JOHANNES BOSSCHA
1831-1911

Bosscha was born in Breda on 18 November 1831, the son of Henrietta Jacoba de Kruijff and Johannes Bosscha, a professor of history and literature, member of Parliament, and a Dutch Reformed minister. From 1844 to 1848, he attended the Latin school in Amsterdam (which became a gymnasium in 1847), after which he enrolled at the University of Leiden, where he studied under the astronomer Kaiser. As a student he received a gold medal for his thesis *Over den invloed der warmte op het electrisch geleidsvermogen van vloeistoffen* (On the Influence of Heat on the Electrical Conductivity of Liquids), and in 1854 he took his doctoral degree on a dissertation entitled *De galvanometria differentiali.* After continuing his studies in Berlin for some time, he returned to Leiden to become an assistant at the Physical Cabinet. Here he pursued his research on electrical phenomena and, in 1858, published *Het behoud van arbeidsvermogen in den galvanischen stroom* (Conservation of Energy in Galvanic Currents), in which he treated the applicability of the recently formulated first law of thermodynamics to electrical phenomena. In 1855 Bosscha married Paulina Emilia Kerkhoven. They had two sons and four daughters.

In 1860, Bosscha was appointed to the chair of natural science at the Royal Military Academy at Breda, and in 1863 he was elected to membership of the Royal Academy of Arts and Sciences. In that year, Thorbecke appointed him as the inspector for secondary education for the provinces of Noord-Brabant, Gelderland, Utrecht, and Limburg. In this capacity, Bosscha exercised considerably influence on the structure of the newly founded HBS, insisting, for example, on specialized classrooms for physics and chemistry. In 1872, he served on the international committee on measurement that met in Vienna. He continued his work on standards after accepting the chair of physics at the Polytechnic School in Delft, in 1873, and was an important contributor to the formulation of the Dutch standard for the meter and kilogram.

In 1878, Bosscha became director of the Polytechnic School, and in this capacity he worked hard to raise the level of scientific instruction. His three-volume *Leerboek der natuurkunde* (Textbook of Physics), in which no higher mathematics were used, appeared in 1875 and went through a number of editions. Beginning in 1895, it contained

contributions from other scientists. Poor health forced Bosscha to step down in 1885.

From 1885 to 1909, Bosscha served as secretary of the Hollandsche Maatschappij der Wetenschappen in Haarlem. Here, he organized the publication of the collected works of Christiaan Huygens and published the *Archives néerlandaises*, devoting his efforts to bringing Dutch science and its history to the attention of foreigners. During this period he also served on the government's committee for geodesy and water levels, was president of the curatorial committee of the Royal Dutch Meteorological Institute (KNMI), and was curator of the University of Leiden. The jubilee issue of the *Archives néerlandaises* to mark his 70th birthday, in 1901, contained contributions by Max Planck and Lord Kelvin. The Physics Reading Room at the University of Leiden is named after him. Bosscha died in Heemstede on 5 April 1911.

Primary works

Poggendorff, vol. 1, 248; vol. 3, 166; vol. 4, 162; vol. 5, 148. Bosscha's papers are in the Bosscha Collection, Boerhaave Museum, Leiden; *Leerboek der natuurkunde* (1875, 3 parts), many editions; *Christiaan Huygens. Rede op den 200sten gedenkdag van zijn overlijden* (1895); *Verspreide Geschriften. Ter gelegenheid van zijn 70sten verjaardag uitgegeven door zijn vrienden* (Leiden, 1903, 3 parts); *Recueil des travaux offert par les auteurs à J. Bosscha, secrétaire de la Société Hollandaise des sciences à Harlem à l'occasion de son 70me anniversaire le 18 Novembre 1901* ('s-Gravenhage, 1901) = part IV of 2nd series of *Archives néerlandaises des sciences exactes et naturelles*.

Secondary sources

H.A. Lorentz in *Verslag ... der wis- en natuurkundige afdeeling van ... 28 April 1911 van de Koninklijke Akademie der Wetenschappen te Amsterdam*, 19 (1910-1911) 1374-1378; *idem*, in *Programma van de Hollandsche Maatschappij der Wetenschappen te Haarlem voor het jaar 1911*, 2-9; H.G. van de Sande Bakhuyzen, in: *Eigen Haard* 37 (1911) 308-312. See also G. C. Gerrits, *Grote Nederlanders bij de opbouw der natuurwetenschappen* (Leiden, 1948) 270-274.

J. Charité in *BWN*, vol. 1, 79.

[A.v.H.]