Vasily Dokuchaev
(the 175th anniversary)

Central Soil Museum by V.V. Dokuchaev –
Branch of the Federal Research Centre
V.V. Dokuchaev Soil Science Institute
Saint Petersburg, Russia
2021
Vasily Vasilyevich Dokuchaev  
(01.03.1846 – 08.11.1903)

Great Russian scholar, natural scientist,  
Professor of Mineralogy and Geology of St. Petersburg University.

- created the science of soil - Soil Science
- he was the first to establish that the soil is an independent natural body, qualitatively different from all other bodies of nature
- proved that living organisms form an integral part of the soil
- discovered the basic laws of the origin and geographical distribution of soils
- developed the doctrine of natural and soil zones, discovered the law of horizontal zoning and high-altitude zoning of soils
- formulated the law about factors of soil formation
- established the principles of the structure of the soil profile
- developed new methods of soil research and the basics of soil classification and cartography
- laid the foundations of ecology
- laid the foundations of the doctrine of the biosphere
- he pioneered and put into practice a sustainable system of farming
- the author of 281 printed works, 4 maps; editor of 57 books and 7 maps from 1869 to 1900
- founded the scientific school. His outstanding students made major contributions to various branches of natural science.

The Dokuchaev natural science paradigm evolutionarily changed the methodologies of almost all sciences of the XX century. Many of Dokuchaev's ideas are most relevant and they have not lost their significance in the modern world.
Vasily Dokuchaev was born on 1 March (February 17 by the Julian calendar) 1846 in the village of Milyukovo, Smolensk region into the family of the priest Vasily Sergeyevich and Pelageya Trofimovna Dokuchaev. Vasily was the youngest of seven children.

The house where the family lived and the church where the father served and the children were baptised have not survived to the present.
Vyazemsky Religious School at the Smolensk Seminary.

The view of the city of Vyazma

Source: https://humus.livejournal.com/3145976.html?view=comments

After attending a parochial school in Milyukovo, at the age of 11 Dokuchaev enrolled at the Vyazemsky Religious School at the Smolensk Seminary.
In 1867 Dokuchaev graduated with honours from the Smolensk Theological Seminary and was sent to the St. Petersburg Theological Academy.
After enrolling in the St Petersburg Theological Academy, he left it and almost immediately joined the Faculty of Physics and Mathematics of the Imperial St Petersburg University.
V. Dokuchaev as the Guardian of the Geological Cabinet.

Source: Article by P.V. Ototsky “The Life of Dokuchaev”. “Eurasian Soil Science” journal. 1904

Diploma of the Imperial St. Petersburg University with the defense of a thesis and the awarding of the Candidate’s degree. October 16, 1871.


Approval of candidate V. Dokuchaev for the vacancy of Guardian of the Geological Cabinet from September 18, 1872.

Submission from the Council of St. Petersburg University for the appointment of Master of Mineralogy and Geology Vasily Dokuchaev as privat-docent to give lectures in Geology.

September 19, 1879.


From 1870 Vasily Dokuchaev was lecturing in dynamic geology and petrography at the Imperial University in St. Petersburg.
In 1879 Vasily Dokuchaev was appointed privat-docent of mineralogy and became head of the department of mineralogy and crystallography at St. Petersburg University.
From 1875, Dokuchaev takes part in creating the first soil map of European Russia. Due to the death of Vasily Chaslavsky in 1878, Dokuchaev had to complete the work himself and write an explanatory note for the Cartography of Russian Soils map, which was published in 1879.
In 1876, at the suggestion of Aleksey Khodnev and Alexander Sovetov, a special commission was organized at the First Department the Imperial Free Economic Society to develop new research programs for Russian chernozem. Vasily Dokuchaev was entrusted with drafting the working program of research and later its execution.

During the summer months from 1877 to 1881, Vasily Dokuchaev was travelling over the chernozem zone of European Russia (the total length of the route was over 10 thousand kilometers).
Since 1879, Vasily Dokuchaev regularly raised the issue of the need for a soil science museum in Russia. This dream came true only after his death through the efforts of his close student Pavel Ototsky.

The official opening of the Pedagogical Museum was held on 6 of November 1904 at the Imperial Free Economic Society. Already at the time of its foundation the Museum was named after Vasily Dokuchaev.

The exhibition was based on a collection of soil samples and monoliths collected by Vasily Dokuchaev and his students during expeditions, which had been displayed at various exhibitions since the 70s of the 19th century.
Vasily Dokuchaev married Anna Sinkler in 1880. By the time she met Vasily Dokuchaev, Anna Egorovna had experience of teaching and was head of her own first-class boarding school for girls.
The work on the study of the chernozem zone of European Russia evolved into Dokyuchaev’s doctoral thesis entitled "The Russian Chernozem", which he defended at the Imperial Saint Petersburg University on 19 December, 1883.
One of the official opponents for the thesis was Dmitry Mendeleev, who highly appreciated this work.
Diploma awarding the degree of Doctor of Mineralogy and Geognosy to Vasily Dokuchaev on the basis of his thesis "The Russian Chernozem", which he defended on the 19th of December. 
*Archive CSM copy from CGIA St. Petersburg. F.14, l.1.*

Approval of Associate Professor of the University of St. Petersburg, Doctor of Mineralogy and Geology, Privy Councilor Dokuchaev as Extraordinary Professor of this University. March 15, 1884. 
*Archive CSM copy from CGIA St. Petersburg. F.14, l.1, D.7192. P.62.*
In 1882, the Nizhny Novgorod provincial zemstvo approached Vasily Dokuchaev with a proposal to determine the qualities of the provincial soils with a precise marking of their boundaries. Under the leadership of Dokuchaev, specialists trained by him completed the work in six years. The results were 14 issues of "Materials on land assessment of the Nizhny Novgorod Province" (one for each county of the province), with a soil and geological map.

In this expedition, the methodology of soil mapping was created and developed, together with the genetic classification of soils with four major classes of land-vegetation, land-swamp, swamp and floodplain soils. The method of land appraisal was improved and the Dokuchaev concept of genetic soil science was tested and extended to the northern soils.
The general appreciation of the research in the Nizhny Novgorod province was confirmed by the proposal to carry out a similar study of the lands of the Poltava province. Dokuchaev was in charge of the expedition's research during 1888-1890. The staff of this expedition included N.M. Sibirtsev, P.A. Zemiatchensky, A.R. Ferkhmin, who had already been on the Nizhny Novgorod expedition, as well as younger students of Dokuchaev: V. I. Vernadsky, K. D. Glinka, P. V. Ototsky, B. B. Polynov, F. Yu. Levinson-Lessing, and others.
State awards of Vasily Dokuchaev

Order of St. Stanislaus, third class
Source: http://www.cabinet-auction.com/auction/9287/085/

Order of St. Stanislaus, 2nd class

Order of St. Anne, 2nd class
Source: http://medalirus.ru/rus-ordena/orden-stanislava-3-kapitulnyy.php

Vasily Dokuchaev
Vasily Dokuchaev was engaged in the development of agricultural education in Russia under the Ministry of Public Education and the Department of Agriculture. In 1892, he was appointed the director of New Alexandria Institute of Agriculture and Forestry and proceeds to radical reorganization of teaching and curricula of the Institute. In 1894, the first department of genetic soil science was established at the New Alexandria Institute. Higher agricultural education in Russia was reorganized according to this model.

Soil sample No. 131 presented at the exhibition. CSM GIK №2-100

Vasily Dokuchaev organized the Department of Soil Science at the All-Russian Exhibition in Nizhny Novgorod in 1896.
The soil collections were particularly successful at the World Exhibitions in Paris. In 1889 Vasily Dokuchaev was awarded a gold medal and the Chevalier du mérite agricole (Order of Merit for Farming). In 1900, Vasily Dokuchaev and his pupils Vladimir Vernadsky, Nikolay Sibirtsev, Pavel Ototsky and others were awarded the highest award - the Grand Prix.

Visitors particularly remembered a monster sample of chernozem from the Voronezh Province (Paninskiy district) in 1900. It was about 9.7 m³ in size and was mounted on a high pedestal. After the exhibition it was decided not to cut the monolith. It was given by lot to the Sorbonne, where it was kept until 1968, when the sample and its display case were destroyed as a result of student riots. Today, the remains of the monolith are preserved in the National Agronomic Institute.
In the autumn of 1900, Vasily Dokuchaev practically ceases all communication with the outside world.

Vasily Vasilyevich Dokuchaev died on November 8, 1903 after a long illness. The funeral was attended by Alexander Karpinsky, Dmitry Mendeleev, Alexander Inostrantsev, numerous friends and pupils of Dokuchaev, students, and delegates from many educational institutions. He is buried next to his wife Anna Egorovna Dokuchaeva at the Smolensky Lutheran Cemetery in St. Petersburg.