (1967–1984), *Geologica Carpathica* (since 1991), and took part in writing the *Encyclopedia of Sedimentology* (1978).

R. Marschalko was leader of the Sedimentological Section of the International Sedimentological Association in Kraków (1986) and Budapest (1989). In the Slovak Geological Society (SGS) he organized the Sedimentological working group, and guided numerous excursions for sedimentologists from Poland, Austria, England, Italy and the USA.

As an externist at the Comenius University Bratislava (UK) he read lectures on „Special methods in research on sedimentary rocks“, and later (1968–1993) an independent subject: Sedimentology. In 1991 he became an Associate Professor for petrology at the Faculty of Natural Sciences (UK Bratislava). In 1994 became an Honorary Member of the SGS.

Róbert Marschalko, the author of 122 scientific works with wide international response, still works in the Geological Institute of the SAV in his effort to interpret the sedimentary history of Western Carpathian basins.