Memorial to John Williams Anthony  
1920–1992  
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John Williams Anthony, mineralogist and emeritus professor of geosciences at the University of Arizona, died November 8, 1992, of heart failure following surgery. John possessed a lust for life, a sincere personal warmth that attracted students and colleagues, and an enthusiasm for learning that characterized his diverse professional career. For 35 years at the University of Arizona, John Anthony played a significant role in the evolution of a small, mining-focused geology department into a large, diversified geosciences program. John’s scientific contributions include *Mineralogy of Arizona* (1977), the standard-setting descriptive mineralogy of his adopted state, senior authorship of the *Handbook of Mineralogy* (volume 1, 1990), and a series of papers describing new mineral species and their crystal structures. John was also the founding editor of the *Arizona Geological Society Digest*.

John moved to Tucson to enroll at the University of Arizona in 1945, at the suggestion of his father, who saw an opportunity for John to finish work for the geology degree that he had begun at the family alma mater, Brown University, and which had been interrupted by World War II. There was also an expectation that Arizona’s therapeutic climate might heal John’s lungs. In reality, this was a homecoming because John had lived near Kingman in the early 1920s when his father managed a polymetallic mine in the Cerbat Mountains.

The two decades between John’s childhood adventures near Kingman and his arrival in Tucson after World War II included a brief stay in Berkeley, California, before the family returned to the vicinity of Boston, Massachusetts, where John had been born (in Brockton) on November 25, 1920. Nurtured through his youth by New England’s cultural diversity, John taught himself to play a wide assortment of musical instruments (snare drums, tuba, trumpet, guitar, sousaphone, and piano) and admittedly tried the patience of several orchestra leaders with his free-form style. Years later, at age 64, John resumed piano lessons and adopted the habit of practicing melodies on a portable keyboard that he carried wherever he traveled. Many former University of Arizona graduate students remember John and his guitar at student-faculty social gatherings. Musical performance was one of several outlets through which John expressed his keen aesthetic sense.

The sites of John’s formal education included Hebron Preparatory School, Stevens Technical Institute (he intended to pursue his father’s profession, engineering), Brown University, the U.S. Navy Radio and Radar School, the University of Arizona, and Harvard University. John’s appreciation for geology began with a course in physical geology at Brown and a textbook by Longwell, Knopf, and Flint that John said he could not put down. This fascination with geology was a surprise, because one of John’s clearest childhood memories of summer camp was his dislike for learning about nature, especially rocks. Fortunately, he had completed the courses in mineralogy and crystallography before World War II interrupted his paleontology course and his tenure as a student at Brown.
After finishing his B.S. degree in geology at the University of Arizona, John accepted a position as mineralogist with the Arizona Bureau of Mines in 1946. His years with the bureau offered invaluable exposure to the diverse geology of Arizona mineral deposits through regular contacts with prospectors, identification of minerals and rocks for the public, and ongoing studies of mineral resources for the booming Arizona mining industry. During his time at the Bureau of Mines, John's interests in determinative mineralogy and Arizona localities blossomed, and almost certainly seeds for his *Mineralogy of Arizona* must have taken root.

After earning his M.S. degree from the University of Arizona in 1951, John left the Bureau of Mines, joined the faculty of the geology department, and assumed responsibility for teaching introductory mineralogy and polished-surface mineragraphy (ore microscopy) courses formerly taught by his recently deceased graduate advisor, Max Short. While he was a student, John had spent untold hours polishing Max Short's extensive reference collection of flat-surface ore mineral specimens, perhaps never fully realizing that some day he would be responsible for that significant collection. Also during this early part of John's teaching career, he met two graduate students, Spence Titley and Sid Williams, who would become his lifelong friends and colleagues.

John's teaching responsibilities expanded to include topographic surveying and field mapping, during the era before the departmental field camp was established. In 1965, John completed his Ph.D. under the direction of Clifford Frondel at Harvard, and in the process of synthesizing the monazite crystals required for his dissertation research, he destroyed the equivalent of a small fortune in Frondel's platinum crucibles. The remainder of John's teaching career centered on courses in mineralogy and crystal structure determination, and occasional stints as the dedicated director and an instructor at the field summer camp. John's service to the geology department also included two years as its chairman.

John's longtime friend Spence Titley described John's deep-rooted fascination with the order and harmony in the physical world as a reflection of a "mathematician's mind combined with the heart of an artist." John's published descriptions of crystal structures clearly document his aptitude for both the artistry and analysis of that challenging discipline.

Visits to John's office for academic advice were normally as unpredictable as they were intellectually challenging. These conversations routinely covered current events, the fine arts, music, jokes, puns, jogging, tennis, and anything else that recently had caught the attention of John's inquisitive mind. John's craft as a teacher was recognized by the Arizona Alumni Association in 1967 through its Outstanding Faculty Member Award.

John's stewardship of the Department of Geosciences' Mineralogical Museum for more than a quarter century helped preserve and expand one of the best university mineral collections during a time when support for museums was almost nonexistent. Anyone who spoke seriously with John about the museum observed a passion for both the scientific and aesthetic value of mineral specimens that has influenced the careers of many of his former students. John strongly supported the Tucson Gem and Mineral Society, recommended numerous students for that society's scholarships, and encouraged involvement in its many activities.

John Anthony's contributions to popular mineralogy were recognized in 1979 by the Rocky Mountain Federation of Mineralogical Societies American Federation Scholarship Foundation Award and the Tucson Gem and Mineral Society Lifetime Award in 1985. Anthonyite, a hydrous copper-chlorine mineral described by Sid Williams, also honors John's contributions to mineralogy. John was a Fellow of the Geological Society of America, the Mineralogical Society of America, and the American Association for the Advancement of Science.

Following his retirement from active teaching in 1986, John concentrated professionally on the *Handbook of Mineralogy* project and a second edition of *Mineralogy of Arizona*, and he actively supported the academic career of his wife Libby at the University of Texas at El Paso. In characteristic style, John also found ample time for personal interests in world travel, music,
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painting, drawing, and applications of personal computers. John Williams Anthony is survived by his wife, Libby, three children, John, Jr., Ryan, and Dorrie, and his former wife, Arline Bate-
man.

SELECTED BIBLIOGRAPHY OF J. W. ANTHONY

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