

RNDr. MIROSLAV HARMAN, CSc. — 50 YEARS OLD

*In June 1982 RNDr. Miroslav Harman, CSc., senior scientific worker at the Geological Institute of the Slovak Academy of Sciences and managing editor of the journal *Geologický zborník — Geologica carpathica*, lives to his fiftieth birthday.*

RNDr. M. Harman, CSc. was born on 28 June 1932 in Bratislava, but he spent his childhood in Banská Bystrica and Podbrezová where he had passed basic school. He attended secondary school in Brezno (1942—1948) and in Malacky (1948—1950) where he took a leaving examination in 1950. In the same year he started to study at the newly established Geological and Geographical Faculty of the Slovak University in Bratislava. In 1952 he passed to the Geological and Geographical Faculty of Charles University in Prague where he was student of professors Koutek, Kettner and Kodým. In 1955 he finished his university study in the branch of deposit geology with dissertation "Antimonite deposit in Dúbrava".

In 1954 he started working at the Dionýz Stúr Geological Institute as the head of a newly established department of young volcanites. In 1956 he was admitted to internal scientific research study at a department of petrography of the Natural Sciences Faculty of Comenius University where Prof. J. Kamenský was his leader. After finishing internal research he worked in 1960—1964 at the Institute of Building Industries and Architecture of the Slovak Academy of Sciences. In 1963 he defended his PhD Thesis on "Petrography of initial basic volcanites of Kraklová zone". Since 1964 he has been an employee of the Geological Institute of the Slovak Academy of Sciences.

RNDr. Harman's professional activity is ample and varied. After his entrance into job, he mapped out the wider environs of Nová Baňa and Pukanec, he worked up old occurrences of Pb-Zn ores in the region of Pukanec and he was engaged in geology of NW spur of Bátovská kotlina basin where he succeeded in finding a lignit deposit and halloisite clays by research borehole PH-1 in 1956, he described these minerals in numerous publications. During his study stay at the Faculty of Natural Sciences of Comenius University he was engaged in mapping and petrographic research into Kraklová zone amphibolites, it is one of the first elaboration of this biggest amphibolite belt in the West Carpathians. During his work at the Institute of Building Industries and Architecture of the SAS he pursued mineralogy and petrography of building materials.



The activity of Dr. M. H a r m a n is from 1962 connected with foundation of the first laboratory of electron microscopy of minerals and rocks in Slovakia. He is working in this field up to now. He was the first in our country to apply electron microscopy methods in branches of geology. In the initial phases of work he was engaged in electron microscopy of clay minerals, he worked up several home and foreign localities.

In this period he published several theoretical works about application of electron microscopy methods and he worked out methodic procedures, such as method of selective etching, method of selective solution for allophane identification, then so-called carbonate test for identification of carbonate presence in clays, method of obtaining final fractions by centrifugation, and others used till the present in electron-microscopic practice at home and abroad. In 1968 he was awarded a prize of the SAS college for his work.

In the further stage of his work he was dealing with elaboration and application of electron microscopy methods to research of cherts and carbonates from Mesozoic of the West Carpathians and he described the first stages of carbonate crystallization in karst regions. In the sphere of application of electron microscopy to the study of organic remnants, he co-operated at research into nannoplankton from Neogene pelites from the West Slovakia, at examination of fauna remnants from lydites of Gelnica Series of Spišsko-gemerské rudohorie Mts. (discovery of so-called geopetal pyrite in organisms) and he worked out an original method of study of spores by transmission electron microscope and several other applications. In 1970–1973 he was engaged in electron microscopy of ore minerals. Result of this work was applied in the field of ultramicrotextures and ultramicrostructures of ore minerals, mainly pyrite, pyrrhotine, sphalerite, antimonite and others from various localities, in the possibilities to study inhomogeneity and typomorphism and problems of crystallization of ore minerals. Results of these works were published in several papers, especially from the sphere of the study of gold occurrence (electrum) in ore veins in Kremnica and from the Vtáčnik region.

Lately, Dr. M. H a r m a n, CSc. has been dealing with complex research of weathering products of the West Carpathian granitoid rocks. Within the framework of these works he worked up mineralogy of mylonites of Malé Karpaty Mts. and he delimited weathering types in the individual core mountains. He succeeded in proving hypergenetic alterations of the West Carpathian granitoids are of expressively illite-hydromica character, in contrast to granitoids of Bohemian massif. This work was awarded within a team a honourable appreciation of the Chairmanship of the SAS. In addition, he solved theoretical questions too, such as influences of hydrothermal processes on morphology of allophane, relations between morphology of particles and kinetics of dehydroxylation of the kaolinites of various structural order, he worked up Dubnica opals and he cleared up a phenomenon of opalization on the basis of their ultramicrotexture, and others.

The results of Dr. H a r m a n's scientific work are gathered in more than 50 papers and monographs and in several research reports. He stands in an important place in Slovak geology in the field of electron microscopy of minerals and rocks, he is pioneer in application of this branch to geological practice in our country.

Pedagogical work of Dr. M. H a r m a n, CSc. is of no less importance. Just

mention his pedagogical activity during his stay at the department of petrography of the Natural Sciences Faculty of Comenius University or, later when lecturing within the cycle "Methods of laboratory research". He is also author of university text-books. During his many years practice Dr. Harman has educated a lot of specialists in the field — electron microscopy of minerals and rocks — from the whole C.S.S.R. and he is ready to help actively to young geologists at solving various problems from his branch.

Another important Dr. Harman's field of work is his organizational and popularizing activity. He read his lectures on research results in various conferences, symposiums and seminars at home and abroad and he was many times appointed a member of organizing committees of these undertakings. He is author of several recensions, reports on researches, anniversaries, reports from scientific sessions, editorials, etc. published in scientific, popular-scientific and daily press. Since 1978 he has been working as a managing editor of the journal *Geologický zborník — Geologica carpathica*, which has become a significant international geological journal, CBGA and programme LITHOS organ. He is a member of editorial boards of several geological journals. In these functions Dr. Harman has great merits in popularization of the results of our science at home and abroad.

In the name of geological public we wish Dr. Harman a lot of creative successes and ardour which will serve to a further development of laboratory research methods in geological disciplines. Editorial board of *Geologický zborník* joints with thanks for his present honest work the wish of best of luck, good health, contentment and personal successes, and it wishes him a lot of energy in his work in the following years in the interest of development of the Slovak geology.

Doc. Dr. Ivan Kraus, CSc.

Translated by O. Mišániová