Memorial to H.T.U. Smith
1908-1973

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Harold Theodore Uhr Smith was born on July 4, 1908, and died on February 22, 1973, at the age of 64. Although he was widely known as H.T.U., many close friends called him Harold.

He majored in chemistry and geology at Wooster College in Ohio and graduated magna cum laude with a B.S. in 1930. At Wooster he came under the influence of Karl Ver Steeg, a gifted teacher and a productive scholar. He received an M.S. in geology at Harvard University in 1933 and the Ph.D. in 1936. Here he concentrated in geomorphology and had the good fortune to work under Kirk Bryan. He was Professor Bryan's assistant in the geomorphology laboratory in Cambridge and his field assistant in New Mexico. He was the first student to earn the Ph.D. under Professor Bryan, and it was Harold who first began to affectionately call him "Uncle Kirk" (although not in his presence).

His thesis was on the Abiquiu area of New Mexico. As he was an easterner, it is easy to see why he fell in love with the Southwest, and all his life he returned to visit and to do field work there.

On June 8, 1935, Harold married Althea Page. Althea received her A.B. from Pembroke College, the M.A. (geology) from Brown University, and the Ph.D. (geology) from Harvard University. She taught geology at Mt. Holyoke College and the University of Vermont and published in more than one field of geology. Theirs was a long and singularly happy marriage. Professor Smith is survived by his wife and three sons, Conrad of Pullman, Washington, Myron of Bridgewater, Massachusetts, and Roger (a geologist) of Pasadena, California.

It was my good fortune to room with Harold when we were in graduate school. We stimulated each other, enjoyed each other's sense of humor and company, and were both doing field work in New Mexico and working under Professor Bryan. It was a good year. We ate breakfast and lunch in our room and went out for dinner. In those days one could get a four-course dinner for fifty or fifty-five cents. I also remember we were very much interested in finding out how much productive work we could do in a week. We kept track of the hours we spent in studying, writing, laboratory work, serious geologic discussion, and in going to classes and to meetings. At the beginning of the year we were working about sixty hours a week, but by striving to be more efficient we slowly, after many weeks, brought this up to more than eighty hours. We found that further increase would be very difficult—it was limited by our total physical energy.

Harold loved good music. He also enjoyed physical activity, and it was almost impossible to beat him to the top of a mesa.

Although we never lived close to one another after graduate school, we did keep in touch. He never forgot to congratulate me on my accomplishments, however unimportant. I will miss the beautiful colored post cards which he sent me from the faraway places where he did field work; I will miss him at the annual meetings of the Geological Society of America, where we met on the same friendly terms as in Cambridge. I will never see a sand dune without thinking of Harold.

From time to time he sent me quotations that he liked. One of them, "Live as if on a mountain," I have not forgotten. He surely followed this advice, and so for him the outcrops were more numerous, the days longer, the air cleaner and more invigorating, the visibility better, the sunrises and sunsets more beautiful, and the challenges greater than for others.

I count it fortunate that I knew Harold Smith. He was a scholarly man, a good American, and a faithful friend. I have never known a harder working or more dedicated geologist.

Professor Oswald C. Farquhar, who taught with Professor Smith at both the University of Kansas and the University of Massachusetts, has written:

"Harold was absolutely dedicated to his family, to the science of geology, and to the university in Amherst, Massachusetts. For thirteen years he had but one major goal—to assemble here in Amherst a matchless group of geoscientists with the wherewithal for continuing achievement. He was proud of his department. It was both the beginning and end of his dream.

"Professor Smith had those very rare combinations of energy and patience, eagerness and restraint, perception and humility. He took time to make plans, he took time to look around, he took time to get results, and he took time to make his judgments. He never swerved from his course. His life went forward like an arrow.

"He loved the mountains and the deserts, he loved the poetry of Robert Frost and the wooded acres around his Pelham home, and he loved to ski. He heard the music of the stars and the lands.

"His wide knowledge of arid lands, periglacial terrain, and other sparsely populated parts of this planet uniquely qualified him in the end to be called upon to interpret the outer skin of the moon and Mars. He was a stimulating personality at the two universities where we worked together—and an inspired leader of both geology and education in the Commonwealth of Massachusetts.

"Harold was a gentleman and a scholar, and as such he will be remembered by hundreds of people in New England, in the midcontinent, in numerous societies throughout the nation, and at national geological meetings. Here at Amherst we will remember our late colleague and friend in thankfulness."

Dr. John T. Hack has written:

"My memories of him are happy ones, for he was a loyal and forgiving friend, who over the years was generous to me on many occasions. As a graduate student and young teacher, a few years older than I, he was an inspiration to me. He visited me in the field and encouraged my research. I paid a memorable visit to Harold and Althea in Lawrence, Kansas, in the late thirties and at their home I met for the first time

several geologists whom I have known all my adult life. As the long-time Chairman of the Geology Department at the University of Massachusetts he attracted men of high quality, built a very successful department and made it a good place for both students and faculty to work in. As a scientist his abiding interest was in sand dunes, particularly in relation to evidence for past climatic conditions."

Professor Robert P. Sharp, who knew Harold when they were in graduate school, wrote the following:

"I have never seen Harold Smith anything but polite, gentlemanly, and completely in control of himself. He coupled patience with enthusiasm to a remarkable degree. He had enduring scientific love affairs with air photos, sand dunes, and other geological topics to the benefit of our science. He ably capitalized on opportunities of exploring his loves in remote terrains, such as the deserts of North Africa or the surface of Mars. Harold was always on the move, never static. Although not a big man physically, he always managed to stand tall in any group."

Professor D. S. Snipes, once one of his students at the University of Kansas, has written:

"The students saw him as a man of dignity, reserved, perhaps even aloof, a scholar and a gentleman, a professor in the traditional sense. We admired his total dedication to geology and the teaching of it. Yet his quiet sense of humor gave us many a chuckle.

"Professor Smith's geomorphology students always reserved their spring holiday for a field trip with him to New Mexico. His camp sites were never chosen for comfort; they were chosen for their proximity to geology. The students took it good naturedly, philosophizing that if he could stand it they ought to be able to.

"While I cried when told of the death of Professor Smith, I cannot cry without quietly laughing. It is the laughter of respect, of admiration, of awe, it is the laughter of his old students."

Dr. Walter Youngquist has written about Harold Smith, his long-time friend, as follows:

"I still think of all the happy associations I had over the years with H.T.U.—a remarkable person in many ways, with such an objective perspective on the world. He had the quality of quiet persistence. He did his work and research with no great fanfare, but methodically and efficiently. He had an exceptionally wide range of interests, one being current economic trends, and he used his background and knowledge as a geologist to take the long view of what the results might be of current events. H.T.U. was a very stimulating associate, both in the field and in a fireside armchair. He was a keen observer with an incisive sense of humor which always got to the heart of matters. When he had his problems, he did not wear them on his sleeve. He did not share his burdens, but only his interesting observations. I count H.T.U. as one of my closest friends for many reasons which now only I know. We were good for each other, and I miss him very much."

Professor Smith was an Austin Teaching Fellow in geomorphology at Harvard from 1931 to 1935, and he taught at the University of Kansas from 1935 to 1956. He was a geologist for the Kansas State Geological Survey from 1936 to 1941, for the Imperial Oil Ltd. in northwestern Canada in 1943, and for the Military Geology Unit of the U.S. Geological Survey from 1943 to 1946. He was a professor of geology at the

University of Massachusetts from 1956 to 1973 and head of the Department of Geology and Geography from 1956 to 1969. At various times he was a consultant for the Research and Development Board, U.S. Department of Defense, the U.S. Forest Service, the Jet Propulsion Laboratory at the California Institute of Technology, and for NASA Office of Space Science and Applications.

Professor Smith was an important person on the faculty at the University of Massachusetts. He served at various times on the Research Council, Graduate Council, Faculty Senate, Executive Committee, College of Arts and Sciences, Ad Hoc Committee on R.O.T.C., Ad Hoc Committees on Marine Sciences, Fulbright Award Committee, and AAUP Committees. He was president of Phi Beta Kappa and Sigma Xi and recipient of the latter's Faculty Research Award in 1966.

Under his leadership the full-time faculty in geology increased from 6 to 14, the total undergraduate enrollment increased from about 300 to 1,000 per semester, and the number of undergraduate majors increased from approximately 25 to 130, making the major program one of the largest in the United States. The M.S. program was broadened and strengthened, a Ph.D. program was initiated, the number of graduate students in residence increased to nearly 40, and $2,000,000 of building construction increased the available space from roughly 3,000 to 40,000 square feet.

Professor Smith was an expert in geomorphology, photogrammetry, and photogeology. By anyone's standards, he was a widely traveled geologist. He did field work in eastern, central, and western United States; in Alaska and northwestern Canada; in Italy, France, Spain, Poland, Scotland, Ireland, and Scandinavia; in central Australia, the Namib and Kalahari deserts of South West Africa, coastal desert of Peru, and Algerian Sahara; in Mexico; and in Antarctica. The title of the last paper he published was "Aeolian Deposition in Martian Craters."

Professor Smith was a member of Phi Beta Kappa, Sigma Xi, Phi Kappa Phi, Theta Chi Delta Chemical Fraternity, Geological Society of America (Fellow), American Society of Photogrammetry, American Association for the Advancement of Science (Fellow), Association of American Geographers, American Association of Petroleum Geologists, Arctic Institute of North America, National Association of Geology Teachers, American Quaternary Association, an honorary corresponding member of the Instituto Italiano di Paleontologia Umano, and a member of the Cosmos Club of Washington, D.C.

He organized and directed the fund-raising campaign to establish the Geological Society of America Kirk Bryan Memorial Award; he participated in the organization of the Geomorphology Division of the Society and served as a panel member and vice-chairman of the division; and he was a member of the Committee on Committees for the Society in 1965. He was second vice-president in 1950 of the American Society of Photogrammetry and served the society as panel member, organizer of symposia, and chairman of committees at various times.

Harold was a member of the editorial board of *Quaternaria* (Rome, Italy) and of the National Research Council Committee on Interrelations of Pleistocene Research, 1947-1949. Also, he served on the U.S. Committee for INQUA, 1960-1966; Earth Sciences Division, 1956-1959; and as cochairman of N.R.C. Committee for Study of Eolian Deposits, 1948-1952.

At various times from 1953 to 1969, he served as a member of the official U.S. delegation at INQUA meetings, organized field conferences in the United States, and did editorial work on guidebooks and papers for the association.

He served as critical reviewer of applications for research grants for the National Science Foundation and as critical reviewer of manuscripts for the *Journal of Geology*, *American Journal of Science*, *Geographical Review*, *Science*, *Bulletin of the Geological Society of America*, *Zeitschrift für Geomorphologie*, *Journal of Sedimentary Petrology*, and other journals.

His research was supported by the Geological Society of America, Office of Naval Research, Air Force Cambridge Research Laboratories, National Science Foundation, National Aeronautics and Space Administration, and by faculty research support at the University of Kansas and the University of Massachusetts.

In a period of 40 years, Professor Smith published 90 papers and wrote many reports and articles for the U.S. Geological Survey, the Office of Naval Research, the Air Force Cambridge Research Laboratories, and for the *Encyclopedia Britannica* and several other standard reference works.

The following titles indicate the breadth of his geologic interests: "Loess in the Vicinity of Boston, Mass.," "Simplified Graphic Method of Determining Approximate Axial Angle from Refractive Indices of Biaxial Minerals," "Geomorphic Evidence Relating to the Antiquity of Man in North-Central Kansas," "Mounting and Remounting Detrital Mineral Grains on Slides," "Dune Morphology and Chronology in Central and Western Nebraska," "A Graphic Method of Measuring Vertical Angles from Oblique Photos," "The Camera Lucida as an Aid in Aerial Photographic Mapping," "Giant Glacial Grooves in Northwest Canada," " 'Piping' in Relation to Periglacial Boulder Concentrations," "Anomalous Erosional Topography in Victoria Land, Antarctica," "Playas and Related Phenomena in the Saharan Region," and "The Question of Eolian Action on Mars."

Harold went forward purposefully and steadfastly, doing the things he was meant to do. Much of his geologic thinking and field work was centered on eolian activity. The great tragedy of his early death was that it left unfinished a monograph on this subject on which he had spent much of his adult life. He was waiting for the ERTS photos, which did come, and the SKYLAB photos, which did not, in order to have everything at his fingertips. He had accumulated an enormous number of photos of wind-produced land forms, and until then had used only a few of them in publications. He left extensive notes on dunes, scoured hollows, loess, and dust storms on several continents. His library of books and separates on eolian and related subjects is comprehensive and well organized. Althea and Roger, both of whom have also studied dunes, plan to complete the monograph. In addition, several manuscripts in various stages of completion were left unfinished.

His memory will long be cherished by his family, his students, his colleagues, and his many friends.

"Gladly would he learn and gladly teach."

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