

Memorial to Harley Barnes 1916-1979

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Harley Barnes was born in Painesville, Ohio, on September 23, 1916. He died of a heart attack on April 6, 1979, while gardening at his home in Wheat Ridge, Colorado.

Harley attended Wheaton College in Illinois from 1933 to 1937, where he majored in geography and geology. Upon graduation in 1937, he received a student assistantship at the Illinois Geological Survey, where I first had the pleasure of knowing and working with him. He attended Northwestern University from 1937 to 1939, receiving an M.S. degree in geology. As a teaching assistant at Northwestern, he was laboratory instructor and also participated in teaching undergraduate courses. From this first experience, he set out for a career in teaching but was determined first to acquire

geologic understanding and insight that he felt could best be gained by extensive field work.

Upon graduation in 1939 during the latter part of the Great Depression, Harley took a job as a miner in a mine near Boulder, Colorado; within a year he had been promoted to mining engineer. In 1940, he changed jobs, to work as a mining geologist for New Jersey Zinc Company at Gilman, Colorado.

With World War II on the horizon, Harley volunteered for the Coast Artillery Corps in 1941 and served 4½ years, completing his active service with the rank of Major. He continued in the active reserve, receiving a reserve commission of Lieutenant Colonel in 1958.

Harley entered a Ph.D. program at Johns Hopkins University following World War II. In 1948, he joined the Fuels Branch of the U.S. Geological Survey (USGS) and worked with Wood Bass and Al Zapp, mapping the geology of the Glenwood Springs and Ignacio areas of Colorado. During the early 1950's, he mapped and made stratigraphic studies in the San Juan Basin of Colorado and New Mexico. This region included the subject of his Ph.D. thesis on Cretaceous-Tertiary relations in the Ignacio Quadrangle, southwestern Colorado. Harley received his Ph.D. from Johns Hopkins in 1954.

Harley made some of his most significant contributions in the field of foreign geology. As a geologist with the USGS Branch of Foreign Geology from 1954 to 1956, he served as technical advisor to the Republic of the Philippines Bureau of Mines. He supervised logging of drill cores and field mapping by Philippine geologists, made coal field evaluations, established format and editorial standards, trained draftsmen and editorial staff, and supervised publication of the first seven reports of a new post-war series for the Philippine Bureau of Mines. In addition to his training and leadership activities, he managed to do field work on the islands of Cebu, Mindanao, Negros, Bataan, and Luzon. His contributions and efforts on behalf of the newly formed post-war Philippine Bureau of Mines rank as a highly significant achievement.

Returning to the United States in the latter part of 1956, Harley served 1½ years as supervising geologist in the USGS Fuels Branch program office, Washington, D.C., working closely with the branch chief, Ralph L. Miller. Harley served well in that capacity, but longed to return to the field. In 1958 and 1959, he was engaged in field studies in Wyoming and Kentucky, respectively. In the spring of 1960, Harley was assigned a leading role in geologic mapping at the Nevada Test Site, where he was to engage in various geologic studies for the next 14 years. Harley made substantial contributions to the Nevada Test Site geologic studies and mapping, as reflected in his bibliography. He also was instrumental in guiding and instructing new hires of the USGS in the late Precambrian and Paleozoic stratigraphy and structure of that region. He also collaborated with Allison R. (Pete) Palmer and Reuben J. Ross, Jr.

I was privileged to work with Harley in the early 1960s, compiling the results of field mapping and writing papers on the Cambrian and Ordovician stratigraphy at the Nevada Test Site. He was senior author of three 7½-minute quadrangle maps of extreme structural complexity, five stratigraphic papers, one structural geology paper, and was co-author on many other papers on the Test Site. He also prepared many geologic reports for the Atomic Energy Commission. Harley's work left a valuable imprint on the geology of the Nevada Test Site region of southern Nye and western Lincoln and Clark Counties, Nevada.

An outstanding effort by Harley in the early 1970s was his contribution to Phase I, radioactive waste emplacement of the Atomic Energy Commission. He provided technical direction and scientific review of the USGS studies of potential sites for storage of high-level radioactive wastes beginning in February 1972, meeting a report deadline of September 1973. He was coordinator of the work from its inception to its finish and was responsible for the successful completion of a series of reports that are of material assistance to the Nation in its efforts to solve the serious problem of disposing of radioactive wastes.

In 1974, Harley was asked to head the new Geologic Division Training Center of the U.S. Geological Survey at the Denver Federal Center. He became staff scientist in charge of continuing earth-science education in the Central Region. In this capacity, he developed in-house training courses, organized symposia, and arranged for guest speakers. In keeping with his ability as an outstanding teacher, he performed this function extremely well.

Only a day prior to his untimely death, he finished his last and most significant work in Nevada, entitled "Geologic and Tectonic Maps of the Mercury Quadrangle, Nye and Clark Counties, Nevada," and submitted it for publication. The map received final approval on April 10, 1979, and will be available within the next year.

Harley had a vital Christian faith and was very active in the Conservative Baptist Church. He was on the board of directors at Rockmont College, Denver, Colorado. He tape recorded books for the Library of Congress program of tape recording for the blind. Harley will be remembered by his friends and colleagues as a kind and considerate person, always willing to help with any professional and personal problems.

He is survived by his wife, Jeannette, whom he married in December 1958, and their two children, Leslie Ann and Harley David, living at home. Two grown children, Nancy Barnes Kirkpatrick and Rebecca (Becky) Barnes Eslin, of a former marriage, also survive him.

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