Bulgarian Journal of Meteorology and Hydrology

Национален институт по метеорология и хидрология

National Institute of Meteorology and Hydrology

Bul. J. Meteo & Hydro 23/2 (2019) 78-80

200 years since the birth of a remarkable Bulgarian: Dimitar Mutev (1818 – 1864)

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Throughout the years and according to the historical moment, each nation has its distinguished personalities to be proud with, to honor and value. These are leaders with a national mission, revolutionaries, scientists, people of art, sports and other. Although small, our country can also boast of a galaxy of Bulgarians who have put their noble cause above their personal peace, prosperity and interests.

In 2018, 200 years have passed since the birth of such a Bulgarian - Dr. Dimitar Mutev. Born September 4, 1818 in the town of Kalofer, Dimitar Stefanov Mutev is the eldest of 6 children in a wealthy merchant's family. His grandfathers, uncles and his father were awake and enterprising Bulgarians. They often traveled across Europe doing business and always, after their arrival back, discussed the cultural and scientific achievements of the countries visited. Their stories aroused the curiosity of the children in the family and stimulated their interest in learning more about the world. As there were no Bulgarian class schools at that time, they received their "primary" education at home. In the early 1830s, the Kardzhalii hordes invaded and burned Kalofer, forcing the family to emigrate to Odessa. After a 2-years period of studying in Wallachia, Dimitar and his brother Hristo joined the family in Odessa. Dimitar Mutev graduated the Odessa high school and continued his education in the Department of Physics and Mathematics of the famous at that time Richelieu Lyceum in Odessa where his interest in the natural sciences and mathematics deepened. His talent and interests were noticed by Prof. W. Brown, who advised and helped the young man to continue his further education in Germany. First, as a student at the University of Bonn, he attended lectures in mathematics, physics,

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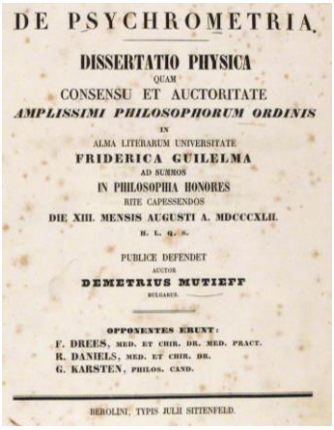
chemistry, anthropology, etc., but his interest in physics prevailed and during the academic year 1840/41 he moved to the University of Berlin, where he specialized physics, natural sciences, meteorology and metrology. His professors and mentors were such well-known for the time scientists as the meteorologist H. W. Dove and Prof. P. Erman. At the end of his studies in Germany, on August 23, 1842, Dimitar Mutev brilliantly defended his dissertation on "Psychrometry" and received the scientific degree "Doctor of Philosophy and Master of Liberal Arts". The thesis is printed in Latin and consists of 72 pages. The original is stored at the University Library of Jena, Germany.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OPPONENTES ERUNT:

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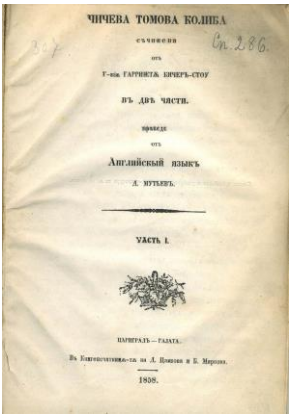
For physicists, meteorologists, and natural science enthusiasts, it is of particular interest to briefly address some of the major issues under study in this dissertation. The main method for measuring humidity – the psychrometric one, is discussed. The first chapter introduces basic concepts and summarizes the existing knowledge about the properties of saturated and unsaturated water vapor, the laws of evaporation. The statements there convincingly demonstrate the knowledge of D. Mutev about the physical properties of water vapor depending on temperature, pressure, air velocity. The other two chapters give a comparative analysis of two methods and several humidity measuring instruments, listing the positive and negative sides of each of them in a detailed and reasoned way. Qualitative observations and examples of the practical use of evaporative cooling are presented. An overview of the first attempts to quantify this phenomenon is also made, e.g. measuring the temperature drop down of a thermometer with a tank immersed in the test liquid. D. Mutev also gives the formula for calorimetric determining the heat of evaporation of water by condensing water vapor in a colder environment.

Not only curious, but also remarkable is the fact that on the title page of D. Mutev's dissertation, under his name is written "Bulgarian", almost 30 years before the existence of the Bulgarian ethnic group was officially recognized by the Ottoman Empire in 1870.

After defending his dissertation, Dimitar Mutev lived mostly in Odessa (1846 - 1849) and St. Petersburg (1849 - 1854), where he was engaged with scientific work and teaching. In 1857, the Bulgarian community in Constantinople initiated the publication of the Bulgarian Booklet magazine (Bulgarski knizhitsi) and invited Dr. Dimitar Mutev as Editor-in-chief. The choice was due to the fact that he was one of the most educated Bulgarians of his time, with a good command of 10 languages, extensive knowledge of physics, mathematics, chemistry, history, economics, politics. By August 1858, sixteen issues of Bulgarski knizhitsi were coming out. The article "Meteorological phenomena" by D. Mutev, published in one of the issues, summarized the existing knowledge on meteorology at that time.

In the last years of his life (1859 – 14/01/1864), Dr. Mutev worked as a director of the first Bulgarian high school in Bolgrad. Guided by his initiative and competence, the school shortly approached the level of the best high schools in Europe. Knowledge about the atmosphere, winds, water and its various phase states, etc. was well presented in the physics teaching. On the notes of Mutev's lectures, a textbook entitled "Natural History and First Introduction to Nature" was printed in 1869.


ЧИЧЕВА ТОМОВА КОЛИБА

ЧАСТЬ I.

1858.

Dimitar Mutev is also one of our talented Renaissance translators. He translated the first part of "Uncle Tom's cabin" by Harriet Beecher Stowe, and only seven years after it was published in original, it appeared as an annex in Bulgarski knizhitsi.

Academician M. Borisov (theoretical physicist) writes that the dissertation of Dr. D. Mutev is an impressive for the time scientific study, highly appreciated in Germany and in Bulgaria, which "marks the beginning of the Bulgarian studies in physical sciences". Academician S. Panchev (meteorologist) states that with the successful defense and high appreciation of D. Mutev's dissertation, "the beginning of scientific research in meteorology, and more precisely, the creation of methods and instruments for meteorological measurements, was initiated in our country."

Writing about Dr. Dimitar Mutev is as easy as it is difficult. It is easy, because in his short life he has achieved and done much for Bulgarian education, science and literature. Extremely humble and alien to vanity, he leaves nothing but science, actions and meager information about himself. Therefore, it is the duty of all who have touched his creativity and acts to remember him and to tell the next generations about this distinguished Bulgarian scientist and enlightener from the years of Bulgarian National Revival. A deep bow!

REFERENCES

Andreev V. (2008) - 120 Years Bulgarian Meteorological and Hydrometeorological Service, Volume 1 and 2, Ed. Demetra (in Bulgarian)

Borisov M., G. Kamisheva, Dr. Dimitar Mutev and Bulgarian Physics, Nature (1), 77 - 82 (1984); (2) 68 - 73 (in Bulgarian)

Drumeva M. (2016) - Sowing Freedom / Remembering Dimitar Mutev, Svet Magazine, On Letters and Freedom, issue 6/2016, (in Bulgarian)

Proceedings of the Scientific Conference "Elena and Dimitar Mutevi: The Early Roads of Bulgarian Modernity" (2017), University Publishing House "St. Kl. Ohridski "

http://museum.issp.bas.bg/mutev/dm01-page1.html

http://www.aba.government.bg/?show=38&nid=1508

http://balgari.bg/istoriya/vazrazhdane-i-osvobozhdenie/1680-poliglot-osnovava-bolgradskata-gimnaziya

https://en.wikipedia.org/wiki/Bolhrad_High_School