

To the 50th anniversary of S.E. Grigoriev

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8 March 2024 would have been the 50th anniversary of Semyon Egorovich Grigoriev, a well-known scientist, populariser of science, candidate of biological sciences and head of the laboratory "P.A. Lazarev Mammoth Museum", Institute of Applied Ecology of the North, M.K. Ammosov North-Eastern Federal University.

Semyon Egorovich was born on 8 March 1974 in the village of Bolugur, Amginsky district, YASSR. He grew up and finished school in the village of Kazachye, Ust-Yansky ulus. In 1990, he enrolled in the Biology Department of the Faculty of Biology and Geography of the M.K. Ammosov Yakutsk State University.

In 1995, after graduating from university and obtaining the speciality "Biologist. Teacher of Biology and Chemistry", he returned to his home village of Kazachye, where he began working as a teacher at the Kazachinskaya secondary school. While working as a biology teacher, Semyon Egorovich showed himself to be a researcher and a patriot of his homeland. In the summer of 1996, as a member of an international group of scientists, he took part in the "Yana-1996" expedition to study the birds of the region. He prepared a scientific justification of the "Yana Delta" resource reserve and participated in the creation of the "Omoloy" reserve.

In autumn 1996, at the invitation of his thesis supervisor, Doctor of Biological Sciences, Professor I.I. Mordosov, he began full-time postgraduate studies at the M.K. Ammosov Yakutsk State University. At the same time he worked as head of the Zoological Museum of YSU, from 1998 to 2004 he worked as an assistant of the Department of Zoology of YSU, from 2004 to 2006 - as a senior lecturer of the same department.

In August 2006, he joined the Institute of Applied Ecology of the North of the Academy of Sciences of the Republic of Sakha (Yakutia) as a junior researcher in the Laboratory of Applied Zoology and Bioindication.

As an already well-trained specialist in zoology, having completed postgraduate studies, Semyon Egorovich was actively involved in the academic career of applied ecology. At that time he travelled a lot as a member of large ecological expeditions to various industrial areas of our republic. S.E. Grigoriev's scientific interest was devoted to the study of biodiversity of small mammals of natural and anthropogenic territories of poorly explored areas of the North-East of Yakutia. He was interested in the adaptive mechanisms of small mammal populations in areas of anthropogenic impact associated with tin mining in the Yana River basin, and in particular, the activities of the depot mining and processing division.

As a result of his research, in 2007 Semyon Egorovich successfully defended his candidate thesis on "Fauna and ecology of small mammals of the lower Yana River basin and adjacent areas under anthropogenic impact" under the supervision of Professor I.I. Mordosov.

By this time, the Mammoth Museum of the Institute of Applied Ecology of the North had undergone significant personnel changes. Several employees resigned for various reasons, some of them moved to other scientific institutions in the republic. Consequently, the question of renewing of the museum's staff arose. Semyon Egorovich accepted the offer of the Institute's management to move to the Mammoth Museum with great pleasure, as he had been interested in mammoth fauna since his childhood, and after university, as a biology teacher at his native Kazachinskaya School, he led a paleontology club. After becoming a researcher of the Mammoth Museum, Semyon Egorovich established very good, trusting relations with his supervisor, the corypheus of Yakut paleontology P. A. Lazarev.

The first year of work as a researcher of the Mammoth Museum was very interesting and productive. Already in the spring of 2009, during a joint expedition with Petr Alekseevich on the Khroma River in the Allaihovskiy district, the well-preserved, permafrost-frozen carcass of a small

mammoth, later named the Khromsky small mammoth, was unearthed. Despite all the difficulties and problems encountered along the way, the expedition as a whole managed the task brilliantly. The Khromsky mammoth they unearthed is now a unique scientific and cultural object widely known to paleontologists all over the world and has travelled to scientific exhibitions in many countries.

In the summer of the same year, Semyon Egorovich took part in an expedition to the Yuribey River on the Yamal Peninsula. It was his first field trip with A.N. Tikhonov, Director of the Zoological Museum, Deputy Director of Science of the ZIN RAS, and leading researcher of the Mammoth Museum. The main task was to find the burial site of Lyuba, the baby mammoth found in 2007. However, it was not possible to the ice drift on the Yuribey River. Nevertheless, Semyon Egorovich had a unique opportunity to communicate closely with the Nenets, who roam the tundra, fully preserving the traditional way of life of the indigenous peoples of the North.

Equally significant and effective was the Mammoth Museum's expedition in the autumn of 2009 to the Batagai Basin in the Verkhoyansk district, where local residents found the remains of a Pleistocene horse and a baby bison. Thanks to the efforts of P.A. Lazarev, S.E. Grigoriev and S.E. Fedorov, these unique scientific objects were studied in the place of discovery and then brought to Yakutsk, where they became one of the valuable scientific objects and exhibits of the museum, arousing real interest not only among visitors, but also among a wide range of specialists.

Under the guidance of P.A. Lazarev, Semyon Egorovich and his colleagues investigated the known sites of Ulakhan Sullar, Oskhordokh and Muus Khaya on the Yana River, Malaya Filippova on the Kolyma River, and were the first to study the mammoth Yuka on Lake Buustaakh. They worked on excavations in the Megino-Kangalassky and Amginsky districts.

The second expedition out of the republic was a trip to Wrangel Island (Chukotka) in August 2010. This island is known as the last habitat of the woolly mammoth, which became extinct here only 3700 years ago.

The three years of scientific collaboration between Semyon Egorovich and P.A. Lazarev were prolific. After Lazarev's untimely death, Semyon Egorovich became the head of the "Mammoth Museum" laboratory in autumn 2011. From the first days of his work in his new position, together with the management of the Institute and the University, a huge amount of work was done to immortalise the memory of P.A. Lazarev. As a result, the Mammoth Museum was named after its founder and director Pyotr A. Lazarev.

The year of 2012 can be undoubtedly called a momentous one for Semyon Egorovich. That year he met a famous scientist, a luminary of South Korean science, a leading expert in the field of modern animal cloning, Professor Hwang Woo-seok, who dreamed of cloning a mammoth. Already in March of the same year, as part of the closing of the exhibition "Hello, Mammoth" held in Seoul (South Korea), a Sakha-Korean symposium on mammoths was held, where an agreement was signed between the Ammosov North-Eastern Federal University and the Soom Biotech Research Foundation on the project "Revival of the Mammoth and Other Fossil Animals". All the following years the activities of the museum will be closely connected with this project.

The implementation of the "Revival of the Mammoth" project, which aroused great interest among the public, various media, Russian and foreign TV companies, began with fieldwork. Under the leadership of Semyon Egorovich, expeditions were organised to the sites of Batagayka, Yunyugen, Muus Khaya in the Yana River basin and to the Novosibirsk Islands (Bolshoy and Maly Lyakhovsky). The most significant was the May 2013 expedition to Maly Lyakhovsky Island to excavate a mammoth known as the "mammoth with blood".

Semyon Egorovich organised scientific seminars on the study of animals of the mammoth fauna with their complete autopsy on the basis of the Mammoth Museum and the Clinic of the Medical Institute of the M.K. Ammosov North-Eastern Federal University. News about the activities of the museum regularly appeared in many federal channels, in newspapers and Internet resources, as well as in a number of foreign media (CNN, BBC, CNC, etc.).

The results of joint expeditions with foreign colleagues and TV companies, filming in the Mammoth Museum became popular science films: in 2013 the film "Mammoth: Back from the Dead" was released on the National Geographic channel, in July 2014 the same channel premiered

the film "Mammoth: Back from the Dead". Mammoth Unearthed" premiered on the same channel; in November 2014, the films "Mammoth: the Autopsy" and "How to Clone a Woolly Mammoth" were released in the UK on Channel 4 and in the US on the Smithsonian Channel. The film "Genesis 2.0" released in 2018, in which Semyon Egorovich became one of the main characters, was an overwhelming success. The film was acclaimed at many film festivals and received various nominations and awards, including Best Documentary - Silver "Saint George" (Moscow International Film Festival) and Grand Prix - Documentary (Sundance Film Festival, USA).

On the initiative of Semyon Egorovich, in agreement with Korean partners and with the support of the university administration, the International Collective Use Centre (ICUC) "Molecular Paleontology" was opened on the basis of the P.A. Lazarev Mammoth Museum in March 2015, where cells and DNA of fossil animals are studied. This was the second stage of the Mammoth Revival project.

The increased interest in mammoths has contributed to the opening of the largest exhibition of mammoth fauna ever in Japan in 2019. The mammoth exhibition is based on 30 unique exhibits from the P.A. Lazarev Mammoth Museum of the IAEN NEFU. Before this exhibition only the head of the Yukaghir mammoth, which became the main exhibit of the EXPO-2005 world exhibition in Aichi, was exhibited in the Land of the Rising Sun. Semyon Egorovich did a great deal of work in preparing and organising the paleontological exhibition in Japan, which visited 4 cities (Tokyo, Fukuoka, Osaka, Nagoya).

Semyon Egorovich was devoted to science, hardworking, creative in solving various tasks. He loved life very much and until the last days of his life he was working, writing articles, preparing content for audio guide and touch panel, making plans for the future. However, the fate decided otherwise.

In total, S.E. Grigoriev has published more than 60 scientific papers, including in international highly rated journals such as Scientific Reports and Nature. The results of the most important scientific studies were presented at the International Mammoth Conferences in Greece (2014) and Taiwan (2017).

S.E. Grigoriev received awards of various levels for his scientific and organisational activities, including certificates of honour from the Ministry of Education and Science of Russia, the Ministry of Nature Protection of Yakutia, the Ministry of Youth Policy of Yakutia, and the Ministry of Science and Professional Education of the Republic. In 2014, S.E. Grigoriev was awarded a commemorative medal "100 Years of the Yakutsk Branch of the Russian Geological Society". For leading the expedition to Maly Lyakhovsky Island to excavate a unique mammoth carcass, he was selected as the torchbearer of the Olympic Torch Relay in Yakutsk by the decision of the Organising Committee of the Sochi 2014 Olympic Torch Relay. He was a member of the Russian Geographical Society, the All-Russian Theriological and Paleontological Societies and an expert of the Ministry of Culture of the Russian Federation and Federal Service on paleontological materials, and a lecturer of the Znanie Society.

In 2013, the laboratory "P.A. Lazarev Mammoth Museum" of IAEN NEFU, led by S. E. Grigoriev, was included in the National Register "Leading Cultural Institutions of Russia-2013". The laboratory's successful activity was recognised by the visit of the President of the Russian Federation, V.V. Putin, to the Mammoth Museum on 1 September 2014. In April 2015, the P.A. Lazarev Mammoth Museum was awarded a certificate of quality for its research activities and was included in the Book of Honour of NEFU. In July of the same year, the British newspaper Daily Telegraph listed the museum's laboratory as one of the top 10 attractions in Russia.

Thus, it can be stated with certainty that when Semyon Egorovich joined the Mammoth Museum, he demonstrated not only his expertise as a renowned paleontologist, but also his proficiency as a skilled science organiser. The first expeditions marked the beginning of his "mammoth epic", which lasted a little over ten years and brought him all-Russian and world fame among paleontologists.

For his invaluable contribution to paleontological science and the introduction of new modern methods of studying the Quaternary fauna of North-East Siberia, Semyon Egorovich Grigoriev was posthumously awarded the University Order "Glory and Greatness of the North-Eastern Federal University" (I degree).

The bright memory of Semyon Egorovich will remain in our hearts forever.