

A LIFE IN SCIENCE WHICH IS LIFE ITSELF ON THE 80TH ANNIVERSARY OF ACADEMICIAN V.M. KOTLYAKOV

Science is Life

V.M. Kotlyakov. The Selected Works, Book 6

The epigraph for this article is composed of the words taken from the title of the Book 6 of "The Selected Works" by V.M. Kotlyakov¹ where the hero of the anniversary tells about his life journey and his 50-year-long work in science. For him, of course, science and life are inseparable. His next anniversary has approached now and, today, we can talk about 56 years in science. And what about life of V.M. Kotlyakov, the world-renowned outstanding scientist, academician, the leader of the Russian glaciology, and the symbol of national geography? It is there, among the lines of his books and articles, in numerous interviews to various media, and in personalia written by his friends and colleagues for various publications. No wonder that traditional memoir headings in the book by Academician V.M. Kotlyakov end with the second chapter "At the University" (there is only one preceding chapter – "Childhood and Young Years"). And further on, there are three impressive chapters: "Polar Countries" (about winter expeditions to the Antarctic and research in the Arctic), "The Becoming of the Soviet Glaciology" and "International Glaciological Life" (this chapter is about life, but very special, "glaciological" one). This means that, after graduating from university, he did not have life in our common sense; science has been his life. Thus, this simple philosophy explains the understanding of science as a form of life of an outstanding scientist².

And it appears that the hero of the anniversary does not separate one from

the other. He does not imagine himself without geography, glaciology, his institute, the Russian Geographical Society (RGS), maps, atlases, books (his own and written by his colleagues), expeditions, congresses, conferences, symposia, national committees, scientific councils, editorial boards of magazines, encyclopedias and serial publications, funding committees, etc. And this is still not enough for him. All the above mentioned should impetuously move around the leader speeding up while approaching a specific date of an event, e.g., an international conference, a meeting of the editorial board of "Proceedings of RAS. Geographical Series", etc. In this respect, the 90th anniversary of the Institute of Geography of RAS has been very remarkable. There, V.M. Kotlyakov has worked for 56 years, 25 of them – as director, and 42 – as head of the Glaciological Division. Generally speaking, the Institute is his home. The row of events designed over a year prior to the Institute's anniversary, was gradually shrinking and fading with the date of the event approaching. However, at the very "point of no return", as soon as the director began convening meetings of the executive committee nearly each week and getting involved in the activities of literally all steering groups, the executive committee has got a second wind: the book "The Institute of Geography and its People" has been prepared for publication, meetings with the Institute's veterans have commenced, a jubilee brochure has been published, and the program has been finalized. And so in all...

¹ Kotlyakov, V.M. The Selected Works. In Six Volumes. Book 6. Science is Life. RAS. Institute of Geography. Moscow. "Nauka". 2003. 574 p.

² Agranat, G.A. Geography: The achievements of science, success of a scientist (review). Herald of RAS. Vol. 73, № 2. 2004. pp. 177–180.

Five years after the previous jubilee of V.M. Kotlyakov have raced by. This period encompassed the 90th anniversary of the Institute of Geography, as well as the 165th

anniversary of the Russian Geographical Society (RGS) and other memorable dates. The years have flown so fast that we haven't completely realized the significance of the sequence of the anniversaries in the world of geography, which happen to take place in the early XXI century. And the jubilees of Academician V.M. Kotlyakov are, undoubtedly, prominent among them all.

There is a certain problem associated with the oncoming jubilee. On the previous one (the 75th anniversary), a collection of works in six volumes with the autobiography³ and a book in the series "Bio-Bibliography of Scientists" by "Nauka Press" had been published. It seems unlikely to expect similar accomplishments now. However, the hero of the anniversary has a lot to "account for" during the last five years:

- Receiving the award of the 2007 Nobel Peace Prize as a member of the Intergovernmental Panel on Climate Change;
- Receiving the award of the Order of Merit for the Fatherland of the IV Degree;
- Publication of the Elsevier's Dictionary of Geography⁴ in five languages and of its Russian version⁵;
- The 50th anniversary of the Russian Antarctic research (2006); V.M. Kotlyakov received SCAR Pin of Honor; he conducted meetings devoted to research of the sixth continent in Moscow and St Petersburg;
- Participation, as the leader of the Russian delegation, in the International Geographic Congress in Tunisia (2008),

the IGU Conference in Israel (2010) and in many other international meetings;

- Publication of the first issue of the "Ice and Snow" magazine ("Nauka" Press) (2010) that continued the series "Proceedings of Glaciological Research" founded by V.M. Kotlyakov in 1961;
- Organization and implementation of the 2007–2008 International Polar Year (IPY) (that could be considered another "brainchild" of our hero of the anniversary) and summarization of its first results⁶;
- The 165th anniversary of the RGS; holding the Extraordinary Congress of the RGS (2009) which marked its reform, and the RGS-sponsored conference "The Arctic – Territory of Dialog" (2010); regular contacts with S.K. Shoigu who became President of the RGS and V.V. Putin who became Head of the RGS's Board of Trustees; organization and conduct of the 14th Congress of the RGS (December 2010) where first results of the reform have been summarized and its strategy and perspectives were discussed;
- Publication of two volumes of a monograph on glaciation of the Northern Eurasia in the past, present, and future⁷ edited by V.M. Kotlyakov;
- The 90th anniversary of the Institute of Geography of RAS (2008) and publication, by that date, of the book "The Institute of Geography and its People"⁸;
- Preparation (editor-in-chief) and publication of the "Atlas of Kuril Islands"⁹ in cooperation with the Pacific Institute

³ Kotlyakov, V.M. The Selected Works. In Six Volumes. Book. 6th. Science is Life. RAS. Institute of Geography. Moscow. "Nauka". 2003. 574 p.

⁴ Kotlyakov, V.M., Komarova A.I. Elsevier's Dictionary of Geography. English, Russian, French, Spanish, and German // Elsevier. Amsterdam–Boston–Heidelberg–London–New York–Oxford–Paris–San Diego–San Francisco–Singapore–Sydney–Tokyo, 2007. 1048 p.

⁵ Kotlyakov, V.M., Komarova A.I. Geography: Concepts and terms: Dictionary in five languages. Russian, English, French, Spanish, and German // Moscow, Nauka, 2007. 859 p.

⁶ Kotlyakov, V.M., Frolov I.E. Russia in the International Polar Year 2007–2008. Preliminary results of studies of the cryosphere // Ice and Snow. 2010. № 1 (109). pp. 127–139;

⁷ Kotlyakov, V.M. (Editor in Chief) Glaciation in North and Central Eurasia in the Modern Era // 2006. Moscow. Nauka, 48 p.; Kotlyakov, V.M. (Editor in Chief) Glaciation in North Eurasia in the Recent past and the Nearest Future // 2007. Moscow. Nauka, 366 p.

⁸ Kotlyakov, V.M. (Editor in Chief). The Institute of Geography and its People: the 90th Anniversary. Moscow. Nauka. 2008. 677 p.

⁹ Kotlyakov, V.M. (Head of the Editorial Board) Atlas of the Kuril Islands. Moscow-Vladivostok: "DIK". 2009. 515 p.

of Geography of the Far Eastern Branch of RAS and with the Federal Service of Geodesy and Cartography;

- Development of new programs of the Presidium of RAS and the Division of the Earth's Sciences of RAS for fundamental research; V.M. Kotlyakov is their leader and the ideological inspirer and the team of the Institute of Geography is responsible for their implementation (2006–2010);
- The list of the hero of the anniversary's publications has grown by 100 papers; almost two dozen books were published under his editorship.

There is unlikely a person in the world, and indeed in our country, who has accomplished more from 2006 to 2011. And it is here that we can recall the phrase that opened V.M. Kotlyakov's book "Science is Life"¹⁰. Using the expression of the consuls of Rome finishing their ruling cycles, he wrote: "I have done what I could; let those who can do better".

The symbol of the national geography.

Exceptionally large volume of publications have been written on V.M. Kotlyakov and his work: together with Internet publications this list is at least 190–200 items long. Such publications were particularly numerous during recent years when the Institute of Geography, RAS, the RGS and the whole country celebrated the 70th and the 75th anniversaries of the scholar. All scientific periodicals, i.e. "Herald of RAS"¹¹, "Proceedings of RAS. Geographical Series"¹², "Geography and Natural Resources"¹³, "Proceedings of the RGS", "The Earth and the Universe",

etc.), published milestone articles. Since 1978, his biographical profiles have been appearing in the biographical dictionaries and encyclopedias. Information on him, his biography, and his contribution to the national science can be found in the "World Biographical Encyclopedia (1998)", "Great Soviet Encyclopedia (1980, 1983, 1985, 1990)", and "Russian Encyclopedic Dictionary (2001)", as well as in other two dozen reference biographical publications. Journalists interview him with enthusiasm, usually picking for the articles trivial titles associated with cold, snow, or ice, such as "Snow Man", "Ice Conqueror", or attempting, indeed, to link glaciology with "Father Frost" (Where was he born? Where does he live? Where does he govern?) or with "Snow Queen". These are the journalists. But he, himself used the titles of his popular articles to move the readers closer to the subject: "The Atlas of the "Refrigerators" of Our Planet", "Who Needs Last Year's Snow?" etc.

V.M. Kotlyakov is appreciated as an outstanding scientist, a public figure, a long-established scholar, and a very organized person not only in RAS, but also far beyond. I remember how young staff of a central TV channel aspirated about an interview with V.M. Kotlyakov and about their work with him on a broadcast.

When the time came for the anniversaries of his university classmates who, at large, became well-known geographers working, as a rule, at the Institute of Geography of RAS and at the MSU Faculty of Geography, V.M. Kotlyakov himself volunteered to write an article for "Proceedings of RAS. Geographical Series" to congratulate them.

When summarizing everything accomplished by V.M. Kotlyakov during these long years, one can be easily impressed by the volume, thematic breadth, and the depth of his work. It is quite understandable in respect to glaciology as a branch of geographical science: for many decades he remains its standing leader, who has modernized it and broadened its scope and methodology,

¹⁰ Kotlyakov, V.M. The Selected Works. In Six Volumes. Book 6. Science is Life. RAS. Institute of Geography. Moscow. "Nauka". 2003. p. 9

¹¹ Agranat G.A. Geography: The achievements of science, success of a scientist (review). Herald of RAS. Vol. 73, № 2. 2004. pp. 177–180.

¹² Belonovskaya, E.A., Belyayev, A.V., Velichko, A.A., Diakonov, K.N., Dreyer, N.N., Zinger, E.M., Kasimov, N.S., Krenke, A.N., Lipets, Yu.G., Osokin, N.I., Saltykovskaya, L.V., Tishkov, A.A. Vladimir Mikhailovich Kotlyakov is 75! // Proceedings of RAS. Geographical Series. 2006. № 5. pp. 7–11.

¹³ Baklanov, P. Ya, Snytko, V.A., and Chibilev, A.A. "The Collection of Works" of Academician V.M. Kotlyakov [in six books] // Geography and Natural Resources. 2004. № 4. 157 p.

has promoted the most advanced methods of investigations (remote sensing, isotope, paleoclimatic, geochemical etc.), has created a strong unified terminology, and several times has managed to assemble large teams (up to 300 people) for inventory and mapping of the glaciers. There were good grounds for rewarding the creators of "The World Atlas of Snow and Ice Resources"¹⁴ led by V.M. Kotlyakov with the 2001 State Award of the Russian Federation in Science and Technology. He also remains the "Pimen of the national glaciology and a chronographer of the glaciological literature"; he diligently follows everything that is published by glaciologists, summarizes and makes it available to all interested persons.

But this is not yet the entire story. All that creates the modern geographical science now, and all that, in one or another way, excites the minds today, had been suggested and stated by him decades ago in the form of ideas and hypotheses and had been planned in the format of research programs. These include deep drilling of glaciers, isotope analysis of ice core-samples and the reconstruction of the history of the Earth's climate and natural environment during different phases of its evolution. Moreover, these are his views on the modern climate change, its natural and anthropogenic components, and its impact on the nature, economy and population. When he was elected director of the Institute of Geography, he had to wrap up, either willingly or unwillingly, into the multitude of themes and to accept responsibility for finalizing large projects of Academician I.P. Gerasimov, including the atlas "Nature and Resources of the World". It is clear now from the words spoken by the hero of the anniversary himself, that this "is connected primarily with inevitable expansion (and, to some degree, with change) of interests" at acceptance of the position of director of the Institute of Geography of RAS.

How does he manage to accomplish this, is a big secret. But it is only a secret to those who don't know V.M. Kotlyakov. We feel emboldened to say that we know him well and understand how he does it.

Nulla dies sine linea. Let us take, for example, his publications. For already 55 years, V.M. Kotlyakov has been producing articles, scientific and popular science papers, books, and maps. Their number is over a thousand! Moreover, upon careful examination of the hero of the anniversary's biography, his exceptional commitment becomes clear – at least 20 to 25 scientific and at least two to five popular science works per year. We should also mention his work as the scientific editor of monographs and collections of papers (over a hundred since 1964). In this connection, it is appropriate to note that Academician V.M. Kotlyakov was the editor of most monographs on glaciological issues published in the USSR and in Russia. And what about his famous "brainchild", i.e. "Proceedings of Glaciological Research" (PGR), now titled closer to the subject of studies, i.e. "Ice and Snow"? Since 1961, for already 50 years (!), he has been editor-in-chief of this publication. The mission fits to be included in the "Guinness Records". And still no beaten tracks. Over a hundred issues have been published, but the twinkling eyes of the editor-in-chief tell about his sincere interest in each issue, each paper, and each illustration.

Analyses of themes of V.M. Kotlyakov's publications conducted by the compilers of his bibliography on the 75th anniversary of the scholar showed that, as it should be expected, his scientific interests have broadened. From special problems of snow studies, ice studies, and glaciology (in 1950s–1960s) they gradually expanded, in 1970s–1980s, to encompass mountain geoecology, its new methods, including remote sensing and mapping of glaciers and compilation of glaciers cadastre. And then, since the mid-1980s till nowadays, his scientific interests have embraced general geographical, ecological-geographical, and environmental

¹⁴ The World Atlas of Snow and Ice Resources. Vol.2. Book 1. Ed. By Kotlyakov, V.M., Grosvald, M.G., Davidovich, N.V., et al. RAS. 1997. 264 p

problems, paleogeology, and climate change. Recent years were marked by the publication of the Elsevier's Dictionary of Geography¹⁵ compiled by V.M. Kotlyakov and A.S. Komarova and of its Russian-language version¹⁶. In keeping with the best traditions of the national science, he familiarized his colleagues with the entrails of his work on this thousand-page thick reference book¹⁷. He shared with them his doubts and success in achieving truly "geographical sockdolager", i.e., terminology of 14 geographical disciplines¹⁸. The experience of analysis of the terminology and supporting reference material proved to be not only successful but also very useful; it vitalized this almost forgotten branch of geographical science capable to unify approaches to problem solving in many geographical sciences. This experience gave a new impulse to the integrity of geography.

In 2000–2004, V.M. Kotlyakov published six volumes of his selected works. It is difficult to remember something even remotely similar in the national geographical science of the XX century. The unprecedented nature of this event is associated with the fact that this publication asserts the right of geography to occupy an important place in the modern life. The scientific deed of the scholar noted by his colleagues¹⁹ and widely recognized by the public, was also in consolidating the leading role of geography in the scientific support of the country's sustainable

development and in promotion of greening and humanization of geography itself. In 2005, the Presidium of RAS awarded him with the L.S. Berg Gold Medal for this work.

From the International Geophysical Year to the International Polar Year-3.

A five-year period between V.M. Kotlyakov's anniversaries included the 2007–2008 International Polar Year (IPY). But there are only few who remember now that it was after more than 50 years since his participation in the International Geophysical Year (IGY) (1957–1959) and his first winter expeditions to the Severny Island of the Novaya Zemlya (1955) and to the Antarctic (1956–1957) that he came back to the idea of holding the IPY²⁰. Recognizing the fact that the Arctic and the Antarctic are the areas of global cooperation and together with his friends and colleagues, he was among the originators of the IPY-3 initiative that emerged as early as in 2003. Far back in the 1950s, the IGY managed to breach the "Iron Curtain"; today, the mission of the IPY is to provide for the cooperation of scientists for prevention of negative and often catastrophic consequences of the modern transformation of the environment and climate. 2007–2008 marked 50 years since the IGY, and 125 and 75 years since IPY-1 and IPY-2, respectively. V.M. Kotlyakov has repeatedly spoken and written on the need to be engaged again in extensive Arctic and Antarctic research using new approaches and methods. The IPY-1 and the IGY coincided with different climatic cycles of the Earth: cooling at the end of the XIX century, warming in the 1920s–1940s (most noticeable in the Arctic), and cooling in the 1950s–1970s. During recent decades of the XX century and the early XXI century, there is a marked warming of the global climate. The most significant changes occur in the Polar Regions and there is high uncertainty associated with forecasted trends of climatic changes there²¹.

¹⁵ Kotlyakov, V.M., Komarova, A.I. Elsevier's Dictionary of Geography. English, Russian, French, Spanish, and German // Elsevier. Amsterdam–Boston–Heidelberg–London–New York–Oxford–Paris–San Diego–San Francisco–Singapore–Sydney–Tokyo, 2007. 1048 p.

¹⁶ Kotlyakov, V.M., Komarova, A.I. Geography: Concepts and terms: Dictionary in five languages. Russian, English, French, Spanish, and German // Moscow, Nauka, 2007. 859 p.

¹⁷ Kotlyakov, V.M., and Komarova, A.I. Geography as a multi-disciplinary science (from the experience of compiling a multilingual dictionary of geographical terms) // Proceedings of RAS. Geographical Series. 2004. № 3. pp. 8–17.

¹⁸ Drozdov, A.V., and Tishkov, A.A. Multilingual Elsevier's Dictionary of Geographical Terms and Concepts // Proceedings of RAS. Geographical Series. 2007. № 4. pp. 134–135.

¹⁹ Maksakovsky V.P. Geography in a changing world. On the publication of "The Selected Works of Academician V.M. Kotlyakov" // Geography in School. 2003. № 4. pp. 3–7; Baklanov, P.Ya, Snytko, V.A., and Chibilev, A.A. "The Collection of Works" of Academician V.M. Kotlyakov [in six books] // Geography and Natural Resources. 2004. № 4. 157 p.

²⁰ Kotlyakov, V.M., and Sarukhanyan, E.I. The International Polar Year 2007–2008 // Nature. 2007. № 3. pp. 34–40; Kotlyakov, V.M., Sarukhanyan, E.I., and Frolov, I.E. The first steps of the International Polar Year 2007–2008 // Nature. 2010. № 9. pp. 44–55

²¹ Kotlyakov, V.M. and Sarukhanyan, E.I. The International Polar Year 2007–2008 // Nature. 2007. № 3. pp. 34–40

Throughout the entire preparation period and in the course of the IPY-3, V.M. Kotlyakov was “in charge” – he participated in selection of international projects (so called “clusters”), coordinated glaciological research in Russia, and led the implementation of international projects. Invisible strings of a musical instrument called “polar research” were extending to reach him from all regions of the Arctic and the Antarctic. Skeptics were laughing: “Where can one get money? Where are the experts? Where is youth to work in snow and ice?” But even three years prior to the beginning of the IPY-3, he had secured funding for special programs for fundamental research of the Presidium and the Division of the Earth’s Sciences of RAS aimed at the organization and implementation of the IPY in the Russian Arctic and the Antarctic. Annually in October, the city of Sochi, haven’t yet cooled from hot summer holidays, became, one may say, a “near polar” city. Under the leadership of Academician V.M. Kotlyakov, special conferences were held there devoted, initially, to the organization and, then, to the summarization of the first results of the IPY. None of other Russian cities (except for Moscow and St. Petersburg) has experienced such a gathering of researchers of snow and ice. And maybe it was the scientific foresight of V.M. Kotlyakov that contributed to the selection of Sochi as the capital of the oncoming Winter Olympic Games.

Honorary President of an oldest scientific-social organization of Russia. The Russian Geographical Society has celebrated its 165th anniversary and V.M. Kotlyakov contributed 55 years of his membership to it. And all these years, it was not just a passive membership, but an active work, first of all, at the Moscow center of the RGS. Since 1980, he was continuously elected Vice-President of the RGS. In 1991, he was elected President of the newly founded Geographical Society of the Russian Federation. Then, after the merger with the RGS at the XI Congress, he was also unanimously elected Honorary President of the RGS. This recognition of V.M. Kotlyakov as a scientist and a leader

of the national geographical community proves that it is not limited just to academia or higher education. He has also received awards from the RGS: the F.P. Litke Gold Medal for his “Dictionary of Glaciology” (1984) in 1985, the N.M. Przhevalsky Gold Medal for the monograph “The World of Snow and Ice” (1994) in 1996, and the Big Gold Medal of the RGS in 2005.

And whereas he has been already well-known abroad as a leader of the national glaciologists, it is specifically because of his work at the RGS that his recognition as a geographer-encyclopedist became possible: he has been elected a member and a corresponding member of a number of foreign geographical societies, namely, American (1987), Mexican (1996), Estonian (2000), and Ukrainian (2008).

One can understand the leaders of our country, e.g., Prime Minister V.V. Putin and Minister for Emergency Situations and President of the RGS, S.K. Shoigu, who take interest in the problems of geography and environmental protection in Russia and regularly contact V.M. Kotlyakov and N.S. Kasimov to seek advise and support for various undertakings of the RGS which is undergoing the profound reforms.

It is encouraging to see our hero of the anniversary in presidiums of the important meetings of the RGS next to those, who themselves, at their own initiatives, came to assist this organization recognizing that “without geography we are in the middle of nowhere!” and attempting to give this organization new impetus to development. And despite the words of those who favored more the former waning life at the RGS, especially at its regional branches, our hero of the anniversary is exactly the one who made sure that geographers have their “corporate fortress” that protects the union of academic, higher education, sectoral, and secondary education geography. Recently, in connection with the reforms of the RGS and the activities of its Executive Directorate, one can see the genuine admiration of

young organizers of the RGS events when they look at the symbol of the modern geographical science, i.e., at Honorary President of the RGS! Oh! They will tell a lot about Academician V.M. Kotlyakov, linking him with his geographical ancestors, such as N.M. Przhevalsky, F.P. Litke and L.S. Berg.

“To wander is the miller’s joy, to wander!”

The heading of the final section of our essay on the anniversary of V.M. Kotlyakov is from the famous song by F. Schubert “Wandering!” The secret of creative longevity, of infectious interest to science and all new in it and of exceptional diligence and attention to people is in motion. In the 1950s, he found his “guiding star” in science and chose a difficult life and career path. And he departed along it without taking any rest-stops, from one milestone to another. The year 2011, as well as the year 2010, is filled to the rim with works, trips, presentations, papers, and books. He is welcomed in Paris, Geneva, Vienne, Oslo, and Berlin, where the headquarters of international organizations and national committees that he heads are located. He plans his participation in international geographical congresses and conferences a year before, or even earlier. Since the establishment of international scientific committees on the Arctic and the Antarctic, it has become his duty to participate in their meetings. The colleagues-geographers from the CIS countries regard V.M. Kotlyakov as their leader and receive him as a reputable member, an old friend, and an honorary guest at their events. And all this is only abroad and in one year only!

And there are also trips and events in this country. These are just impossible to account and work into the schedule. Regular, actually annual, conferences of glaciologists; visiting

sessions of the Scientific Council of RAS on the problems of fundamental geography; repeated meetings of the Scientific Council and the Presidium of the RGS in St. Petersburg ... After the successful start in 2010 in Moscow, it was decided that in 2011, the international conference “The Arctic – Territory of Dialog” will be held in Arkhangelsk. V.M. Kotlyakov, as one of the initiators and the organizers of this international meeting, began the preparatory work actually one year prior.

Our hero of the anniversary is in the constant motion – heading the Section on Oceanology, Physics of Atmosphere, and Geography of the Division of the Earth’s Sciences of RAS, the Institute of Geography of RAS, several dozens of societies, councils, committees, commissions, and editorial boards; editing several books simultaneously; preparing 20–30 scientific and popular science articles each year; closely supervising the work of his students, graduate students, and candidates for doctoral degrees; and constantly giving interviews to TV programs and other mass media. And this is happiness for him!

However, the purpose of this essay is not to list all numerous duties of V.M. Kotlyakov. The purpose of it, indeed, is to create a portrait of the scholar through the eyes of his colleagues, whom he walks next to, but a little bit faster than anyone else. It is precisely the reason that he has been considered the leader of our science and our geographical community. The portrait is ready, being made with large brushstrokes. Now it remains only to wish Vladimir M. Kotlyakov to stay in motion as long as possible, i.e., to wish him happiness, fascinating journeys, new books, and long life in the name of the Science!

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