Dr. V. A. Varsanofieva writings on the protection of the environment

O A Valkova
S I Vavilov Institute for the History of Science and Technology, Russian Academy of Science, 14, Baltiiskaia str., Moscow, 125315, Russia
E-mail: o-val2@yandex.ru

Abstract. The paper presents data on the ideas and efforts of well known soviet geologist and mineralogist, historian and popularizer of science Dr. Vera Varsanofieva (1889–1976) in such area as environment protection. Despite the small number of published works about this topic she was a prominent figure in nature preservation struggle in the Soviet Union. Her efforts were mostly focused on the protection of nature preserves from destructions caused by desire of unrestricted economic use. She was convinced that integrated natural reserves should be created to protect both living and inorganic nature because they were closely intertwined and that such reserves were the best places for the nature exploration.

1. Introduction

Vera Varsanofieva (1889–1976) was the first female in the USSR granted doctoral degree in geology and mineralogy in 1935. She was a professional geologist and spend a large portion of every year in the “field” starting from her student’s years in 1907–1915 and till her retirement in 1970 when she was already 81 years old. She regularly published results of her field research and was well known and well respected in the professional community. Simultaneously she was teaching different geological courses in different universities beginning from 1916, organizing later, in 1925, the department of geology in the II Moscow State University (II Moskovskii gosudarstvennyi universitet) and leading it for more than three decades.

She was also a popularizer of science, written several popular-science books and many articles that were published and republished. Interested in humanities, specifically in history from her childhood she in time became a historian of science and published several books and articles in the history of science in the USSR, history of natural science education in the Russian Empire and women education.

Again, from the very first days of her professional career in geology she obtained memberships in several Russian natural science societies and enthusiastically participated in their activities. In time she became a part of the leading bodies of a few of them and in 1943 was elected a vice-president of the eldest and most renowned of all Russian societies – Moscow Society for the naturalists (Moskovskoe obshchestvo ispytatelei prirody).

As many women of her generation who archived significant career success in previously strictly men’s sphere she was invited to participate in political activities and was elected people’s deputy first in one of the Moscow local districts and then a member of Moscow Soviet of Deputies. From her biographical data it is known that she really cared about people she represented and tried to aid them as much as was possible as well as she cared about her students and her research [1].

[1] Reference...

Content from this work may be used under the terms of the CreativeCommons Attribution 3.0 licence. Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

Published under licence by IOP Publishing Ltd
But her real passion was wild nature. Through all her life she was spending an extraordinary amount of time and effort working on protection of living and inanimate nature. Despite that she published only a few items on the subject and her special book about Pechora-Ilych nature reserve (Pechero-Ylychskii zapovednik) was also left unpublished. As of today, I don’t know the reason but I strongly suspect that it was due to the governmental policy of the time. In the article I will analyze her forgotten or unknown writings and ideas on the protection of the environment.

2. Materials and methods
The main sources for my research were original papers published by Dr. V. A. Varsanofieva and also her unpublished writings such as speeches given on different occurrences, books and papers left unpublished by different circumstances, her private and official correspondence. All this data was accumulated in the Russian State Archive of Economics (Rossiĭskiĭ gosudarstvennyĭ arkhiv ěkonomiki) in Moscow [2].

3. Dr. V. A. Varsanofieva writings on the protection of the environment
From its very early days Vera Varsanofieva was a member and an active participant in the activities of the All-Russian society for nature protection (Vserossiĭskoe obshchestvo okhrany prirody) founded in 1924. For her this effort was not a social or professional or even political obligation but a heart desire. In her private correspondence with friends and colleagues she frequently mentioned that the time she was spending in communication with nature was the best and the happiest in her life. She even wrote that she became a geologist in order to have a legal opportunity to regularly spend time in wild nature environment. Among her unpublished documents one can find texts of several speeches from different years dedicated to the subject of nature’s protection. They were given during sessions of the All-Russian society for nature protection, special conferences and official meetings in state departments, for example, such as the State Planning Committee of the USSR Council of Ministers (Gosudarstvennyĭ planovyĭ komitet Soveta Ministrov ŠSSR) [2].

![a](image1.png) ![b](image2.png)

Figure 1. Portraits of Vera Varsanofieva: a – in her youth; b – in her middle age.

There were several subjects she mostly concentrated on. Among them the need to protect objects of inanimate nature as much as living nature; the necessity of protecting nature in complex including inanimate nature, living nature, and humanity as an integral part of that last; the terrible need in the reasonable and accurate use of natural resources; the need to teach children and teenagers to love and protect nature and last but not the least the necessity to create and protect natural reserves.
One of her ideas which she actively promoted was the need to protect not only animate nature but inorganic nature as well. Namely mountains as well as interesting and rare outcroppings of rocks, etc. In 1959 she published an article entitled “Monuments of inanimate nature” (“Pamiatniki nezhivoi prirody”) where she outlined her thoughts on the subject [3]. First, she mentioned that layers of hard and loose rocks which make up the earth’s crust are in fact beautiful chronicles of Earth. She argued that they were in fact pages of an interesting book where Earth itself wrote its own history. She outlined natural factors destroying even mountains and named several very interesting for geological research rocks outcroppings situated in the USSR.

She then mentioned that sedimentary rock which contained fossils were unique monuments of nature as they presented information about development of life on earth, allowed to reconstruct the history of modern plants and animals and tells us a story about changes which occurred on the surface of the globe. She argued that rock outcroppings rich with fossils should be preserved from destruction as the monuments of geological history of great value. She named then several very interesting for researches and rare places on the territory of Pechora-Ilych nature reserve. She also argued that it was important to preserve natural outcrops on the sites where extractions of minerals were performed as they allowed to trace outcrops relationships with the surrounding rocks and other peculiar properties.

Her next point was that the inorganic nature was closely connected with plant and animal life as well as the artifacts of prehistoric man. She concluded that sites of wild nature where significant geological and mineralogical monuments were mixing with archaeological artifacts and interesting specimens of vegetation and fauna should be declared complex nature reserves and be protected by law. She argued that there it would be possible to study a diverse and complex existence of the inanimate and live nature simultaneously as they are closely connected between themselves. That is why according to Varsonofieva it was so important to organize and protect nature reserves in different regions of the country.

In 1961 Varsonofieva participated in the special conference dedicated to the nature protection in Komi Autonomous Soviet Socialist Republic (Komi Avtonomnaia Sovetskaia Sozialisticheskaia Respublika) where she was one of the organizers and main speakers. The purpose of the conference was an attempt made by scientific community to protect the Pechora-Ilych nature reserve from elimination or severe reducing of its territory. Varsonofieva began her speech with the statement that it was well known that everything was interrelated and interdependent in nature and to learn the laws of nature evolution was possible only by taking into account all complex and diverse connections between different elements of the landscape [4]. And to learn those laws is essential as for the development of natural science as well as for sensible and clever use of natural resources. She stressed that rational and profitable use of natural resources is possible only with parallel care about their recovery and increase. And in turn that is possible if nature is exploited and then restored on the base of complex and comprehensive research. Numerous failures in rearrangement of nature undertaken by soviet government without understanding of many and various connections between different parts of relief and consequences of destroying of any link in this chain were the sad result of such ignorance. As examples of such failures with dire consequences for environment she mentioned the deliberate lowering of the water level of lake Sevan in Armenia, land reclamation of the floodplain of the Oka river. Then she argued that optimum conditions for a comprehensive study of nature existed exclusively in nature preserves. She finished her speech with the statement about importance of the environment protection for people of different countries. The humanity, she argued, couldn’t afford not to care about depletion of natural resources, threatened extinction of rare animal species, about the need to preserve areas of wild nature as it is our duty to future generations. And next she logically suggested that the USSR with its large and diverse territory should take the leading role in the environment protection. And that was a quintessence of Varsonofieva’s ideas about the environmental protection.

The conference was a success. The opinion of scientific community was communicated to the government and taken into account. As a result, not only the Pechora-Ilych nature reserve was left alone, its territory was somewhat increased. And it is staying that way till nowadays.
The idea about rational nature management was among the most important in Varsonofieva’s opinion. Conference held in 1961 was not the first where she spoke about the matter. She was not afraid to name sad or even tragic consequences of some of the governmental projects, as I already mentioned, and also common consequences of greed, neglect, uncaring, and pure stupidity of the business managers, company directors, and poachers. She was really angry about destruction of forests in Carpathians, central Ural, North Ural etc. She frequently spoke about the consequences of such actions for rivers of these regions, for its flora and fauna. She despised poachers who killed animals for example moose with cruel methods and then even did not use the whole animal leaving large parts of it to rot [2, p. 52]. She argued that it was impossible to condone such behavior. Varsonofieva was convinced that there were ways to minimalize damage inflicted on nature by economic development firstly by way of consulting with scientists before the start of new gigantic and potentially dangerous nature-relevant projects and secondly by teaching children to love and respect nature.

The idea about dare need to raise children loving wild nature was also among dearest to Dr. Varsonofieva. She argued that handmade parks and gardens would never replace wild nature in upbringing of the well-balanced and decent human beings. As an official of the All-Russian society for nature protection Varsonofieva supported nature protection education in secondary school’s curriculum. In her opinion a child raised with the love of nature would never commit acts of atrocities against her as an adult even when he will be in charge of large and profitable economy projects. He or she would care and that was the most important for Varsonofieva, the result she wanted to achieve.

It is not strange at all that authorities didn’t support her ideas much, that her papers on the subject often were left unpublished in strictly regulated soviet periodicals and that her activities with time vanished from memory. Nevertheless, largely forgotten in this day and time, efforts of Dr. Varsonofieva in the field of environment protection were significant and had been continued by those who shared her views even if they never heard her name [5–7].

4. Conclusion
After analysing the papers and unpublished writings of Dr. Vera Varsonofieva it is possible to conclude that she was a conscious supporter of ideas of environmental protection. And first of all, ideas of protecting remaining on the planet wild nature by creating nature preserves. She spent a lot of time and effort fighting for her ideas, created a chain of logical arguments based on natural laws and although her publishing’s on the subject are rare they were significant as was an example of her active position and some of her winnings. She was a prominent figure in soviet scientific community, a teacher in her own right and was able to influence not only her colleagues but the young generation as well.

References
[1] Valkova O A 2012 Interview with the historian of science: questions that have not been asked. Materials to the biography of Vera Alexandrovna Varsonofyeva (1889–1976) Issues of history of natural sciences and engineering [in Russian – Voprosy istorii estestvoznaniya i tekhniki] 1 100–127
[2] Russian state archive of Economics Fund 3 List 1 File 24
[3] Varsonofieva V A 1959 Monuments of inorganic nature, in Cultural monuments of Komi ASSR pp 92–109
[4] Varsonofieva V A 1961 Comprehensive study and protection of nature and their importance in the development of the natural sciences and the rational use of natural resources, in Environmental protection in Komi ASSR pp 8–13
[5] Crespin S J and Simonetti J A 2019 Ambio 48(2) 131–138
[6] Stokes D L 2018 Biodiversity and Conservation 27(6) 1539–1544
[7] Watson J E M, Venter O, Lee J, Jones K R, Robinson J G, Possingham H P and Allan J R 2018 Nature 563 27–30