

Memorial to Alice Mary Dowse Weeks 1909–1988

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Alice Mary Dowse and her twin sister Eunice were born on August 26, 1909, to Jessie Parker and Charles Arthur Dowse in Sherborn, Massachusetts. Their mother, Jessie Parker, had been raised in Uxbridge, Massachusetts, and worked her way through Jackson College (Tufts University) to earn a degree in mathematics in 1904. She came to Sherborn and taught school for several years before marrying C. Arthur Dowse, a banker, farmer, and member of a prominent Sherborn family. After she was married, Jessie never taught formally again, but throughout the rest of her life, she never stopped learning and helping others to learn.

Her twin daughters began school in the second grade because their mother had already taught them to read and write. Jessie strongly supported women's rights and encouraged her daughters to get an education. Into her 90's and blind, Jessie eagerly awaited letters from Alice describing her research, travels, and field work. Alice received a diploma from Sawin Academy and Dowse High School in Sherborn in 1926. Following in her mother's footsteps, she attended Tufts University, graduating *cum laude* in 1930, with a degree in mathematics and science.

After graduating, Alice taught at Lancaster School for girls for 2½ years, and then returned to Tufts with a small scholarship to take a few geology courses. She was admitted to the graduate school at Harvard and received a master's degree in 1934. It was not easy at this time to be a woman studying geology. Professors at Harvard taught the same introductory courses twice, once for the men of Harvard, and again for the women of Radcliffe. Alice reportedly was not allowed to participate in some classes, but rather sat in the corridor outside the classroom to take notes.

After completing her master's work in 1934, Alice was financially unable to continue her education at Harvard. She accepted a research fellowship at Bryn Mawr for a year and then stayed a second year as a laboratory instructor. In 1936, she returned to Harvard to begin work on her doctorate.

Alice began teaching at Wellesley College at this time. She was a laboratory instructor in physical and historical geology for one year before becoming an instructor and then assistant professor. She taught a wide variety of courses, including physical and historical geology, geomorphology, cartography, gemology, petrography, optical mineralogy, and regional geology. During the war she taught military map making to Navy officers at Wellesley. Alice was totally ambidextrous. Using her precise drafting skills, she drew on the right side of the map with her right hand and on the left side with her left hand, an ability that especially benefited her left-handed students.

One of her summer jobs during this time was the drafting of figures for a new edition of Dana's book on mineralogy. The job paid the magnificent sum of \$100 per month. During later summers, she and another Wellesley instructor made three trips, visiting all of the 48 states and Canada to gather data and scenic photos for her regional geology course.

While teaching at Wellesley, Alice struggled to complete her doctorate at Harvard. Her dissertation, directed by Marland P. Billings, involved mapping two of the quadrangles that included her hometown of Sherborn. It was in part a family project: her younger sister Martha was her field assistant during one summer. Alice began mapping in 1935, but she found that the topographic maps that had been published in 1893 were inadequate. She waited for the completion of new 7½-minute quadrangles that were published in 1940 and 1942, but when they

finally came out, gasoline rationing caused further delays in her work. She finally was able to complete her field work in 1947, and received her degree in 1949.

In May of 1950, she married Albert Weeks, a petroleum geologist. She and Al had known each other for some time, and he provided the much-needed encouragement that allowed her to finish her dissertation.

In 1949, Alice took leave from Wellesley to work for the U.S. Geological Survey; in 1951 she officially resigned her position at Wellesley to remain with the Survey. Her work began in the Trace Elements Lab where she studied the mineralogy of radioactive deposits. She became a project leader in 1951, working with uranium mineralogy, particularly that of the Colorado Plateau.

At a time when few women worked in the field, Alice did extensive field work and visited many mines. Although she was generally well received, there were occasions when the superstitions against women caused her to use subterfuge to gain access to the mines. She willingly disguised herself as a man and waited until few miners were around, then quietly entered the mine to collect samples. The miners were never aware that a woman had been underground. In recognition of her contributions to the understanding of uranium mineralogy, the mineral weeksite was named in her honor.

Alice left the Survey in 1962 to accept a challenge from Temple University to establish a viable degree program in geology. Temple's geology department was a one-person service department offering introductory courses to over 1,000 students. She rapidly expanded the department and developed a degree program. The present department of seven full-time staff members, two part-timers, and fourteen full-time graduate students is her legacy to Temple. She commented that what best prepared her for the job at Temple was her experience as a project leader with the Survey. She said she learned "how to justify what you needed, and that productivity is the best insurance for continued support." While at Temple, Alice continued her research on uranium mineralogy, particularly in south Texas.

In 1976, Alice retired from Temple University and was awarded emeritus status. A symposium on uranium was held in her honor at the 1980 meeting of the Northeastern Section of the Geological Society of America in Philadelphia. Unfortunately, at that time she was beginning to suffer the effects of Alzheimer's disease. She died on August 27, 1988, the day after her 79th birthday. She is survived by her husband, three sisters (including her twin, Eunice, also stricken with Alzheimer's disease), a brother, and 14 nieces and nephews.

Alice strongly supported women in geology and science. She was a charter member of the American Geological Institute's Women Geoscientists Committee, formed in 1973. She missed memorial services for her mother because she had previously agreed to give a talk on women in science at a symposium at Radcliffe.

During her career, Alice was a Fellow of the Geological Society of America, the Mineralogical Society of America, the American Association for the Advancement of Science, and the American Geographical Society. She was a member of numerous other professional organizations and a life member of the Appalachian Mountain Club. She attended many international meetings, including the International Geological Congress in Prague in 1968, a meeting that was interrupted by the arrival of Russian troops. She later laughed about hiding in the bathtub in her hotel room while waiting to "escape" back to the West.

Alice Dowse Weeks was listed in the first (as well as the 40th) edition of *Who's Who in American Women* and was listed in *American Men of Science*, even before the name was changed to *American Men and Women of Science*.

For me, as a young woman in geology, Alice's largest contribution was her presence as a role model. I never questioned whether women belonged in geology because my aunt was an excellent example of a woman at the top of her profession. Alice overcame many obstacles that would have

stopped a lesser woman, and she reached prominence in her chosen field. She was highly regarded and respected as a thoroughly professional and competent geologist.

An endowed chair for Energy Management and Resources Geology will be established at Temple University in her memory. Donations may be sent to the Alice M. Weeks Endowment Foundation of Temple University, Development Office, Philadelphia, Pennsylvania 19122.