

# Biographical Encyclopedia of Astronomers

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Byrd, Mary Emma

Born Le Roy, Michigan, USA, November 15, 1849

Died Lawrence, Kansas, USA, July 30, 1934

Mary Byrd directed the Smith College Observatory, determined the positions of comets by photographic astrometry, and pioneered the development of laboratory teaching methods in descriptive astronomy

Byrd's father was an itinerant Congregational minister, the Reverend John Huntington Byrd; her mother was Elizabeth Adelaide Low. After age six, Byrd grew up in Kansas and later attended Oberlin College and the University of Michigan, where she earned an A.B. degree (1878). After four years as a teacher and a high school principal, Byrd spent a year as a voluntary assistant at the Harvard College Observatory, under Edward Pickering. Between 1883 and 1887, she taught mathematics and astronomy at Carleton College, Northfield, Minnesota, and operated its time service under the supervision of William Payne. Byrd later earned her Ph.D. in astronomy at Carleton (1904). Like many women who chose to pursue a scientific career in that era, Byrd never married

In 1887, Byrd accepted the directorship of the Smith College Observatory, Northampton, Massachusetts. For nineteen years, she trained young women in science and developed laboratory methods of teaching descriptive astronomy (as opposed to Standard lecture/recitation procedures). These were highlighted in Byrd's *Laboratory Manual of Astronomy* (1899) and her *First Observations in Astronomy* (1913). An astute observer of changing educational practices and the declining influence of the liberal arts college's classical curriculum, Byrd sought to place her subject on the same level as the new experimental subjects of physics and chemistry within the nation's emerging research universities. Her own astronomical research concerned the photographic determination of the positions of comets.

The collapse of the mental discipline model of pedagogy and the reduction of astronomy from a college prerequisite to an elective subject carried important implications for astronomy instructors in the years after 1900. Recognizing that a crucial link in the cycle of astronomy teaching and learning had been severed and must be reformed, Byrd looked to the nation's normal schools as the place from which to recruit astronomy-literate teachers. She wrote prolifically to try and bridge apparent gaps in the pedagogical literature.

Byrd abruptly resigned her position in 1906 after she learned that Smith College had agreed to accept financial support from Andrew Carnegie. Believing that such a decision severely compromised her Institution's freedom of expression, she undertook this action as a public protest. She was succeeded by Harriet Bigelow. Byrd was briefly associated with the Normal College of the City of New York (now Hunter College) but subsequently removed to her parents' farm in Lawrence, Kansas. Nonetheless, she remained active in pedagogical reforms through the 1920s. Byrd was a member of the American Astronomical Society, the Astronomical Society of the Pacific, and the British Astronomical Association.

*Jordan D. Marché, II*

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