Academician V. L. Komarov as a historian of science

S S Ilizarov

S. I. Vavilov Institute for the History of Science and Technology of the Russian Academy of Sciences, 14, Baltiiskaya str., Moscow, 125315, Russia

E-mail: sinsja@mail.ru

Abstract. It is demonstrated that one of the most versatile Russian scientists, geobotanist V.L. Komarov fully belonged to the academic tradition, according to which natural scientist was expected to be well-versed in the history of science. As a historian of biological sciences, Komarov was engaged in different genres: theoretical, historical-biographical, as a historian of evolutionism, etc. Komarov lived in a period when the history of science in Russia as well as in a number other European countries was in the process of disciplinary institutionalisation, i.e. its transformation from a research area into a sphere of professional activities. For Komarov, history of science was, on the one hand, a method of scientific study of floristic material, and on the other hand, an expression of profound humanistic understanding of the role of the history of science as a way of gaining knowledge and understanding of the world and culture.

1. Introduction

The year 2019 saw the 150th anniversary of the birth of Academician Vladimir Leontievich Komarov (1869–1945), an outstanding Russian scientist, statesman and public figure, President of the USSR Academy of Sciences, and Honorary President of the Geographical Society. The jubilees tend to propel historical memories. In this context, it would be logical to explore the historical-scientific legacy of Komarov, whose name is associated with the most important, critical stages in the development of the history of science in the USSR as a sphere of professional research activities. Right from the start, history of science had been an integral, indispensable part of Komarov’s work as a botanist, a universal naturalist, although, at the same time, he authored quite a few purely historical-scientific works.

Figure 1. President of the USSR Academy of Sciences Vladimir Leontievich Komarov
2. Methods, materials and historiography

This paper is based on the archival and literary sources, first and foremost, on V.L. Komarov’s historical-scientific works. While in Komarov’s lifetime and during the first few years after his death, many papers and books were devoted to him, subsequently his scientific legacy, especially in the field of the history of science, became practically forgotten, despite Komarov’s undoubtedly being one of the key figures in the tragic history of Soviet science. Such omission is partly associated with the fact that, due to severe censorship during the Soviet era, many events and names of repressed scientists Komarov associated with were strictly banned. As a result, the attitude towards Komarov as a person was gradually becoming erroneous and superficial – he was regarded by many as practically a minion of Stalin’s regime. The formation of his negative image was, in no small part, influenced by the publication of S.I. Vavilov’s diaries that happened to be full of rude and unfair remarks about his predecessor as President of USSR Academy of Sciences. Therefore, when studying Komarov’s legacy and the time in which he lived, one should be governed by – apart from the general historical methods – the principle of historical credibility. Among recent works devoted to Komarov’s biography that are scientifically significant, one may mention [1-5]. However, Komarov’s legacy as historian of science is a practically unexplored topic that demands a systematic modern study [6].

3. Results and Discussion

For the Russian historians of science, the name of V.L. Komarov is as important as that of V.I. Vernadsky. There is a long-standing tradition in the Russian science, according to which a true scientist must be not only a professional in his chosen discipline but also well-versed in the history of science. This pan-European phenomenon of scholarship that was transferred to Russia in the 18th century became firmly planted there. Komarov was a prominent representative of this persistent tradition: a specialist in floristics and a geobotanist who worked in those disciplines of natural sciences that, more than many others, dealt with systematic material, with exploring time-evolving natural phenomena – just one more step away from the history of science in its pure form. It was this side of Komarov’s research work that manifested itself even in his early studies, which was characteristic of Komarov, one of the most versatile Russian scientists, as a prominent thinker and historian of science T.I. Rainov wrote about him in 1944 [7]. A foremost historian of science S.L. Sobol wrote that, in Komarov’s frame of reference, the history of biology was as valid and important as other sectors of biological science [8].

Figure 2. V.I. Vernadsky’s note to V.L. Komarov: “Dear Vladimir Leontievich, yesterday, in the bustle of the meeting, I haven’t expressed to you my feelings of deep friendly regard on account of your decision to take on the heavy responsibilities of the Vice President. Permit me to wish you strength and health in this difficult but important position. Yours sincerely, V. Vernadsky. 4 February 1929”

V.L. Komarov believed that understanding the world of plants is only possible through reconstructing its history and studying the migration of various “floristic complexes,” evolving under the influence of environmental conditions. Thus, the results of systematic studies of the vegetation of eastern Asia, carried out by Komarov during major expeditions in the late 19th – early 20th century, became translated into his fundamental work, “The flora of Manchuria.” This work, however, like many of his other works, contains not only a comprehensive botanical and geographical description of the region but also an exhaustive historical-scientific analysis of relevant literature.
Komarov’s scientific method implied a complex study of flora in a given area. He had formulated a systemic approach very early in his scientific career. For instance, in his early major work “Materials on the flora of the Turkestan Uplands: the Zeravshan River basin,” published in 1896 in the *Proceedings of the Imperial St. Petersburg Society of Naturalists*, he described three consecutive stages of his study. The first part of this work provided a detailed analysis of the plants’ environment: landscape, amelioration, climate, soils, and finally, human impact (cattle grazing, deforestation and brush cutting, agriculture and horticulture). The second part contained a list of plant species growing in the Montane Zeravshan. The third, theoretical part contained general constructs and particular groupings of the flora under study, based on available data, followed by the descriptions of what was actually observed, and, finally, theoretical constructs and assumptions were compared with the actual situation. Defining the stage of the local flora’s development, Komarov concluded that the most important factor in its history was the increasing drying of the region.

In the 1920s, Komarov published a series of purely historical-scientific, or rather historical-biological, works. In his rather small book titled “From the history of biology” he had thus formulated the tasks of this knowledge area: “The history of biology shows us, first, a steady accumulation of factual knowledge rather than abstract theorising. Second, a steadily growing influence of physicochemical method of research. Third, increasingly more widespread use of the experimental method that replaces the descriptive one. We are striving more and more to not only comprehend life in its diverse forms but also to regulate it” [9, p. 6].

His interest in the legacy of his predecessors in the studies on the vegetation of Central Asia was reflected in his fundamental work “The botanical routes of the most important Russian expeditions in Central Asia” (1920, 1928), devoted to major expeditions led by N.M. Przhevalsky (Przewalski) and G.N. Potanin. In the same vein, Komarov also published a number of works on the history of studies on the flora of the Northern Pacific territories, including Alaska, Kamchatka, the Commander Islands, the Okhotsk region, as well as of the Amur River basin, Korea, Sakhalin, Japan, China, etc. V.L. Komarov actively worked in a genre of scientific biography, especially after his election as full member of the Academy of Sciences and later, as its President.

He had authored many essays and books devoted to the life and works of Russian scientists: A.N. Beketov, O.A. Fedchenko, S.N. Kostychev, V.V. Sapochnikov, P.P. Semenov-Tyanshanskii, K.A. Timiryazev, and others. However, Komarov went far beyond the history of the Russian studies on plant geography and Russian scientists’ biographies. Ever since being a student at the university, his interest for the history of evolutionism and of the search for the origin and meaning of life led him to explore the works by Charles Darwin and his predecessors. Komarov published the books on Carl Linnaeus and Jean-Baptiste Lamarck.

As for Darwin, it deserves to be specially mentioned that in 1932, the year of the 50th anniversary of death of Charles Darwin, the Academy of Sciences decided to publish an academic edition of works by the founder of the evolutionary theory of the origin of animal and plant species by natural selection. Komarov supervised the publication of the then most complete edition of Darwin’s works in the world, which largely determined its success.
Figure 3. The programme of the USSR Academy of Sciences’ session devoted to Charles Darwin (with the opening address by V.L. Komarov). Moscow, 1939

4. Conclusion
Komarov is known in the historiography not only as a researcher and historian of science. His versatile efforts as science promoter and organiser had a much greater impact on the fate of the history of science in the USSR than his own research in this area. Komarov contributed to the making and development of the Commission on the History of Knowledge (KIZ) of the USSR Academy of Sciences, headed by Academician V.I. Vernadsky from 1921 to 1930. Later on, after Academician N.I. Bukharin, the then Chair of KIZ, managed to get KIZ reorganised into the Institute for the History of Science and Technology (IINT), Komarov as, firstly, Vice President and then President of the USSR Academy of Sciences did a lot for IINT to become one of the best institutes at the Academy. The impact of science-organising efforts of Komarov as President of the USSR Academy of Sciences became particularly marked in the period of acute crisis in the disciplinary development of the history of science that erupted in the 2nd half of the 1930s. In 1936-1938, Komarov together with V.I. Vernadsky did everything possible to preserve the first research institute for the history of science and technology. It was during that period that V.L. Komarov began to meet and communicate with a historian of biology S.S. Sobol, a historian of science and a prominent thinker T.I. Rainov, and a historian of science B.G. Kuznetsov. Good working and personal relationships became established between Komarov and each of these outstanding historians of science.

V.L. Komarov was the person to whom the Institute for the History of Science and Technology owes its creation and existence to this day and, accordingly, the history of science somehow or other continues to develop as a professional sphere in its own right [10]. The creation of the Institute was the last significant, even heroic deed in the life of this outstanding statesman, scientist, and man.

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