

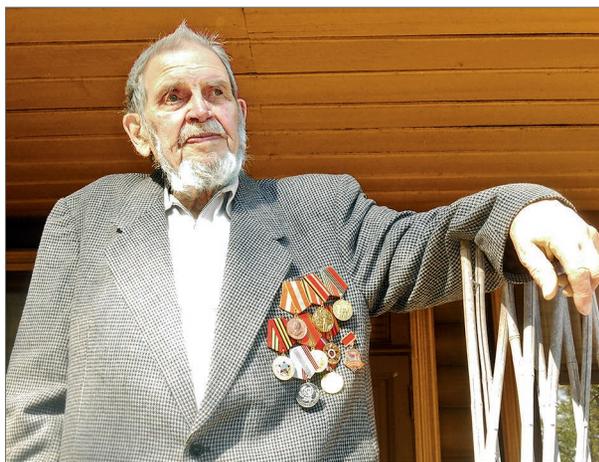
CHRONICLE

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**IN MEMORY OF SERGEY MIKHAILOVICH FOTIEV
(28.11.1927–23.12.2017)****M.O. Leibman, S.E. Sukhodolskiy***Earth Cryosphere Institute, Tyumen Scientific Centre SB RAS,
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On the 23rd of December, 2017, the famous geocryologist, doctor of science in geology and mineralogy, Professor Sergey Mikhailovich Fotiev passed away after a short illness. Sergey Mikhailovich will remain in his friends' and collaborators' memory as a brilliant scientist, an outstanding educator and organizer of science, and the secretary-general of the *Earth's Cryosphere* journal, highly valued by the entire geocryological community.

Geocryologist, cryogenic area, classification of taliks, cryohydrochemistry, secretary-general of the journal



On the 23rd of December, 2017 the outstanding scientist, doctor of science in geology and mineralogy, the secretary-general of the journal *Earth's Cryosphere* Professor Sergey Mikhailovich Fotiev passed away.

Only a month before his demise, Dr. Fotiev celebrated his ninetieth anniversary. The unfinished text of his paper and the manuscripts of the papers submitted to the journal which he intended to edit were left on his desk.

Sergey Mikhailovich Fotiev was born in Moscow on November 28, 1927. Before the beginning of the Great Patriotic War in 1941, he had finished the sixth grade of the school and during the war he finished the seventh grade. In December 1942, Sergey Fotiev was drafted to work at an aircraft plant, where he continued to labor till the end of the war. In 1946, he finished the 10th grade of the secondary school and was awarded a medal *For Valiant Labor during the Great Patriotic War of 1941–1945*.

In 1946, Sergey Fotiev was admitted to study in the Moscow Geological Survey Institute Named after S. Ordzhonikidze, the department of hydrogeology. After graduation, Sergey Fotiev started to work in the Railway Projects Organization of the Ministry of Interior of the USSR and simultaneously was a student of the graduate school of the Permafrost Institute Named after V.A. Obruchev.

In 1958, Sergey Fotiev successfully defended his candidate's thesis and started to work at the Aldan permafrost station of the Academy of Science of the USSR as its director (the settlement of Chulman, Yakutia).

In 1954, the station workers V.M. Ponomarev, V.T. Balobaev, S.E. Sukhodolskiy, G.N. Filosofov, as well as the workers of the expedition of the Workforce Study Council of the Academy of Science of the USSR (N.V. Velmina, V.V. Uzemblo, and A.I. Efimov), started the survey of the ground waters and of the permafrost mass of the Chulman coal basin and of the

adjacent territories. Sergey Fotiev continued those works and expanded their coverage. He established a series of traverses in order to investigate large sources of ground waters and their regimes, expanded the network of observation boreholes to monitor the rock temperatures and variations in the ground water level. The results of the studies were published in scientific journals and in the local press.

In 1961, Sergey Fotiev started to work in the Moscow-based Permafrost Institute Named after V.A. Obruchev, beginning with the position of a junior researcher and the learned secretary of the institute's science council. In 1963, the institute was reorganized, and part of its departments became the core of the new Production and Research Institute for Engineering Survey in Construction of the State Construction Committee of the USSR. In this institute, Sergey Fotiev worked till 1996 as a senior and later leading researcher. In 1965, Sergey Mikhailovich had a monograph published named *The Ground Waters and Permafrost Rocks of the Southern Yakut Coal Basin*, based on the materials collected at the Aldan permafrost station. That monograph opened the series of seven monographs written by Fotiev alone or in collaboration with his colleagues published later. The most notable out of the collective works are the volumes of such monographs as *The Hydrogeology of the USSR*, *The Geology of the BAM Region*, etc. p. Working at the first of these monographs, the author gradually came to the main idea of all his subsequent studies. It can be generally stated as the problem of thermal interaction between ground waters and the permafrost rock masses under different geological-tectonic and zonal conditions.

In 1978, the second monograph written by Sergey Fotiev *Hydrogeothermal Features of the Cryogenic Region of the USSR* was published. The provisions developed in it were later used in Fotiev's doctorate thesis *The Trends in the Development of Cryogenic Masses in the Territory of the USSR and their Impact on Formation of Ground Waters under Different Geostructural Conditions*, which Sergey Fotiev defended in 1978.

Fotiev's work as an educationist is extensive and unique, and planned work with graduate students was only a small part of it. In the Production and Research Institute for Engineering Survey in Construction, Sergey Mikhailovich supervised defense of six candidate theses (T.N. Bogomolov, M.O. Leibman, T.N. Elisafenko, F.N. Rivkin, S.N. Brazhnik, I.G. Kazakova). Two of his graduate students later became Doctors of Science.

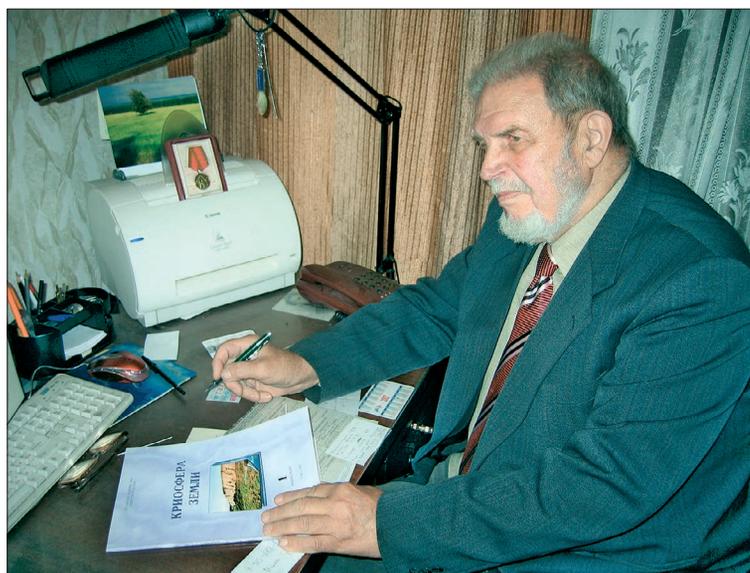
In the scientific community of geocryologists and hydrogeologists, Sergey Mikhailovich was widely known as an unprecedented consultant on generalization of investigation results, writing of theses, author's thesis summaries, papers, and investigation plans. He never denied help either to venerable scholars or young specialists who asked for his assistance. He always appeared as a well-wishing critic and advi-



sor, he gave advice on organization of collected materials and their preparation for publication. In preparing for publications, Dr. Fotiev demanded from the authors to be precise and consistent in provision of collected data and in statement of the conclusions made. More than once did Sergey Fotiev suggest ways and possibilities of more logical and regular presentation of the investigation results. At times, 'brainwashing' was rather emotional, but finally all the aspiring authors who 'finished' the school of Dr. Fotiev remained grateful to him for the lessons they learnt and were proud that Dr. Fotiev had participated in finalization of their work.

Dr. Fotiev was a member of science councils on awarding scientific degrees in the Production and Research Institute for Engineering Survey in Construction, All-Russia Research Institute of Hydrogeology and Engineering Geology, and in the Melnikov Per-





mafrost Institute. He often appeared as an opponent of candidate's and doctorate theses.

Sergey Mikhailovich worked hard in the area of making maps of different scales and purposes. Some of them were used as scientific support in designing large industrial structures, including BAM, in developing such an exotic project as the Eurasia–America transcontinental railway.

In 1997, Sergey Fotiev became the secretary general of a new scientific journal *Kriosfera Zemli* (*Earth's Cryosphere*), in which he worked for many years until his last day. Publication of the first journal issues required large organizing work from Sergey Mikhailovich, including development of the journal's

dummy, its status, and requirements for the authors. Beginning with the first issue, he was not only its secretary-general but also its strictest reviewer and simultaneously advisor for the authors. He contributed to raising the level of published papers by his comments and proposals, which were far from sheer criticism. It was due to Fotiev's contribution that the journal became highly valued in the scientific world and acquired a high rating position among journals in the area of geosciences. Beginning with the day of the first issue in 1997 to the present time, 86 issues of the journal have been published, with more than 800 papers.

Editing the journal, Dr. Fotiev never forgot about research. He summed up its result in the monograph published in 2009 *Cryogenic Metamorphism of Rocks and of Ground Waters (Conditions and Results)*. In this book, he consistently developed the provisions of the problem which occupied his thoughts throughout his life. After publication of the monograph, Sergey Mikhailovich wrote a number of papers in which, based on analysis of the published materials on the chemical composition of ice beds of the Yamal Peninsula, of ice inclusions of the embedding sediments, he stated his concept of formation of ice deposits.

Dr. Fotiev accumulated tremendous experience of investigations in different areas of geocryology. Together with N.N. Romanovsky, he developed a theory of cryohydrogeology (the study of the ground waters of the cryogenic region) and genetic classification of taliks. He was one of the founders of cryohydrogeochemistry, geochemistry of the ground waters of the permafrost region. Over the last years, he added geochemistry of ground ice to the area of his scientific interest.

In addition to his active involvement in the scientific and science organizing activities, Sergey Mikhailovich was known in the scientific community as a talented organizer of informal meetings. When he worked in the Production and Research Institute for



Engineering Survey in Construction, he organized New Year parties which attracted geocryologists from the entire Soviet Union. He was a recognized entertainer at all the geocryologists' gatherings and always found words of praise for each participant of the event.

A remarkable scientist, an exacting but well-wishing editor, and a good man has passed away. He will live in the memories of his numerous disciples and followers, in whom he instilled parts of his soul and personality.

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