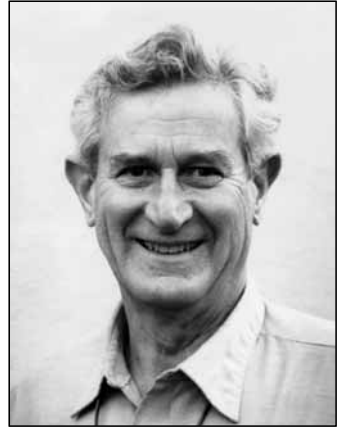


Memorial to Ward C. Smith 1906–1998

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Ward Conwell Smith died of arteriosclerotic heart disease on June 25, 1998, at his home in Cupertino, California. He was born on February 6, 1906, in St. Louis, Missouri, fourth of the five children of Frank Victor Smith and Isabelle Conwell Smith. He attended Cote Brilliant (grade) School and graduated in 1922 from Soldan High School, both in St. Louis. His family had a tradition in which after a younger sibling graduated from high school, he or she would help support an older sibling through college; as a result, Ward worked for four years at a fur company in St. Louis in a position that he described as “office boy/stenographer.” Following this period, he moved to California to attend Stanford University. This choice of colleges was based on the advice of one of his brothers: “It is a very good school and about as far from home as you can get.”



Ward first enrolled at Stanford as an engineering major, but he took Eliot Blackwelder’s class in introductory geology at the start of his sophomore year, “saw the light,” and graduated in 1931 with an A.B. degree in geology. Besides Blackwelder, his geology professors at Stanford included James P. Smith, Austin F. Rogers, Cyrus F. Tolman, Hubert G. Shenck, and Bailey Willis (emeritus). As if confirming his loyalty to geology and Stanford, the summers of 1931, 1932, 1936, and 1937 were spent instructing Stanford’s geological field camps, in association for one or more years with Paul F. Kerr, Siemon W. Muller, Julian D. Barksdale, William C. Putnam, and Robert P. Sharp. Collectively, these professors and associates provided Ward with his first exposure to some of the early giants in the field of American geology.

After receiving his A.B. degree, he taught geology at Ventura Junior College in southern California, but at the end of that academic year, Ward moved to New Haven, Connecticut to start graduate work in geology at Yale University, supported in part by stipends related to his nomination as an Iddings Fellow and a University Fellow in geology. Most of the geology courses he took at Yale were taught by Carl Dunbar, Adolph Knopf, Chester Longwell, Alan Bateman, or Richard F. Flint, another all-star cast. His Ph.D. dissertation on “Geology of the Caribou stock in the Front Range, Colorado,” under the guidance of Knopf, was accepted in 1936.

During the two years following his graduation from Yale, Ward taught at Pomona College in California. In September of 1938, however, he joined the Mineral Deposits Branch of the U.S. Geological Survey, where he remained for 33 years until retirement. Between the time he first joined the Survey and 1945, he was assigned to its headquarters in Washington, D.C., where his time was divided between office tasks and field work. In anticipation of World War II, the Survey had initiated a major effort in the late 1930s to compile all data from existing literature on this nation’s “strategic” minerals and to geologically map all major deposits of those minerals in North and South America. Ward worked on tungsten, tin, and pegmatite deposits in the states of Nevada, California, and South Dakota, as well as in Argentina and Mexico; his party

chiefs were Thomas B. Nolan, D. Foster Hewett, and Charles Park, Jr., another august group.

In late 1945, he transferred to San Francisco to head the Survey's new California Cooperative program with the state, a mineral-deposits-oriented program that resulted in the production of a series of new geologic maps and reports on selected mineralized areas within the state. During this period he also helped the Survey to select a site somewhere in the west and plan a new western center. The centralized location of Menlo Park on the west coast, and its proximity to the geologic and other libraries of Stanford University and the University of California at Berkeley, were major considerations in choosing the location.

In May 1952, he moved to Claremont, California, to take on leadership of the "Mojave Borate Project," a group of as many as 20 individuals, composed of geologists, chemists, geophysicists, hydrologists, draftsmen, and secretaries. My personal contact with Ward began at that time. This project was created to determine the reserves of boron in the United States and in Central and South America. We also hoped to discover new deposits—not an unreasonable goal at that time, as much of the world production of boron then came from the California desert region. A by-product of this assignment was the discovery and naming in 1970 of a new borate mineral from Death Valley, wardsmithite, by Erd, McAllister, and Vlisidis. In 1959, funding for that project ended and Ward moved to the center he had helped establish in Menlo Park, remaining there until his retirement in 1971.

Ward Smith was a Fellow of the Geological Society of America and a GSA Council member from 1962 to 1963, a Fellow of the Mineralogical Society of America, and a member of the Society of Economic Geologists, serving on the admissions and nomination committees. From 1956 to 1970 he was a member of the Stanford School of Earth Sciences Advisory Board; for a number of years a member of the Associates of the Stanford School of Earth Sciences, and its president from 1957 to 1967; and a cofounder of the Stanford-USGS Fellowship Fund. Following his retirement from the Survey in 1971, he became a research associate at Stanford in earth sciences, a position he maintained until 1990. He also was for a long period an associate of the Junior Museum of Palo Alto, California, and its president from 1967 to 1968.

Ward met his first wife, Jean Stewart (Stanford, '28), in 1931 while they were both at Ventura Junior College, where she was an English instructor. They were married in 1933 and had three children, Alexia in 1944, David in 1946, and Margaret in 1949. Jean died of cancer in 1965. In 1968 Ward married Genny Schumacher; their marriage took place the day before they departed for New Zealand to act as coleaders of a Sierra Club hiking trip. Genny is also the coauthor and editor of two widely read books on the natural history of the east side of the Sierra Nevada, *Mammoth Lakes Sierra* and *Deepest Valley, Guide to Owens Valley*, as well as editor and publisher of four other books that concerned people and enterprises in that area (and where Ward and Genny spent most of their summers following his retirement).

Ward was my supervisor when I joined the U.S. Geological Survey in May of 1952. He initially assigned two tasks to me, the first of which became my Ph.D. dissertation four years later, and the second of which introduced me to the geology of Searles Lake in southeast California—which at the time was the second largest borate producer in the world. I soon recognized, however, that Searles Lake and other areas having similar geology were also rich sources of paleoclimatic information, and much of my 46-year professional career and my publication record have reflected that realization. The paleoclimatic aspect was not part of my original resources-oriented assignment, but Ward encouraged me to continue and expand these studies and made no attempt to draw me back to the goals he had initially assigned. I have appreciated many times how fortunate I was during my early years to have been supervised by Ward Smith, a person with enough perspective and vision to have faith in one of his young project members and allow him that amount of self-direction!

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