

**SEELY, Caroline E.** August 3, 1887–May 17, 1961.

BARNARD COLLEGE (BA 1911), COLUMBIA UNIVERSITY (MA 1912, PhD 1915).

Caroline Eustis Seely was born in Delhi, New York, the daughter of Sarah Augusta (Wheeler), born in 1846 in Delhi, New York, and Henry Bates Seely, born in 1838 in Seneca Falls, New York. Her parents married in about 1870 and had four children: Carleton H. (ca. 1872–1885), Annie (b. ca. 1874), Mary (b. 1879), and Caroline. Her mother was from a Delhi professional family; Caroline's maternal grandfather was an attorney in Delhi and in Chicago. Caroline Seely's father was a naval officer who had graduated from the US Naval Academy in 1857. Before her birth he served on a number of ships, one of which was part of the South Atlantic blockading squadron early in the Civil War. After 1864 he commanded several ships and later the Ajax, European, and South Atlantic squadrons. In 1880 Henry Seely, convalescing from typhoid, was living with his wife and three children at the home of his mother-in-law in Delhi. From 1884 until 1891 he was captain, and then commandant, of the League Island Navy Yard in Philadelphia. He commanded a ship from March 1891 until 1892, after which he was retired. In 1900 the Seely family was living in Philadelphia. Henry Seely died there in 1901 when Caroline was thirteen.

In 1910 Caroline Seely and her widowed mother were living in New York City, where Caroline Seely was attending Barnard College, from which she graduated with honors in mathematics in 1911. She then did graduate work at Columbia University and served as an assistant in mathematics to David Eugene Smith at Teachers College, Columbia, in 1911–13. Seely had taken two courses from Smith as an undergraduate: theory and practice of teaching mathematics during the summer of 1910 and history of mathematics in 1910–11. She received her master's degree in 1912 with a thesis in analysis and continued her graduate work in mathematics at Columbia. Her doctoral dissertation, directed by Edward Kasner, was completed in 1914, and the degree was awarded by Columbia the following year.

In 1913 Seely began a twenty-two year association with the American Mathematical Society when she became the first mathematician to be employed full time by the society. Her first position with the AMS was clerical and editorial assistant. She wrote to David Eugene Smith in the fall of 1913 that she was “enjoying her new work very much, thanks to [him], but [was] afraid she [would] be rather homesick for Teachers College . . .” (Professional Correspondence, David Eugene Smith Professional Collection, Archival Collections, Rare Book and Manuscript Library, Columbia University Libraries). Frank Nelson Cole, professor at Columbia and Barnard and secretary of the AMS since 1895, was editor-in-chief of the *Bulletin* of the AMS from 1899 until his resignation as secretary of the society in 1920. In addition to Seely's duties involving work of the society as clerk to Cole, she was engaged in editorial work for the *Bulletin* and the *Transactions* of the AMS. Seely continued her work with the society when R. G. D. Richardson of Brown replaced Cole as secretary in 1920. Seely was officially associate editor of the *Bulletin* 1925–34 and was cooperating editor of the *Transactions* 1924–36.

Seely lived in New York City, where she worked for the AMS and served as secretary to Cole at Columbia. During World War I, she was associated with F. R. Moulton and worked with the Army Ordnance Department in Washington, D.C. She continued her mathematical research in analysis during and after the war. In

1918 she prepared a *Union List of Mathematical Periodicals* for the Bureau of Education with David Eugene Smith.

At some point in 1934, Seely submitted her resignation to the AMS. In October 1934, J. R. Kline, an associate secretary of the society, reporting for a committee to study problems of the New York office, wrote to the council of the AMS, "The committee used all efforts within the dignity of the Society to secure the withdrawal of this resignation, but without success" (T. H. Hildebrandt Papers, Bentley Historical Library, University of Michigan).

In November 1934, Seely purchased nearly seventeen acres of land in the village of Willseyville in the town of Candor in Tioga County, New York, with the plan to retire the following spring. Seely wrote to D. E. Smith in November 1934, "Thanks very much for your kind letter; it is nice to feel that my first boss still remembers me. Yes, I am leaving the Society's office on April 1, to start a chicken farm; my friends tell me this is a very appropriate day for such a move. But most of them don't know New York State as well as you and I do, and don't realize how beautiful it is up there" (David Eugene Smith Professional Collection).

A year later she wrote to Smith, "It is lovely up here, and I enjoy being a farmer very much indeed. But it takes some time and money to get a farm in working order, and my part time job with the Transactions will run out this spring, with the completion of the first volume for 1936; I should have been glad if it had lasted a little longer, until my chickens are more steady on their feet. So if you hear of any text book work that you think I could handle, I should be glad if you would let me know" (David Eugene Smith Professional Collection).

Seely continued living in Willseyville most of the rest of her life. She died in 1961 at age seventy-three in a nursing home in nearby Ithaca and was buried in Woodland Cemetery in Delhi. She was survived by a niece, a nephew, and cousins.

**Organizational affiliations:** AMS, MAA, Phi Beta Kappa.

**Thesis and dissertation:**

**1912** Refinements of the notion of limit prevailing in the modern theory of functions of a real variable. MA thesis, Columbia University.

**1914** Certain non-linear integral equations. PhD dissertation, Columbia University, directed by Edward Kasner. Printed, 1914, Press of the New Era Printing Co., Lancaster, PA. PhD granted 1915.

**Publications:**

**1916** (Translator from the French and German) The Mittag-Leffler Testament and Institute, by G. Mittag-Leffler. *Bull. Amer. Math. Soc.* 23:31–34. Review: *Rev. semestr. publ. math.* 25, pt. 2: 4 (D. J. Korteweg).

**1918** with D. E. Smith. *Union List of Mathematical Periodicals*. Department of the Interior, Bureau of Education, Bull. 1918 no. 9. Washington: Government Printing Office. Review: *Mathematical periodicals. Bull. Amer. Math. Soc.* 25:134–37 (R. C. Archibald).

**1919** Non-symmetric kernels of positive type. *Ann. of Math.* 2nd ser., 20:172–76. Reviews: *JFM* 46.0631.02 (M. Plancherel); *Rev. semestr. publ. math.* 28, pt. 1: 9 (W. A. Wythoff). Presented as "On kernels of positive type" to the AMS, New York City, 27 Apr 1918; abstract: *Bull. Amer. Math. Soc.* 24:470 #11.

**1928** Kernels of positive type. *Ann. of Math.* 2nd ser., 29:313–18. Review: *JFM* 54.0417.01 (A. Hammerstein). Presented by title to the AMS, New York City, 29 Oct 1927; abstract: *Bull. Amer. Math. Soc.* 34:14 #48.

**1930** Note on kernels of positive type. *Ann. of Math.* 2nd ser., 31:32–34. Review: *JFM* 56.1011.03 (A. Hammerstein). Presented by title to the AMS, New York City, 30 Mar 1929; abstract: *Bull. Amer. Math. Soc.* 35:445 #43.

**1931** An existence theorem for characteristic constants of kernels of positive type. *Bull. Amer. Math. Soc.* 37:554–56. Reviews: *JFM* 57.0460.01 (M. Golumb); *Zbl* 002.26603 (G. Wiarda). Presented by title as “Note on kernels of positive type” to the AMS, Seattle, WA, 13 Jun 1931; abstract: *Bull. Amer. Math. Soc.* 37:523 #250.

**Abstracts not listed above:**

**1915** Certain non-linear integral equations. *Bull. Amer. Math. Soc.* 21:277 #10. Based on PhD dissertation. Presented by title to the AMS, New York City, 1 Jan 1915.

**1917** On series of biorthogonal functions. *Bull. Amer. Math. Soc.* 23:74–75 #34. Presented by title to a meeting of the AMS, Cambridge, MA, 4–8 Sept 1916.

**Reference to:** “Miss Caroline Eustis Seely.” (Obituary) *Ithaca Journal*, 18 May 1961.

**Other sources:** PhD dissertation vita 1914; Owens questionnaire 1940; Archival Collections, Rare Book and Manuscript Library, Columbia University Libraries; Bentley Historical Library, University of Michigan (T. H. Hildebrandt Papers, 1887-1978); transcript of birth record; communications with Delaware County (NY) clerk, Tompkins County (NY) Public Library, and with Delores Vasilow (local researcher); TwCBDA 1904 (Seely, Henry B.); US Census 1880, 1910, 1920 NY, 1900 PA.

Last modified: March 26, 2009.