

*International Commission  
on the  
History of Geological Sciences*

**INHIGEO**

**ANNUAL RECORD**

No. 48

Covering activities generally in 2015

Issued in 2016

INHIGEO

is

*A Commission of the International Union of Geological Sciences*

&

*An affiliate of the International Union of the History and Philosophy of  
Science and Technology*

**Compiled and Edited by Wolf Mayer  
INHIGEO Editor**

**Printed in Canberra on request  
Available at [www.inhigeo.org](http://www.inhigeo.org)**

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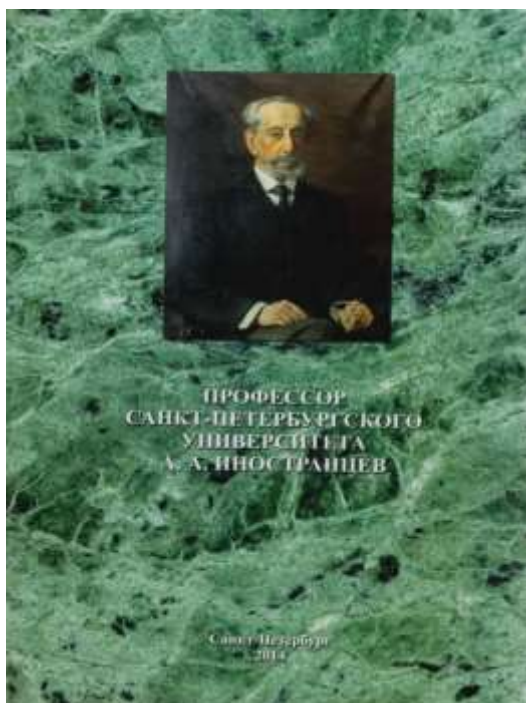
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But, all in all, this book, by the same press that published the original edition in 1924, is a historical masterpiece and well worth the purchase.

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**A.A. Inostrantsev, Professor of St.-Petersburg University. Text prepared by V.V. Arkadiev, comments by V.A. Prozorovsky and I.L. Tikhonov 2014. Saint-Petersburg, Publishing House “Superwave Group Company “, 352 pp. (In Russian)**



This second edition of the memoirs of Alexander Aleksandrovich Inostrantsev (1843-1919), an eminent Russian geologist and corresponding member of the Imperial St.-Petersburg Academy of Sciences (since 1917 of the Russian Academy of Sciences), was prepared on the 170<sup>th</sup> anniversary of his birth. The first edition was published in 1998 and entitled *Inostrantsev A.A., Memoirs* (Autobiography). In 1998, Professor Vladimir Anatol'evich Prozorovsky (1932-2007), at that time the head of Department of Historical Geology of the St.-Petersburg State University, together with the Director of the Museum of History at St.-Petersburg State University, Igor L'vovich Tikhonov, prepared the text for this publication and wrote an introductory article and comments on the text. They were supported in this work by employees of the Museum of History of St.-Petersburg State University and by Galina Mikhailovna Gataulina, keeper of the Geological

Museum of the Department of Historical Geology (nowadays – the Paleontological-Stratigraphical Museum of the Department of Dynamic and Historical Geology), who transcribed and typed Inostrantsev's the manuscript into the computer.

In October 1998, during a conference at St.-Petersburg State University, we visited Prozorovsky in his small office and discussed the history of geology, to which he devoted much attention at that time. Prozorovsky presented me with some brochures of essays about geologists of St.-Petersburg State University. He also gave me the book of Inostrantsev's memoirs. He spent much time and energy on preparing this publication. Prozorovsky asked me to give this book to the director of the Vernadsky State Geological Museum of the Russian Academy of Sciences, Academician Dmitry V. Rundqvist. He said that after the Great Patriotic War, he and Rundqvist had studied together at the same school in Leningrad. This book was popular and soon became a rare.

Therefore the fact of the publication of its second edition has pleased, I hope, not only experts in the history of geology and the history of science and higher education, but also a readership interested in the history of our country. The book covers a wide time-range including the second half of the 19<sup>th</sup> century and the first two decades of the 20<sup>th</sup> century. It presents extensive accounts of the geography of many places of our own and of foreign countries, visited by Inostrantsev, and of various events in which he participated.

The book consists of 13 chapters. The first three are devoted to Inostrantsev's childhood, his studies in a grammar school and at the University. Inostrantsev was born into a large family of an officer in the courier service of Emperor Nikolay I. therefore all eight children received a good education. In the grammar school, Sasha Inostrantsev was a boarder supported by Nikolay I. Five of his sisters studied in the Smolny, the Pavlovsky and the Elizabethan Institutes for Noble Maidens, exclusive educational institutions for daughters of the nobility, between the ages of 10 and 18.

Inostrantsev made many interesting observations about the atmosphere that prevailed at the University, about the professors, about his friends and about fellow students. At the University, he attended the lectures of Dmitry I. Mendeleev and worked as his assistant in the laboratory. During his first geological excursion to "Valamo" (Valaam Island) Inostrantsev met and became a friend of the landscape painter Ivan I. Shishkin (1832-1898), with whom he remained on friendly terms to the end of the artist's life. When under the Charter of 1863, the universities formed the institute of post-graduate studies, designed to prepare graduate students for the professorate, Inostrantsev was one of the first to enrol. He participated in the First Congress of Russian Naturalists and Doctors in 1867, where he presented a report on the results of his geological study of Valaam Island.

The fourth and longest chapter "Professorate" (34 pages), is devoted not only to the teaching activity of Inostrantsev. It also includes details of the establishment, in 1868, of the St.-Petersburg Society of Naturalists. He was the first secretary of its mineralogy and geology branch and, later, in 1890, became the Society's President. Also in these pages, Inostrantsev described in detail his first journey abroad, in 1871-1872. Over a period of 17 month he visited, among other cities, Warsaw, Vienna, Munich, Prague, Venice, Milan, Zurich, Geneva and Lausanne. He examined geological and mineralogical collections in museums and he made a number of excursions to famous localities, on the advice of local researchers. He met and communicated with European geologists, including Edmund Mojsisovics, Gustav Tschermak, Eduard Suess, Emil Tietze and Oswald Heer, who showed him generous hospitality. Due to illness, Inostrantsev and his wife had to spend some of their time in Rome and Naples. He managed to assemble a collection of specimens from the lavas of Vesuvius and to observe its eruption. He also became acquainted with Luigi Palmieri (1807-1896), the Director of the Observatory on the slopes of Vesuvius, which for many years conducted seismic observations of the mountains volcano activity.



Inostrantsev presented a thesis for his doctor's degree at St. Vladimir University, in Kiev, where he became the first Russian to be awarded the degree of doctor of mineralogy and geology, instead of geognosy.

The fifth chapter "The organization of a geological Cabinet and the work involved in maintaining it" narrates Inostrantsev's methods of equipping a Cabinet (museum) with cupboards and showcases, for the replenishment of its collections. He worked as keeper and then as the head of the Geological Cabinet from 1868, from the start of its creation. The description of Professor Inostrantsev's activities relating to the organization of the Cabinet are inseparably connected with his teaching activities. He gave lectures on geology during half a century, not only at the University, but also as part of the Bestuzhev Highest Female Courses, at the Technological Institute, in Military Medical and Military Engineering academies and in the General Staff Academy. He remembered the names of many of his students who obtained work in the Geological Cabinet, which at that time was a centre scientific activity. He also remembered assistants who had researched the museum's collections and geologists from universities of other cities who defended their master thesis in the Cabinet. Inostrantsev authoritative manner and his rigorous adherence to principles, led at times, to resentment and misunderstanding among his co-workers and students.

The following chapter "Public Services" is devoted to Inostrantsev's activities as an expert-geologist. Inostrantsev sought advice and recommendations from individuals, as well as from government agencies, from various societies and from the councils of Russian districts and cities. He described the most interesting journeys with staff of the expert Commission: with Nicholas P. Barbot-de-Marni to the Crimea, concerning the water supply of the Imperial Residence in Livadia, and with the well-known chemist Dmitri I. Mendeleev to the Oryol province, to evaluate the prospectivity of an iron-ore deposit. On the return trip with Dmitri Mendeleev, they missed the train, which crashed after leaving Oryol. By their lateness they had avoided certain death, as "the carriges of the 1<sup>st</sup> and 2<sup>nd</sup> class have most suffered the greatest damage as a result of the derailment" (Inostrantsev, 2014, pp. 151).

The chapter, "My Participation in the Formation of the Geological Committee and of the Geological Section of the Cabinet of His Majesty", occupies five pages only. Inostrantsev wrote one of the versions of the Charter of Geological Committee – the first State Geological Survey in Russia. For some years, he headed the Geological Section of the Cabinet of His Imperial Majesty. In particular, in 1894, he conducted a study of the Altay mountain district. Under his management, eight volumes of works of the Geological Section of the Cabinet of His Imperial Majesty have been prepared and published.

The chapter "Service to Petrograd" is also a short one. In his native city, Inostrantsev was a deputy of the Duma for 12 years. He had to deal with the problems of the urban economy: such as searching for sources for the city's water supply, and choosing a suitable location for a cemetery. He suggested paving sidewalks with Shoksha granite, rather than with cobblestones.

In the chapter "About publishing my Works", the memoirs' author briefly narrated about the destiny of some his printed works. His "The Geological Essay of Povenetsky District of Olonetsky Province and its Ore Deposits" (1877), was printed in the seventh volume of "Materials for the Geology of Russia", and was illustrated "by three tables of colored microscopic images of rocks, for the first time in Russia" (drawings of microsections – Z.B.). His book "Prehistoric humans of the Stone Age at the coast of Lake Ladoga" (1882), contained a description of the unique collection assembled by him during the construction of the New-Ladoga canals. The book was censored and removed from all public libraries by within a month after its publication, as the author had included calculation of the lifespan of prehistoric man in the book.

The tenth chapter, “Journeys to International Geological Congresses (IGC)” contains many interesting facts about congress sessions and about his personal impressions of meetings with known foreign geologists. For example, he became acquainted in France with the petrographer Auguste Michel Lévy and the paleontologist Albert Gaudry, in Belgium with the paleontologist Louis Dollo, in England with the geologist Archibald Geikie and in Italy with the geologist and paleontologist Giovanni Capellini. During excursions, he was greatly impressed by the open pits for marble extraction in Carrara and for roofing slate in Northern Wales. Inostrantsev participated in sessions of the IGC in Paris (1878), Bologna (1881), Berlin (1885) and London (1888), mainly in the role of session vice-president. He took a part in the organization of the 7<sup>th</sup> session of IGC in St.-Petersburg (1897) and was also the vice-president of this forum. He was engaged in the preparation of a geological-mineralogical exhibition in St.-Petersburg, was the organizer of excursions for delegates of the Russian session of IGC, to Imatra and to the Crimea. The 9<sup>th</sup> session of IGC in Vienna (1903) was the last in which he participated.

In the following chapter “Concern about the expansion of the Department of Geology at our University”, Inostrantsev gave his opinion on the differences of courses of Geology at the University and in the Mining Institute. According to him “the pure science in Geology should be reserved for universities” (Inostrantsev, 2014, pp. 186), and that students entering the Mining Institute should “be provided with information on mining and ore theory and practice” (ibid, p.185).

The chapter “The dangers and inconveniences of excursions” described the difficulties and dangers of geological excursions in which he participated across all Russia, for about forty years. He mentioned absence of good local maps, difficulties with supply of provisions, bad roads or hardly visible tracks, an abundance of blood-sucking insects. The bathhouse was considered the best way at that time of a fast recovery from biting insects. Mountain rivers presented a big danger. Inostrantsev had himself experienced this on several occasions, when only a miracle saved him from drowning.

In the final chapter, “About Private life”, Inostrantsev briefly listed the contemporaries whom he met during special dinners. Among them were not only professors of the University and Institutes, but also military men, officials, writers, artists and actors. He also invited acquaintances to his home. Inostrantsev listed the national science societies, which elected him as an honorary member. He was also a corresponding member of the Academy of Natural Sciences of Philadelphia and of the Geological Institute of Vienna. According to Inostrantsev, “during the last revolution and the persecution of intellectuals” his natural optimism and employment “have substantially disengaged me from the passing events and the sad thoughts generated by them” (Inostrantsev, 2014, pp. 204-205).

Inostrantsev finished his manuscript at the age of 75, shortly before his death. (He committed suicide on December 31, 1919).

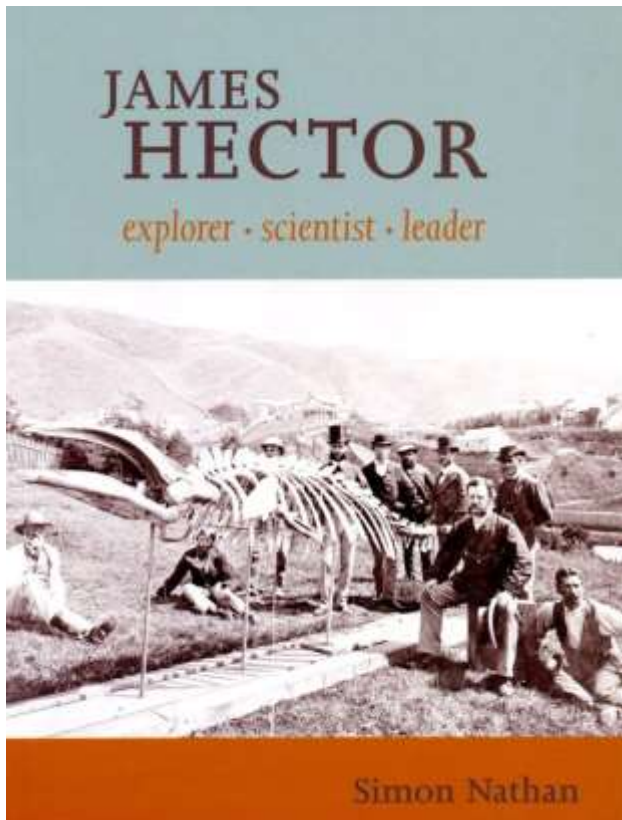
It should be noted that this well prepared book, as compared with the first edition, includes documents and, in particular, reports of University Council sessions, which relate to Inostrantsev’s activities. It includes a letter from teachers of the city schools to Inostrantsev and an “Open letter to the Geological Committee” (1891) from Inostrantsev, in reply to criticism of his work by the geologist Sergey N. Nikitin. A separate part presents illustrations, including his portraits and many interesting photos, which have show Inostrantsev in his Cabinet, during lessons with students and during field works, as well as diplomas, inventories of collections, copies of official and award documents.

Comments to the text, compiled by Vladimir A. Prozorovsky and Igor L. Tikhonov, for the first edition of the book, occupy 54 pages and were included in the second edition, unfortunately, without changes. The huge amount of work by the compilers of comments did

inevitably result in some errors. It would be good if the incorrect comments and some the errors and discrepancies in the second edition, could be corrected in the preparation of the third edition of this remarkable book.

Zoya Bessudnova, Moscow, Russia

**Nathan, S. 2015. James Hector: Explorer, scientist, leader. Geoscience Society of New Zealand, Miscellaneous Publication, 140, 264p. ISBN: 978-1-877480-46-1, NZ\$45. Distributed by Potton and Burdon.**



Marking the 150<sup>th</sup> Anniversary of the founding of the New Zealand Geological Survey (now GNS Science), along with what was then the Colonial Museum and Colonial Laboratory, INHIGEO member Simon Nathan has written a biography of its first director, Sir James Hector (1832-1906). Even at 265 pages, including many illustrations, this is a relatively short account of the multitude of achievements of the most outstanding 19<sup>th</sup> century scientist in New Zealand and an equal internationally.

Although born in Edinburgh, Hector spent the last 45 years of his life in New Zealand. His scientific career began when, after qualifying with a degree in medicine and geology from Edinburgh University, he was appointed to the Palliser Expedition that traversed western Canada from 1857 to 1860 and where his dual professional skills were put to good use. Also coming to the fore were his

powers of observation and an ability to quickly and rationally synthesize data, traits that were to serve him and science well in the coming decades. In 1861 Hector was appointed geologist to Otago, a province in southern New Zealand that was benefiting from a rapid expansion of alluvial gold mining. Although he was expected to further enhance the province's mineral wealth, Hector took a much broader view and produced a geological map of the province, the third such regional map of New Zealand (the first were by Ferdinand von Hochstetter, assisted by Julius von Haast, of parts of the Auckland and Nelson provinces). However, it was Hector's organising, almost single handed, of the New Zealand Exhibition in 1865 in Dunedin, Otago, that confirmed his great administrative talents. For the exhibition Hector compiled the first geological map of New Zealand.

As Nathan states, it was Hector who persuaded New Zealand's leading politicians, many of whom were what could be termed "gentlemen scientists", of the value of an integrated New Zealand-wide geological survey, museum, analytical laboratory and metrological service, as well as of the benefits of keeping uniform time throughout New Zealand. The latter was put to good use in analysing earthquake records. In 1865 Hector was appointed in charge of these and other organisations. An illustration of a letterhead lists ten