## **NOTAS**

# Alice Bache Gould, Brocardian Geometry and Spanish Archives

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Alice Bache Gould (1868-1956) devoted the last forty-five years of her life to extensive research in Spanish archives and now she appears to be herself a worthwhile topic for archival work in Spain. Gould is currently known primarily for her painstaking investigations concerning the crew accompanying Christopher Columbus on his initial voyage to the New World. Additionally, Gould's training in mathematics, diplomatic service, and passion for educational reform combine to make her an interesting figure as a scholar and a woman of this period.

Alice Bache Gould was born in 1868 in Cambridge, Massachusetts to noted astronomer, Benjamin Apthorp Gould, and his wife, Mary Apthorp Quincy Gould. Shortly thereafter, the Argentinian President Domingo Faustino Sarmiento invited Benjamin Gould to establish the Argentine National Observatory, so young Alice Gould spent three years with her family in Cordoba, where she learned Spanish. In 1871, Alice Gould relocated to her ancestral family home in Quincy, Massachusetts, where three great-aunts welcomed their niece for extended stays between intermittent trips to visit her family in Argentina. Gould's mother died in 1883. Two years after that, Benjamin Gould returned permanently to the United States. Not long after her father settled in to Cambridge, Massachusetts in 1885, Alice began attending the Society for the Collegiate Instruction of Women –later Radcliffe College –where she studied undergraduate mathematics for one year. She then enrolled at Bryn Mawr College and graduated in 1889 with an A.B. in mathematics and physics as a member of the first graduating class. Gould then pursued further mathematical studies at the Massachusetts Institute of Technology and at Newham College in England from 1890 until 1893. Nothing specific is currently known about the nature of her mathematical work in England.

In the fall of 1893, Gould began teaching mathematics at Carleton College in Minnesota. She left after one year to pursue graduate work in mathematics in Chicago. E. H. Moore had accepted Gould on fellowship at the University of

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Chicago for Ph. D. work on the now obscure topic of Brocardian geometry, references for which are listed below. Unfortunately, chronic foot problems and repeated bouts of influenza impeded Gould's progress in Chicago. Her father's death in 1896 and Gould's subsequent efforts to establish the Benjamin Apthorp Gould fellowship at the National Academy of Science also interrupted her work with Moore. Gould lost her University fellowship in 1897, which further slowed her academic progress. She finally returned to Massachusetts before completing the Ph.D.

Over the next few years, Gould lectured on mathematics occasionally and tried to complete her doctoral work despite intermittent poor health. In 1900, Gould began writing a biography of Louis Agassiz, which appeared in 1901. Ongoing illness, combined with graduate school frustration and developing historical interests eventually led Gould in a new research direction. In 1903, she journeyed to Puerto Rico to recover from the flu. During her extended convalescent visit, Gould became fascinated by issues of colonization and began to write an article on the early colonization of Barbados. Her interest in early colonization flourished alongside blossoming social activism as Gould worked hard to improve the Puerto Rican educational system. Between 1905 and 1907, she also established a fund to raise money for a nursing school there.

In 1911, Gould embarked on a trip to Rome with a Boston-area friend, but an unknown illness befell her traveling companion and cut the trip short in Gibraltar. Gould seized the opportunity for a side trip to visit the Archive of the Indies in Seville, where she hoped to complete her article about Barbados. Captivated by her subject and lured by unanswered questions, Gould remained in Spain to continue research while her friend returned to Boston. Gould visited the Archivo de Simancas to pursue her new challenge of compiling the most complete biographical record possible of the 89 men in Columbus's crew. This meticulous investigation primarily occupied Gould for the rest of her life.

When the United States entered World War I, however, Gould left Simancas and relocated to the United States Embassy in Madrid, where she volunteered in the espionage office. Because of safety concerns, Gould returned to Boston in March of 1918, and there continued her zealous support of the war effort. Gould spent the late stages of World War I on American soil, but she returned to Spain in 1925 to continue her archival work in Valladolid. The Spanish Civil War of 1936 found Gould on furlough in Boston, where she remained until hostilities ended in 1939. Other than that brief hiatus, Gould spent the rest of her life in Spain –researching the Columbian crew, establishing local schools, and supporting public education—until her death and burial there in 1953.

The majority of Alice Bache Gould's papers are housed at the Spanish Royal Academy of History, which had named her a corresponding member in 1942. A few repositories in the United States include some of Gould's mathematical work and

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additional correspondence. The Massachusetts Historical Society includes several drafts of her incomplete dissertation, some mathematical notebooks—primarily those she used in the summer of 1918 while teaching mathematics for navigation to naval recruits—and many letters to friends and family in Boston, especially regarding her work at the Embassy in Madrid and subsequent efforts to find mathematical work in the United States during the first World War.

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