

## Igor Mikhailovich Gromov, a prominent Russian theriologist

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## Игорь Михайлович Громов, выдающийся русский териолог

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*“There are three kinds of aristocracy in the world:  
aristocracy of birth and rank,  
money aristocracy  
and the aristocracy of intellect and talent.”  
A. Schopenhauer*

This year we hold 90 anniversary of Prof. Igor Mikhailovich Gromov's birth, a prominent Russian specialist in systematics of recent and fossil mammals. I.M. Gromov was born in Orenburg on July, 13 1913. In 1922 he with his mother and brother moved to Petrograd. Here he enters 41 labor Soviet school (reorganized from the former Peter-Paul-schule) where he perfectly learned German and got basic knowledge of French and English. Already before graduation of school in 1930 I. Gromov took part in field investigations. After graduation of school from 1930 till 1934 he worked as a technical assistant in the All-Union Institute of Plant Protection and in Military Medical Academy at the Department of General Biology and Parasitology. During this period he participated in a number of expeditions to Middle Asia and Central Russia, studied rodent ecology and published several papers. Only in 1934, having a written recommendation of Academician E.N. Pavlovskii, he entered Leningrad State University, Biological Faculty.

An immense influence on the formation of scientific interests of I.M. Gromov from the early childhood and during the whole life had his mother, Vera Isaakovna Gromova, an outstanding paleontologist, specialist in paleontology of large mammals. In 1922 Vera Gromova participated in the famous excavations of Paleolithic sites Syuren' and Kiik-Koba in Crimea, young Igor was there with her. But if the main interests of Vera Gromova were related to the study of large mammals such as hipparions, ancient and recent horses, goats and argali, Igor Gromov, in his turn, from the very beginning of his scientific activity dealt with the study of small mammals, both recent and extinct. His faunistic studies Igor Gromov began in the age of eighteen in the expedition at the southernmost of Turkmenistan under the supervision of K.K. Flerov. At that time Igor Gromov was one of the first who start to use the method of analysis of pellets of birds of prey that enrich the faunistic spectrum of the territory under study. The next year Igor Gromov together with K.K. Flerov studied the fauna of

mammals in the lower reaches of Vakhsh River in Tajikistan. Vast surveys of the results of field studies in Sumbar and Chandyr' rivers and lower reaches of Vakhsh River published in co- authorship with K.K. Flerov (see bibliography in this issue) still are the most important faunistic works on these regions. During the student years Igor Gromov participated in the expeditions to the North-Eastern Badkhyz, western part of the Great Caucasus and to the moment of graduation of Leningrad State University in 1939 he is already a well known field investigator. In 1939 he enters the postgraduate courses at the Department of Vertebrate Zoology of the Biological Faculty of the Leningrad State University, but these plans were interrupted by the Finnish war. Gromov was mobilized, was a commander of the platoon and was hardly wounded and up to 1941 was in hospital. He was evacuated to Kyrgyzstan in 1942 from the siege Leningrad together with the rest of the staff of the Academy of Sciences but before managed to pass postgraduate exams. During the evacuation he worked as hunter expert. At that time in Frunze (now Bishkek) the Paleontological Institute of Academy of Sciences of USSR (PIN) was evacuated. Academician A.A. Borisyak suggested him to become postgraduate student of the Institute and he entered the postgraduate courses in 1943 in Kyrgyzstan and then together with the Institute was re-evacuated to Moscow. His postgraduate studies were devoted to the rodent fauna of the Binagady asphalt site and he successfully defended his postgraduate thesis in 1945. During the last year of his postgraduate scholarship Gromov was on attachment to the Zoological Institute of Academy Sciences of USSR (ZIN) in Leningrad. The study of the Pleistocene and Holocene mammal fauna genetically similar to the Recent is impossible without comparison with a recent material. In the Zoological Institute due to the efforts of many generations of zoologists, starting from Langsdorf, Brandt, and Middendorff and up to Vinogradov and his colleagues a great collection of recent mammals of the world fauna has been accumulated, the largest zoological library also was located there. All this determined the will of Gromov to switch over from PIN to ZIN. At the same time, director of the Zoological Institute, Academician Pavlovskii in the letters to the chief of the postgraduate department of Academy of Sciences and to the Director of PIN underlines the

extreme need of ZIN in the specialists due to the enormous losses of qualified employers during the siege of Leningrad and that the destination of Gromov to ZIN for scientific work on mammals is very anticipated. Thus, since 1946 and till his retirement in 1993 all scientific and scientific-organizing activity of I.M. Gromov is related to ZIN. During this period he occupies different positions being the scientific secretary of the Institute, deputy director, head of postgraduate department, and head of many different important commissions, more than 20 years was a head of the laboratory of mammals. However, all these honorary and difficult duties I.M. Gromov always called "activity" and refused of these positions by his own will. His true business he always considered to be scientific studies. He is the author of two monographs in the series "Fauna of the USSR", of many guide books on rodents and lagomorphs, which are repeatedly reissued and still are the best in the country. Unlike other editions of this kind these guide books contain data on extinct groups and change of the range of distribution in the Pleistocene and Holocene. After the war Gromov continues his field activity. He collected material on the Late Pleistocene and Holocene faunas of Urals, Don, Caspian drainages, Middle Volga area. The studies of the recent rodents he permanently combines with the study of the history of formation of their recent fauna and problems of phylogeny of that group. He introduces the method of the so-called one-scale study of fossil and recent faunas.

In the beginning of the fifties Gromov published the results of the study of rodents of cave localities of Crimea and Urals, fossil remains of rodents from alluvium of Urals, Volga and Don rivers. These publications contain descriptions of most rodent species of the Late Pleistocene and Holocene of the eastern part of the Russian Plain, one can find there analysis of their morphological changes in time and space, range dynamics and ways of development of recent fauna. These publications also contain generalization of taphonomic observations on formation of alluvium localities and ideas on the perspectives of study of fossil rodents.

These works laid the foundation of homeland micropaleotheriology. They even today are the starting point for any paleozoological investigations. Gromov is the founder and recognized leader in this field. In addition, vast materials that have been accumulated to that time put forward a number of theoretical questions on temps of subspecies development, problems of supraspecies categories, ways of phylogenesis that were discussed in papers of 1959. Great interest to general questions of evolutionary theory and systematics Gromov retained during the whole scientific career.

At the end of the fifties under the supervision of Academician Yu.A. Orlov a preparation of grand series of "Fundamentals of Paleontology" had been started. These issues later were awarded with the Lenin premium. The largest part on rodents in the issue on mammals in this publication was written by Gromov (1962).

This essay on rodents is topical still today and serves as handbook for beginners in paleontology and theriology. This book has been translated into English and became world known.

Approximately within this period a number of initiative young scholars interested in paleotheriology and phylogenetics from different regions of the former Soviet Union gathers around Gromov (A.I. Shevchenko, M.A. Erbaeva, R.D. Maslovets, V.S. Zazhigin, N.S. Shevyreva, A.K. Agadjanyan, V.A. Topachevskii, A.G. Maleeva, V.P. Sukhov and many others). Some of them undergo postgraduate studies under his supervision, other constantly come for consultations. Thus a school of Gromov is forming. Many of above mentioned researchers became prominent scientists; continue to develop traditions and ideas of Gromov preparing their own students (Agadjanyan in Moscow, Erbaeva in Ulan-Ude, Maleeva in Ekaterinburg, Topachevskii in Kiev and others). Once in two years Gromov conducts a kind of workshop on micropaleotheriology, where he discusses preliminary results of carried investigations and outlines plans for the future. Most often such workshops took place in Leningrad, in ZIN, but some of them also were held in Kiev and in Syktyvkar (the latter was with emphasis on method of field collecting of fossil micromammals). The high level of development of Russian school of micropaleotheriology, its international recognition are to a great degree tributes of I.M. Gromov, both as a scientist and educator, a creator of "Gromov's school" of paleotheriologists and taxonomists.

Gromov paid a great attention to the central edition of ZIN – "Fauna of the USSR". He is the author of systematic part in two volumes of this series: on terrestrial squirrels (Gromov *et al.*, 1965) and on voles (Gromov & Polyakov, 1977). In these volumes Gromov follows the tradition laid down by his teacher, B.S. Vinogradov, to analyze the group in the scale of world fauna. These studies summarize all homeland and foreign studies, they are based on a vast material on fossil and recent forms, on their morphology, zoogeography, and karyosystematics (for voles), and give detailed and rather comprehensively argumentation of phylogeny of these groups. These issues are fine examples of works of this kind and stimulate further investigations on phylogeny of rodents. The work of Gromov on voles was got the First prize of the Moscow Natural History Society (Moskovskoe Obschestvo Ispytatelei Prirody) in 1980.

On the initiative of Gromov in the series "Fauna of the USSR" volumes devoted to the systematics and phylogeny of mole-rats (Topachevskii, 1969), systematics and phylogeny of lagomorphs and insectivores (Gureev, 1964, 1979), morphology and ecology of hamsters of the world fauna (Vorontsov, 1982) have been published.

Editing of scientific papers constituted an important part of Gromov's work. Under his editorship, together with his closest follower — G.I. Baranova, the

collective work of theriologists of ZIN, a survey of principally new type – “Catalogue of Mammals of the USSR” was published (Gromov & Baranova, 1981). He also was the editor of many proceedings, papers and monographs on the evolution of rodents and history of their fauna.

Starting from the fifties and up to the late eighties Gromov practically without break every season with a small group went to field excavations. He personally gathered faunas of such well known sites as Etulia, Kotlovina, Tsimbal, Uryv, Korotoyak and others. In many of such expeditions together with him was his devoted friend, his wife, an artist, Sara Lazarevna Smuilovich. She illustrated many of his papers and monographs.

In 1990 for the complex studies of mammals (systematics, ecology, conservation) Gromov received an honorary reward, the State Premium of the USSR.

Despite that Gromov is known as a founder of micropaleotheriology and in his studies he mainly used classical morphology method he always showed a vivid interest in application of new methods of analysis in systematic and phylogenetic studies and being a head of laboratory of mammals encouraged their promotion. Being a head of the laboratory of mammals he organizes the studies in the field of intraspecies systematics with the use of new methods and on his advice M.N. Meyer developed in the laboratory a complex taxonomic method with a wide application of karyological and other modern methods of analysis.

Igor Gromov always valued creative scientific work more than any high administrative positions and gave up administrative duties as only they came into conflict with his scientific activity. Thus, in 1980, having felt that he has not enough time to combine the duties of the head of the laboratory of mammals and scientific work he by his own will left the high administrative position.

Through dry lines of biographical reference it is difficult to see personality of Igor Mikhailovich. Not only for me, but I think that for all my colleagues who were lucky to work and learn from IM it was an unforgettable time.

Gromov was the true leader. His opinion meant a lot. Researchers from such known scientific centers within the country as Moscow, Sverdlovsk, Kiev, Novosibirsk and world centers such as Montpellier, Bonn, Krakow, Budapest, Washington came to Leningrad, to Gromov to get his advice, to discuss own results and current issues of theriology and evolutionary biology. Among them were both well known scientists such as N.N. Vorontsov, V.A. Topachevskii, O.L. Rossolimo, N.G. Smirnov, K. Kowalski, R. Hoffman, W. von Koenigswald and those who only start their way in science. Gromov treated them all with equal respect. Characteristic feature of Gromov’s leadership and supervision was that he never forced his ideas and opposite was very attentive to another opinion. In the late seventies – early eighties Gromov supervised postgrad-

uate work of several young students in the laboratory (F.N. Golenishchev, M.V. Zaitsev and me). As it often typical of young people we tried to establish our own independence and the supervision of Gromov was as if invisible, so we start to think that we really are independent and our work is purely our own merit. How wrong and naive we were! Gromov taught us everything and we were full of his ideas and way of thinking, not giving ourselves a full account. Our dependence became clearly evident soon after Gromov’s retirement in 1993 when due to observable decline in health his visits to the Institute became very rare. We immediately felt the emptiness and lack of the leader. The authority of Gromov was extremely high. His remarks, words, opinion, reference meant too much for everybody. Despite his gentle and kind treat of everybody, in his own work he was perfectionist and waited the same attitude from others. The number of works published by Igor Gromov is comparatively small, but every work is an example of thorough investigation and still topical.

The influence of IM is not limited only to scientific topics. His extensive knowledge, splendid education amazed and continues to amaze all who is fortunate to know him closely. The true Petersburg intellectual he excellently knows classical and modern literature and art and I thank my luck for that it give me a pleasure of communication with IM, an aristocrat of intellect and talent.

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