

ARKADY MIKHAILOVICH KARASIK
1930-1987

Arkady Mikhailovich Karasik, a prominent Soviet geophysicist who was well known at home and abroad as an investigator of polar regions, died on February 27, 1987, at the age of 57, after a prolonged and grave illness.



Karasik was born on May 16, 1930, in Leningrad. In 1953 he graduated from the Leningrad State University and received an honours diploma. During the 1950s his activities were concentrated on magnetic research in the Arctic Basin and Antarctica. In 1956-59 he took part in the second and fourth Antarctic expeditions, pioneering the magnetic survey of Antarctica. Much of his research was done at the Institute of Arctic Geology, where he worked in different capacities. Beginning in 1959 he guided aeromagnetic studies over the seas of the Arctic Ocean. From 1972 he was the head of one of the major departments of the Institute and was involved in developing methods of conducting geophysical observations, assessing their reliability and interpreting them geologically.

Karasik belongs to the post-World War II investigators who contributed significantly to the revolution in the earth sciences that led to formulation of the theory of lithospheric plates. He successively considered the regions under study in terms of present-day concepts. Some of his articles concerned with the analysis and characterization of many magnetic anomaly fields of the world oceans, with detailed descriptions of their properties and features, rank among the classics. These works provided an objective basis for the identification of oceanic magnetic fields over some equators and elucidation of the genesis of some ocean basins.

One of Karasik's major achievements was his many years' study of the Eurasian Basin of the Arctic Ocean. This study enabled him to develop and substantiate the technique of geohistorical analysis, which, due to his efforts, became tech-

nologically accessible to a wide circle of investigators. Based on this technique, he constructed a generalized map of the magnetic anomaly pattern of the Arctic Ocean and presented a comprehensive analysis of it. Thus, the Eurasian Basin was inferred to originate in the process of sea-floor spreading away from the mid-oceanic Gakkel Ridge. Simultaneously, the time of formation of the basin was determined and pre-drift reconstruction of surrounding continental blocks was presented. Subsequently, Karasik extended his studies to the entire Arctic Basin, and he recognized and proved the continental origin of the Lomonosov Ridge. He was the first to delineate the magnetic field of the Mendelejev Ridge, and he also expressed his thoughts on the magnetic field structure and origin of the Canadian Basin, which are supported by present studies.

In 1978 Karasik was appointed chief of the Department of Marine Geomagnetic Research at the Leningrad Division of the Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation of the Soviet Academy of Sciences. While working at this institute, he broadened his focus to include other oceans. He personally participated repeatedly in hydromagnetic surveys in the Atlantic and Indian oceans. His creative activity was then centred on the study of the magnetic pattern of the world's oceans. His thorough analysis of the survey data provided insight into the structure and evolution of the Indian Ocean and considerably widened our knowledge about its northwestern part in particular. He devoted much attention to a generalization and systematization of the materials of marine magnetic surveys. Toward this end the most complete map of the paleomagnetic anomaly axes of the world's oceans was compiled under his guidance, the importance of which can hardly be overestimated.

Karasik was a highly gifted person of wide erudition and a great capacity for work. In 1967 he received his degree of Candidate of Technical Sciences and in 1975 that of Doctor of Geologico-Mineralogical Sciences. The two dissertations were based on the results of aeromagnetic surveys carried out under his leadership and active personal participation. Karasik took part in 15 arctic and 2 Antarctic expeditions. His publications covering various problems in geophysics and magnetometry include some 200 papers. He attended many congresses, conferences and committee meetings. His reports at scientific meetings were distinguished by their remarkable completeness, logic and elegance of style and attracted widespread attention. Karasik was a member of the Over-Union Council on Magnetism, as well as many other scientific councils. Any account of his career would be incomplete without mentioning a course on marine geophysics he brilliantly taught for over 10 years at Leningrad University. He trained young co-workers and left followers. In recognition of his important contributions to geophysical research, he was given some top awards.

Karasik was at the peak of his creative ability when his life stopped. This makes our grief much more acute. His devotion to cause and his creative mind, enthusiasm and unflinching readiness to help secured the respect and affection of his collaborators. Arkady Mikhailovich Karasik, outstanding scientist and person, will live on in the memory of those who knew him and had the pleasure of working with him.

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