

HUGO MARIE DE VRIES  
1848-1935

Hugo de Vries was born in Haarlem on 16 February 1848, the son of Gerrit de Vries Azn., who had studied literature and law and was representative to the Provincial States of North Holland. Later he became a member of the Council of State and Minister of Justice. Both Hugo's parents came from families with an academic tradition. In primary school in Haarlem, De Vries already started collecting plants. In 1860 he entered the municipal gymnasium of Haarlem, and in 1862 the family moved to The Hague. Beginning in that year, he helped W.F.R. Suringar, professor of botany at Leiden, to classify the plants in the herbarium of the Netherlands Botanical Society.

In 1866 De Vries matriculated at the University of Leiden and studied natural philosophy with an emphasis on botany. He received his doctorate in 1870 with a dissertation on the influence of temperature on the life phenomena of plants (*De invloed der temperatuur op de levensverschijnselen der planten*). One of the listed propositions De Vries was ready to defend was in favor of Darwin's theory of evolution, which was strongly opposed by his professors Suringar and J. van der Hoeven. In 1870 De Vries went to Heidelberg to study with W. Hofmeister, R.W. Bunsen and H.L.F. von Helmholtz. A year later he spent some time in Würzburg to study experimental plant physiology with J. Sachs.

After a four-year period as teacher at an HBS in Amsterdam, De Vries moved to Germany in 1875, where he published monographs on agricultural plants and worked in Sachs's laboratory. In 1877 he was admitted as *privat-dozent* at the university of Halle, but in that same year he received an appointment as lecturer at the University of Amsterdam. In 1878 he was promoted to extraordinary professor of botany and elected as a member of the Royal Academy of Arts and Sciences. Finally he became full professor in 1881, a post he kept until his retirement in 1918. In 1879 he married Elisabeth Louise Egeling with whom he had three sons and one daughter.

At Amsterdam, De Vries was intensively occupied with teaching and research, first on plant physiology, and from the 1880s onwards mainly on genetics. The joint research with his colleague J.H. van 't Hoff proved to be especially fruitful. In 1880 De Vries published his textbook on plant physiology (*Leerboek der plantenphysiologie*), and in

1889 *Intracellulare Pangenesis* in which he critically reviewed earlier studies on heredity and variation and published his own pangenesis theory. In 1900 De Vries was the first to publish the 'rediscovered' laws of G.J. Mendel, followed later that year by C. Correns, and E. von Tschermak-Seysseneg. The results of more than ten years of experimentation and study were published in *Die Mutationstheorie* (2 vols; 1901-1903), in which De Vries described the laws of segregation, the phenomena of variation and his mutation theory. This work made him one of the most important botanists in the world. He made three journeys to the United States to visit botanical laboratories, to lecture at the University of California at Berkeley, and to meet plant cultivators such as Luther Burbank.

De Vries's influence on Dutch botany was tremendous. Despite his strong personality which often brought him into conflict with people who disagreed with him, his authority was recognized. Among his students were later professors like J.H. Wakker, F.A.F.C. Went, J.M. Janse, H.P. Wijsman, H.M. Quanjer, Th. Weevers, and his successor, Th.J. Stomps. For his work De Vries obtained eleven honorary doctorates, seven gold medals, and memberships in all the major scientific academies and societies. After his retirement he continued his studies at his home in Lunteren until his death on 21 May 1935.

#### *Primary works*

*Poggendorff*, vol. 4, part 1, 324-325; *Opera e periodicis collata*, 7 vols (Utrecht: Oosthoek, 1918-1927) contains practically all his scientific publications. See further the bibliographies in De Veer, *Leven en werk*, and the long list in Van der Pas, 'De Vries', *DSB* (see below); H. de Vries, *O, Wies! 't is hier zo mooi!: reizen in Amerika*, E. Zevenhuizen, ed., (Amsterdam: Contact, 1998; reprint of De Vries's American diaries). Archive in the library of the 'Biologisch Centrum' of the University of Amsterdam. See: E.J.A. Zevenhuizen, *De wereld van Hugo de Vries. De inventarissen van Hugo de Vries* (Amsterdam: Universiteitsbibliotheek, 1996).

Letters in the Royal Library in The Hague and the library of the University of Groningen.



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[L.C.P.]