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## **RESEARCH ACTIVITIES OF THE VORONEZH SOCIETY OF NATURALISTS**

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### **Abstract:**

The article analyzes the activities of the Voronezh Society of Naturalists. In November 1918, members of the Yuryev Society of Naturalists at the University of Yuryev ("UOE") created the Voronezh Society of Naturalists, considering it a successor to the previous, founded in 1853. The revolutionary upheavals and events of the civil war adversely affected the functioning of science. The society suffered significant human losses — part of the teachers left the city including parts of the white armies, the others died of hunger. Replenishment of the numerical strength was due to local scientific and pedagogical personnel.

In the article, we characterize the organizational activities of the chairpersons of the society - prominent figures of science such as: B.I. Sreznevsky, N.N. Bogolyubov, B.M. Kozo-Polyansky, I.I. Barabash-Nikiforov and some others members. The main directions of scientific research carried out by the member of the Voronezh Society of Naturalists, are considered. The society made a significant contribution to the scientific, pedagogical and social life of the Central Black Earth region.

**Keywords:** Voronezh University, Yuriev University, Yuriev Society of Naturalists, scientific societies, naturalists.

## I. INTRODUCTION

The history of scientific societies in Voronezh dates back to the beginning of the 20th century. Their members were not professional scientists, but lovers of science: officials, teachers and other representatives of the urban intelligentsia. The situation changed somewhat in 1912 with the creation of the first higher educational institution in the Central Chernozem - the Voronezh Agricultural Institute named after Emperor Peter I (VSHI) and the organization of the Society of Lovers of Natural Science and Agriculture. However, the outbreak of the First World War and the subsequent revolutionary upheavals significantly complicated the position of the Voronezh scientific associations.

In 1918, Yuryev University was evacuated to Voronezh, on the basis of which a decision was made to create the Voronezh University. The formation of a new university management system has begun. Simultaneously with the re-creation of educational activities, the restoration and the scientific began. The activity of the Society of Naturalists was resumed among other things at the University. In November 1918 members of the Society of Naturalists at the University of Yuryev ("UOE") created the Voronezh Society of Naturalists, considering it a receiver of the previous.

## II. METHODOLOGY

The research is based on traditional historical methods.

The historical-system method was used in the study of the formation of the Voronezh Society of Naturalists, organizational structures, internal and external links, as well as changes in leadership, numbers, scientific preferences were analyzed.

The features of scientific research can be analyzed using the method of scientific objectivity and historicism, which allowed to reveal the difficulties and successes of the Voronezh Society of Naturalists.

The article uses a comparative-historical method that makes it possible to trace the development of the Voronezh Society of Naturalists in various historical periods, to show the features of functioning in the conditions of changing state policy. One can single out the synchronization method, which made it possible to trace the evolution of the BEE, to reveal the features of their work. The statistical method allowed to confirm the analysis of the number of members of the Voronezh Society of Naturalists based on the materials of the regional archives. The method of socio-psychological analysis was used to show the motivation of the members of the Voronezh Society of Naturalists, their moods. Involvement of the ego-document (the letter of N.N. Bogolyubov to V.I. Vernadsky) clearly demonstrates the emotions of scientific figures.

The use of different approaches and methods of scientific research allowed to create research on the scientific activity of the Voronezh Society of Naturalists.

## III. RESULTS

The Society was headed by the last chairman of the Yuryev Society of Naturalists (UOE), a member of the society since June 17, 1899. Boris Izrailovich Sreznevsky. Along with him, the vice-president of the UOE, a member of the society from February 19, 1899 A.D. Bogoyavlensky and the secretary, member of the society since September 29, 1905, N.A. Samsonov, joined the presidium of the society.

Voronezh Society of Naturalists (BEE) continued the old numbering of meetings as a sign of continuity with the old society. Documents on the registration of the company were sent to the Main Directorate of Scientific and Museum Institutions of the People's Commissariat of Education of the RSFSR.

At first the members of the society were busy with a complicated arrangement in a new place. NN Bogolyubov wrote in a letter to VI Vernadsky that "in Voronezh teaching activities are greatly hampered here by the miserable and miserable situation. I lived two winters in a damp and cold room, which was almost unheated due to malfunctioning of the ovens. The temperature in winter was often from 4 ° to 6 °".

The society suffered significant human losses - part of the teachers left the city including parts of the white armies, others died of hunger and disease. In total, 14 out of 25 members of the UOE who arrived in Voronezh dropped out of the BOC during this period.

A big loss for the VOE was the re-evacuation of the UOE library in 40 thousand volumes. Along with it, a university library was sent to Estonia in the amount of about 500 thousand volumes, all cabinet libraries, scientific aids and collections, equipment items for clinics, institutes and laboratories.

The loss of members of the society was compensated at the expense of the local faculty of the VSKhI, the Voronezh Institute of Practice and various secondary schools. This trend is reflected in the leadership of society. On September 28, 1920, a new presidium was elected, which included Prof. KK St-Iler (chairman), professor of VSU and VSKHI A.A. Dobyash (deputy chairman), VGU employee E.V. Rylkova (secretary), Senior Assistant of the Department of Astronomy of the Voronezh State University VR Berg (Treasurer). The new government united both veteran scientists and young scientists, who are making the first steps in science.

The chairman of the Saint-Hilaire society will largely determine the activities of the BEE in the 1920s-1930s. Along with experimental laboratory studies in the field of histophysiology and comparative histology, Konstantin Karlovich resumed hydrobiological work on the study of freshwater organisms and fauna of the Kovdsky Gulf of the White Sea, begun by him at the University of Yuryev.

On February 11, 1923, a hydrological commission was organized in the VOE. The main task of the commission was the comprehensive study of the reservoirs of the Voronezh province. In the plan of the nearest work, various studies of the Voronezh River were included: in particular, topographic surveying and leveling of the river valley; study of the bottom relief and distribution of depths, geological structure of the coast; chemical and microscopic analysis of water; sanitary research of the river, etc. The plan was approved in the CenterVidohoNe and the hydrological department of the meliorative part of the People's Commissariat of Agriculture. At their suggestion, a cost estimate was drawn up, but no funds were received from Moscow.

The activity of KK St.-Hilaire as chairman of the BEE coincided with the adoption of a new law on public organizations. These regulatory acts have tightened the administrative control of the authorities over scientific societies.

In connection with the need to register the company, it was necessary to approve a new charter. On February 14, 1923, the organizational meeting of the All-Russia Union of Artists was held at the State University. The chairman of the meeting was Saint-Hilaire, secretary of Kozo-Polyanskiy. In the composition of the Presidium of the VOE there were changes: instead of Rylkova, Kozo-Polyansky became the secretary, Berga was replaced by SE Puchkovsky as treasurer.

In connection with the need for reorganization within 10 months, the work of the company was suspended. On November 10, 1923, the VOE was registered by the administrative department of the Voronezh Provincial Executive Committee and resumed its activities. A new board was elected, comprising St. Hilaire (chairman), Kozo-Polyansky, Bogolyubov, assistant professor of natural science at the Voronezh State University Petr Andreevich Grigorov (secretary and treasurer).

By January 1, 1925, there were 35 members in the WoE. Of these, 11 were former members of the UOE and 24 joined the WWII in Voronezh.

Members of the society conducted a permanent research work on the study of the geological structure, flora and fauna of the Voronezh province. Their results were presented in the form of scientific reports at the meetings of the All-Union Union of Soviet Socialist Republics.

The Hydrological Commission worked more energetically. If the BOE held 19 meetings between 1918 and 1925, the commission had 14 meetings for its two years of operation.

The members of the commission took part in the First Hydrological Congress, which took place in Leningrad in the spring of 1924. The Voronezh delegation consisted of seven people. At the congress the reports were delivered by S. V. Moiseev and A.V. Shipchinsky ("On the theory of thaws and spring melting of snows"). The congress adopted a decision on the formation on the basis of the commission of the Voronezh branch of the Russian Hydrological Institute. The latter also did not develop.

In 1925, the Scientific Research Institute of the VSU was established, whose director was Saint-Hilaire. This circumstance probably led to the election of a new chairman of the BOC, which Bogolyubov became. He took an active part in the activities of local lore organizations, involving in him and members of the WoE. He was engaged mainly in paleontological research. He was the organizer of geological expeditions in the Central Black Earth region. Among his merits is the beginning of the publication of the periodical edition of the VOE "Bulletin of the Society of Naturalists at the Voronezh State University," the editor-in-chief of which he became. Under his leadership came two volumes of the bulletin.

In December 1928, Bogolyubov died. The chairman of the society is Kozo-Polyansky. Having headed the VOE, he led the work with his enthusiasm. Under his leadership Voronezh botanists conducted intensive botanical and geographical studies of the Central Black Earth region. A major area of scientific research was the study of the reproductive organs of flowering plants in order to establish their evolutionary anatomy.

In 1932, Kozo-Polyansky was elected a corresponding member of the USSR Academy of Sciences. In 1933, Saint-Hilaire was re-elected as chairman of the BOC.

In 1937, Kozo-Polyansky created a botanical garden. At the initiative of St. Heler, two biological stations were established and started functioning (in Kovda on the White Sea and in the Zhirov forest in the Voronezh region). Several laboratories operated at the university, three museums (zoological, botanical and animal evolution). A fundamental herbarium was compiled, numbering more than 100,000 sheets.

In 1938, Voronezh arrived from Saratov, a prominent specialist in vertebrate biology, Ilya Ilyich Barabash-Nikiforov (1894-1980), who will become the founder and scientific leader of the Department of Zoology of Vertebrates and Zoological Station. In the summer of 1938 he became the head of the Murmansk expedition to acclimatize the sea otter on the coast of the Barents Sea and in the same year - the chairman of the BEE.

Studies of the flora and fauna of the Voronezh and neighboring regions, deployed on the initiative of the All-Russia Union of Artists, laid a solid foundation for scientific knowledge of the flora and fauna of the Central Chernozem region. Let's consider the basic scientific research of the members of the BEE. The main directions in the study of the flora of the Central Chernozem region were floristic and geobotanical (phytocenological). The center of research was the Department of Botany of the VSU. A biological faculty was established, the first dean of which was Kozo-Polyansky.

On his initiative and with his participation, in-depth study of the flora of the Chernozem region was started. The flora of the vicinities of Voronezh was especially thoroughly and thoroughly investigated. Floristic research, as a rule, intertwined with geobotanical. Both touched on both natural and artificial plant groups. Keller analyzed the steppes. Together with his colleagues, he organized a special description of the sections of the steppes preserved in the Central Chernozem Region, applied them to a map, and proposed their classification. The results of these studies were summarized in collective work.

Being an energetic follower of the relic theory, Kozo-Polyansky managed to attract the study of relics of his employees, students and local lore. Members of the WGE GE Grosset, NF Komarov, AV Dumansky, VI Lashchevskaya, KK Zazhurilo revealed new data in the geography and ecology of relics on the Central Russian Upland. Members of the VOE NS Kamyshev and SV Golitsyn discovered new areas of relic plants on limestone slopes at the junction of the Voronezh, Orel and Ryazan regions and new relicts of the Central Russian Upland. The All-Union Conference at the USSR Academy of Sciences in 1938 on the history of the flora and vegetation of the USSR confirmed the arguments of Voronezh botanists about the antiquity of rare plants on stony outcrops of the Central Russian Upland and the heterogeneity of their geological age.

It should be noted that the work of botanists - members of the BEE had not only local but also national importance. For example, the introduction of such concepts as "semi-desert", "steppe complex", "hostel", the method of ecological series, the ecological-geographical method in phytogeography, the technique for describing the steppe, etc., is connected with the name of Keller. Ramensky proposed a new method for accounting for coverage plants in percentage, which entered into the practice of research of vegetation.

In recent years, the interest of the world scientific community in the works of Kozo-Polyansky has been outlined. In 2010, Harvard University (USA) published the English translation of his book "Symbiogenesis. A new principle of evolution". Foreign scientists were interested in the presentation of Kozo-Polyansky on the evolution of symbiotic systems (this term was used by Kozo-Polyansky in 1924).

Y. P. Shchelkanovtsev carried out a study of mosquitoes in the southeastern part of the RSFSR. Numerous works of the members of the BEE focused on the problems of studying the biological prerequisites for the health of the population. Zoologist Bukhalova and bacteriologist Romanov for several years studied the influence of pollutants (and, in particular, sewage) on the sanitary state of the river. Voronezh. Bukhalova studied the process of biological self-purification of the river and its influence on the state of the aquatic fauna.

Members of the BEE carried out many works of zoogeographic, systematic and ecological nature, research in the field of nature conservation, acclimatization of new useful animals, fur farming, hunting, pest control.

#### IV. DISCUSSION

Now in the historical science there is an interest in the study of public organizations, especially within the framework of the concepts of civil society. Various aspects of civil society are reflected in the numerous publications of A.S. Tumanovoy. However, most of her research is devoted to the late imperial period, but in some publications she touches on the Soviet period.

In particular, considering the relationship between the state and public organizations in the period 1920-1930-ies, she notes the emergence of a confrontational model of the relationship between civil society and the state, when the state opposed the functioning of voluntary associations and formed quasi-citizen forms of associations.

A serious study of public organizations is the monograph by Il'ina. Orlovsky researcher A. Saran explores the relationship of public organizations and authorities. Functioning of scientific societies in Siberia is engaged VA. Danileiko.

The Petersburg researcher EF also deserves attention. Sinelnikova, which analyzes both the state and legal foundations of the activities of scientific societies, and the activities of specific scientific societies.

A.A. Fedotova conducts historical and biological studies of the activities of both individual botanists and scientific societies. Especially it should be highlighted her work "Bureau of Applied Botany during the First World War", in which there is information about botanists associated with the Voronezh province.

Thus, both historians and other scientists actively study the activities of scientific societies: biologists, geographers, physicists, etc. The Institute of the History of Natural Science carries out active scientific research and Technology named after S.I. Vavilov Russian Academy of Sciences, the results of which are reflected both in the annual conference materials, and in monographs.

In 2018, an article devoted to the history of biology and chemistry in the twentieth century was published. It was research in the field of historiography of the history of individual sciences, methodological foundations of historical and scientific works of well-known scientists, a science-research analysis of the development of various directions in the history of biology and chemistry, biographical information and memories of outstanding historians of natural science.

At the regional level, the theme of public organizations in the Soviet period has not yet become widespread. In the future, scientific research based on interdisciplinary research will make it possible to highlight the activities of both the Voronezh Society of Naturalists in general and its individual members.

## V. CONCLUSION

In the light of the above, it can be stated that the Voronezh Society of Naturalists made a significant contribution to the scientific, pedagogical and social life of the Central Black Earth region.

With the society was associated the activities of outstanding domestic scientists Academician B. A. Keller, Academician of the Academy of Sciences of the Ukrainian SSR B. Sreznevsky, Corresponding Members of the Academy of Sciences of the USSR B. M. Kozo-Polyansky, A. V. Dumansky and many other scientists. The students and graduate students of Voronezh universities made their first scientific achievements in the Voronezh Society of Naturalists; many of them became leading scientists and organizers of various scientific centers of the country.

The activities of the Voronezh Society of Naturalists continued until 1976. This year, the decision of the Presidium of the Voronezh Society of Naturalists on December 24, the society ceased its activities. It should be noted, however, that the Voronezh branch of the Russian Botanical Society, created in February 1957 on the initiative of Kozo-Polyansky, partially caught up with his baton. It has become a new center for the organization and development of regional botanical research in accordance with modern trends in science.

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