

History

Ivan Nikolayevich Filipjev (a short biography)

Semyon J. Tsalolikhin

Zoological Institute of Russian Academy of Sciences, Universitetskaya embankment 1, Saint-Petersburg, 199034, Russia.

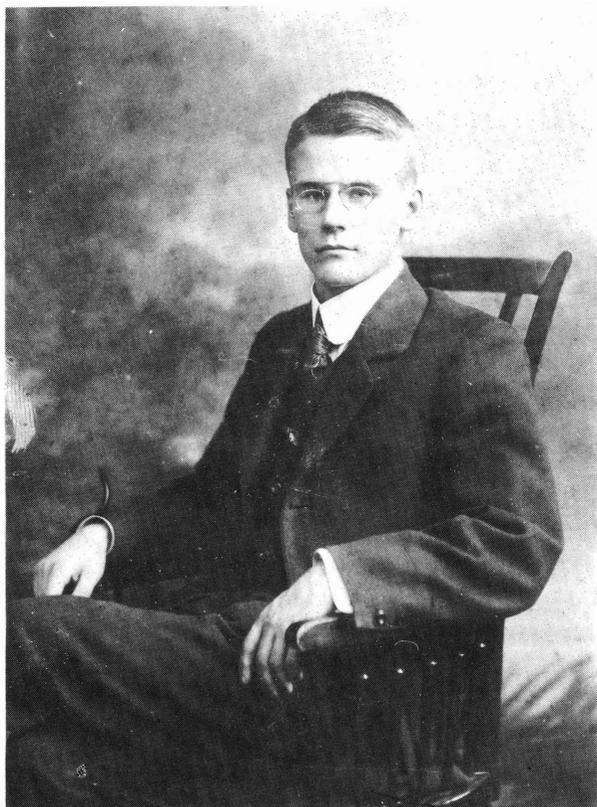
Whilst much has been recorded of the life and, most importantly, the scientific contribution of N.A. Cobb, regarded as the founder of Nematology in the USA, only mainly speculation and anecdotal rumor is available of I.N. Filipjev, the founder of Nematology in Russia. The reason for the relative paucity of factual information of the life of Ivan Nikolayevich Filipjev stems mainly from the fact that in 1931 he was charged as being a subversive in communist Russia, but this charge was quickly rescinded. However, in 1933 he was again charged as a counter-revolutionary, and on this occasion was found guilty and exiled to Kazakhstan. In 1937, Filipjev was again arrested and found guilty as being an "enemy of the Soviet people", thus becoming a persona non grata in his own country. From this period all books and scientific works by Filipjev were removed from Russian institutions, and he remained a persona non-grata until in 1956 the original charges against him were cancelled posthumously. Unconfirmed information suggests that Ivan Filipjev met his death, probably at the hands of a firing squad, in a concentration camp during 1940. The following provides the first biography of one of the outstanding figures in Nematology in the twentieth century.

Ivan Nikolayevich Filipjev was born on May 25, 1889 in St. Petersburg, and had three sisters and an older brother, Nikolay. His parents were relatively wealthy and thus he was raised in a wealthy family home, attended a private school, and later went to a gymnasium high school. He entered St. Petersburg University in 1906, where not surprisingly he chose the Department of Natural Sciences of the University. Filipjev had an innate talent for natural science studies, obvious from an early age, as when he was 5 or 6 years old he had already started to collect insects, especially butterflies. This was to remain one of his major passions throughout his life. Moreover, as a young child he could already identify different species, and was familiar with the species that were common in the Torbino village of Novgorodskaya Province, where the Filipjevs had their "dacha". Once, 8 year old Vanja (diminutive for Ivan in Russian families) was found crying in the family garden. When asked why he was crying Vanja explained "this nasty Mashka (a younger sister of Filipjev) has killed my favourite moth". All attempts to placate Vanja "Look, this moth has most probably laid eggs, and you will be able to catch the same type" were to no avail as he was already very well aware that "it was a unmarried male".

Whilst Filipjev's interest in insects manifested

itself quite early in his life, his interest in nematodes developed much later, although it was this interest that made him internationally famous.

Whilst attending St. Petersburg University the students very thoroughly studied representatives of all groups of invertebrates. In the summer the students went to the marine biological stations. In 1909 Filipjev met A. A. Lubischev, also a 3rd year student at that time, who subsequently became a famous Russian biologist-philosopher. In his memoirs A. A. Lubischev recollects that during the 4th and final year at St. Petersburg University the students undertook research to obtain their graduation certificate. Such research was compulsory for those who wanted to receive a first-class graduation certificate. Filipjev and Lubischev approached the Assistant Professor S. V. Averintsev with a request that he recommend a subject for their future graduation certificate research. Averintsev advised Filipjev to study marine free-living nematodes. To complete their research the two students had to go to Murmansk biological station situated on the coast at Kola Bay, on the Barents Sea. However, there were no places available at Murmansk biological station during the summer of 1909. Consequently, Prof. V. T. Schewiakoff, Head of Division of the Natural Science Department at St Petersburg University, the Department where, at that time, invertebrates were



Ivan N. Filipjev before entering to St. Petersburg University

studied, proposed that the two students should go to the famous Zoological Station, Naples, Italy. Despite this being a very expensive trip, especially for students, as Filipjev and Lubischev each were the children of quite wealthy parents they could afford it. Schewiakoff wrote two letters of recommendation asking the Italian institute to host Russian students for three months from May 15 up to August 15, 1909. One of the letters was addressed to Paul Mayer, the Director of the Naples institute, the other (in Italian) was sent to Lobianko, the Deputy Director.

The visit to Naples was not Filipjev's first visit abroad; he had already traveled in Europe with his parents, and was fluent in German and French. Paul Mayer was a very hospitable host and recommended that his two Russian students work hard for two months, and then to spend a month enjoying Italian culture, society and life. Rather surprisingly for him the two colleagues declined this "strange" advice, and instead spent all three months working extremely hard. Nevertheless, the two Russian students did spend weekends sight-seeing around Naples: Pompeii, Capri, Sorrento, and they even climbed to the summit of Vesuvius.

Two years later, in 1911, Filipjev visited the

Marine Zoological Station at Villa-Franca, in 1912 and 1913 worked at the Sevastopol Biological Station, and in 1914 at the Murmansk Biological Station.

In spite of the fact that Filipjev's first encounter with nematological research was quite successful his graduation paper, published in 1910, dealt with the protozoan *Tocophrya quadripartita*. It was not until the following year that Filipjev published his first nematological paper on the subject of the nervous system of nematodes. In 1916, he published his first taxonomic paper in which he described the nematode species *Leptosomatium arcticum*. This paper was to be the forerunner of descriptions prepared by him of more than two hundred new species that he collected from the Black Sea, the waters surrounding the North Pole Ocean, from rivers and lakes in Russia and Africa, and of numerous plant nematodes.

After Filipjev graduated he taught Zoology and Evolutionary Theory at the Teachers Training Institute for Women, as well as at the Agricultural Management School for Women, and the Bestuzhev Medical College. It was at the Medical College that he met Elena Jampolskii, one of his students, and they were married in 1916.

In 1917 Filipjev obtained a position as an Assistant Professor in the Department of Zoology in Petrograd University (in 1915 St. Petersburg was renamed as Petrograd). In April of the following year the Society of Naturalists at Petrograd University sent Filipjev on assignment to the North Caucasus to do zoological research. However, the Civil War that began in 1918 effectively isolated Filipjev from Petrograd and he became an Assistant Professor in the North-Caucasus Polytechnic Institute at Krasnodar, and in 1919 obtained a position as Professor at the Stavropol Agricultural Institute. During this period Filipjev completed his Masters Degree thesis on the subject of free-living nematodes of the Black Sea. This research was published as a book and he brilliantly defended this, his Masters Degree thesis, in 1923 in Petrograd. In the Introduction to his dissertation Filipjev wrote: "Nine years separate me from the beginning of this work. Much water has flowed under the bridge since then. The First World War started and ended. Russia was shaken by Revolution and its Civil War began and has ended".

Filipjev had returned to Petrograd in 1922, and obtained a position in the Entomology Department at the Institute of Experimental Agronomy. Between 1923 and 1933 he was involved in plant protection issues, and lectured on general and applied entomology and evolutionary theory.

During this time he wrote a book on the subject of the theory of evolution in which the evolutionary aspects of fundamental modern genetics were described for the first time in Russia. Unfortunately, this book was never published, but perhaps surprisingly the original manuscript is curated in the Archive of Russian Academy of Sciences in St. Petersburg. Concurrently, during this period Filipjev published his major research on free-living nematodes of fresh-water bodies and oceans. He published many fewer publications on the subject of entomology, despite the fact that he held the position of Assistant Professor in Applied Entomology at the University. It was his 'applied entomology' that made it possible for Filipjev to travel extensively in his country, enabling him to visit Lapland, the Caucasus, the shore of the Caspian Sea, and Plant Protection Stations in Siberia and the Urals. Filipjev's involvement with entomology also, and most importantly, enabled him to participate in the IV International Entomological Congress held at Ithaca, USA, where he presented a paper "Locust problems in the USSR". During the stay in the US he presented papers not only on entomology but also on nematology. On December 15, 1928, at a meeting of the Helminthological Society of Washington, Filipjev presented a paper on the general classification of nematodes. This paper laid the foundations for further nematode taxonomic research, both in the US and in Europe.

During this period Filipjev's international status was being increasingly recognized, resulting in him being elected a Member of the Helminthological Society of Washington, the American Society of Applied Entomology, the Entomological Society of France, the Zoological Society of France, and the French Society of Plant Pathology. However, in his own country the Soviet Union, Filipjev began to experience increasing hardship. Also, at this time the political situation in the Soviet Union was becoming increasingly tense and in 1931 Filipjev was arrested for the first time and charged with counter-revolutionary, subversive activity. The charges laid against him were quickly dropped, and on January 10th, 1932, he was admitted to the Zoological Institute of Academy of Sciences and held the position of Head of the Division of Lower Worms. He soon lost this job, and in 1933, Filipjev was arrested for a second time. On this occasion he was exiled to Kazakhstan, from where he was prohibited to leave, but he was allowed to continue to do scientific research.

Although Filipjev was exiled to Kazakhstan his family remained in Leningrad (in 1924, the Com-

munists renamed Petrograd as Leningrad). His wife and children visited him only during the summer, at which time he went hunting at Balkhash Lake with his elder son. During the winter, Filipjev complained in a letter to his colleague M. N. Rimskii-Korsakov, Docent of Leningrad University, "*I really enjoy my summer work here, not like winter work when you are isolated from everybody and see nobody, and that stupid habit of our bureaucrats instead of rendering assistance (they even do not answer the letters they receive) they just interfere. What can you expect from provincial bureaucrats? Moreover, those awful things spreading all over the country ..*". In the same letter Filipjev said, "*There is no culture here. Those little cultural remains, like the museum, fell apart, but the new things have not yet got going. My life is really boring; I do not visit anybody. If I could have spent at least a couple of months in Leningrad it would have been tolerable*". To E. S. Kirjanova, his successor at the Zoological Institute, he wrote "*You are fond of Marxism but I hate it*". Obviously, such statements did not make Filipjev's life easier, especially as his correspondence undoubtedly was being read by the security police.

In 1934, Filipjev's fundamental treatise "*Nematodes harmful and useful in agriculture*" (440 pages, 3200 copies) was published. He wrote to Rimskii-Korsakov "*You are concerned about the future of 25 copies of my book, edited by you. I would like to distribute them in such a way: one copy to be sent to the Office of Nematology, Washington, one copy for V. A. Dogiel (leading parasitologist in Leningrad University), one copy for E. N. Pavlovskii (chief parasitologist in Zoological Institute of Russian Academy of Science), one copy for E.S. Kirjanova, one copy to the Zoological Museum... and the remaining 10-15 copies, please send them to me. That's it. My life does not change much for the better. There are lot of things to do, but no opportunity to complete everything, no necessary literature..*".

The book proved to be very valuable for nematologists, and for people involved in agriculture, not only in Russia, but abroad also.

In a series of letters written by Filipjev, and sent to Rimskii-Korsakov, he wrote:

15th May 1936 - "*My book about nematodes will be published by E.J. Brill in Leiden, in English. I will do the translation, and J. H. Schuurmans-Stekhoven from Utrecht will be responsible for the style, editing, and publication problems. The book is to be published in the middle of 1937.*"

20th May 1936 - "*The Soviet Society of Cultural Contacts is ready to be responsible for the transfer of the manuscript to the publisher.*"

5th August 1936 – “*The progress with the translation got stuck.... but I hope it will go ahead soon..., at least by the end of the year to have it completed*”.

In the event, the translation was not presented to E.J. Brill, but it was not the author's fault.

To better understand the reason for the non-delivery of the manuscript to E.J. Brill it is necessary to review the preceding years, and how the political system in the Soviet Union during this period affected the life of Filipjev. Filipjev, the foremost Soviet nematologist at the time and one of the world authorities in his science, is considered a *persona non grata*, which resulted in him being prohibited to teach at the University. He was dismissed from the Zoological Institute of USSR Academy of Sciences, and from the Plant Protection Institute. Also, he was deprived of all of his scientific contacts, and access to scientific literature. This occurred against a background of Nematology becoming increasingly important in the Soviet Union, as recalled by Academician K.I. Skrjabin “*At the end of 1932 a new laboratory was established that was supposed to do research on the agricultural plant parasites. The point is, that the plant parasitic nematodes do a great economic damage ..., great losses of leguminous crops damaged by the plant parasitic nematodes sometimes reach 80% .. nematodes on cereals sometimes caused losses in the wheat crop of up to 1100 kg per hectare .. the stem nematode of potato can ruin up to 40% of the crop tubers. The potato cyst nematode Heterodera causes massive destruction of potato crops that must be considered even more dangerous than that caused by Colorado beetle. By 1933, we received the money and got down to business. It was absolutely new what we started.*”

Skrjabin's comment that research on the subject of plant parasitic nematodes was “absolutely new” is not correct, as obviously considerable experience had been already been accumulated by Filipjev. Evidence of this can be seen in the articles and lectures that Filipjev had delivered, as well as in Filipjev's book, which was extensively used by Soviet nematologists up to the 1960s. Moreover, the book was published twice abroad. However, all of this experience and knowledge, which the Soviet Union so desperately needed, was removed from the arsenal of agricultural science and from science on the whole. It was not only Filipjev, the scientist, who was persecuted, but also his science.

Whilst exiled to Alma-Ata, Kazakhstan, Filipjev published almost nothing on applied entomology, although his practical activities were closely associated with insects, which he mentioned repeatedly in his letters. What is even more curious is that



Ivan N. Filipjev (the end of 1930s)

during this time he was not involved in collecting nematodes, or at least there is no documentary evidence available that he did so. Filipjev apparently did even not collect any nematode samples when he spent time at Balkhash Lake. This, although it is well documented that he focused his creative potential on nematodes.

Filipjev wrote all his major works on the class of Nematoda whilst exiled as *persona non grata* in Alma-Ata. Also, during this time he prepared his fundamental revision of nematode taxonomy, and compiled data on the fauna from different regions of the USSR, as well as from the North Pole waters, including descriptions of many new genera and species.

Against the background the translation into English of Filipjev's book was eventually achieved, but without the authors involvement. The English version of the book was published in the Netherlands under two names: I. N. Filipjev and J. H. Schuurmans-Stekhoven. The title of the book was also changed to “*A manual of agricultural helminthology*”. During the autumn of 1937, Filipjev was again arrested, and consequently this prevented his translation of his book from reaching the publisher. It must be assumed that Schuurmans-

Stekhoven prepared the translation, and also introduced several additions.

Paradoxically, it was after Filipjev's arrest that the Publishing House of the USSR Academy of Sciences published the first volume of the multi-volume edition "Animal world of the USSR" in which the chapter "Free-living round worms" (pages 579-583) had been written by Filipjev. The reference list for this chapter contained 8 major Filipjev's publications on nematode faunistic and taxonomic studies. The name of Filipjev as the author of the chapter was mentioned both in the chapter title and in the general table of contents. In the same year the first volume of the "Manual in Zoology" edited by Prof. L.A. Zenkevich was published by the "Biomedgiz" Publishing House. However, the chapter "Class of round worms" (pages 557-627) that had been written by Filipjev was designated as "Compiled and edited by Prof. L. A. Zenkevich". In all of the other chapters in this book the names of the authors are given. Filipjev's name, i.e., publications, does not appear in the reference list of this book. Effectively, all reference to Filipjev, a *persona non grata* in the Soviet Union, was removed from the scientific literature. The fact that Filipjev was the author of this chapter is evident from his correspondence. For example, in his letter to Rimskii-Korsakov dated April 19, 1936 he wrote "*The issue concerning the drawings I settled with Prof. Zenkevich. The copy of the manuscript was ready for him for a long time. I have actually mailed it already after insignificant additions and corrections.*" How can it be that in the same year Filipjev's name is present in the "Animal world of the USSR" but has been removed from the "Manual in Zoology"? The explanation is relatively simple, "Animal world of USSR" was approved for publication (an official permit to publish had been supplied by the communist censorship in the USSR, which at this time was an unavoidable step in the publishing process) on March 15th, 1937, when I.N. Filipjev was not yet considered as being a socially dangerous person. However, the "Manual in Zoology" was approved for publication by the censors on October 20th 1937, by which time Filipjev had been arrested and charged as an "enemy of the Soviet people", thus being a *persona non grata* his name could not appear in print. E.S. Kirjanova restored this "lost" authorship of I.N. Filipjev in 1959 in a reference list of Filipjev's scientific contributions. It was also she who arranged for the publication in 1946, before official permission was available to restore in print the name of I.N. Filipjev, of an article about nematodes from North Pole waters. In 1956, she

published one more of Filipjev's articles on the subject of a new species of horsehair worm from the Commander Islands.

Restoration of Filipjev's name occurred 'officially' on December 4th 1956 when the following document was issued: "The case on the charges of Filipjev Ivan Nikolayevich was heard anew by the Military Collegium of Supreme Court of the USSR on November 17, 1956. The sentence handed down against I.N. Filipjev by the Military Collegium of Supreme Court of the USSR on March 7, 1938 was cancelled and the case was closed due to the newly found circumstances."

The 'official' restoration of Filipjev's name and recognition in the Soviet Union of his contributions to his science were not to be witnessed by the man himself. The date of Filipjev's death was officially reported as being October 22nd 1940, but the circumstances of his death remain obscure. Recently, the granddaughter of Filipjev, Mme E.O. Kuzmina, informed us that the botanist Michail Grigorjevich Popov, who served the term together with Filipjev in a concentration camp, witnessed his execution. So far, 'official' documentation to confirm this account of Filipjev's death is unavailable.

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(compiled by S. Ya. Tsalolikhin)

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