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Memorial of David R. Wones
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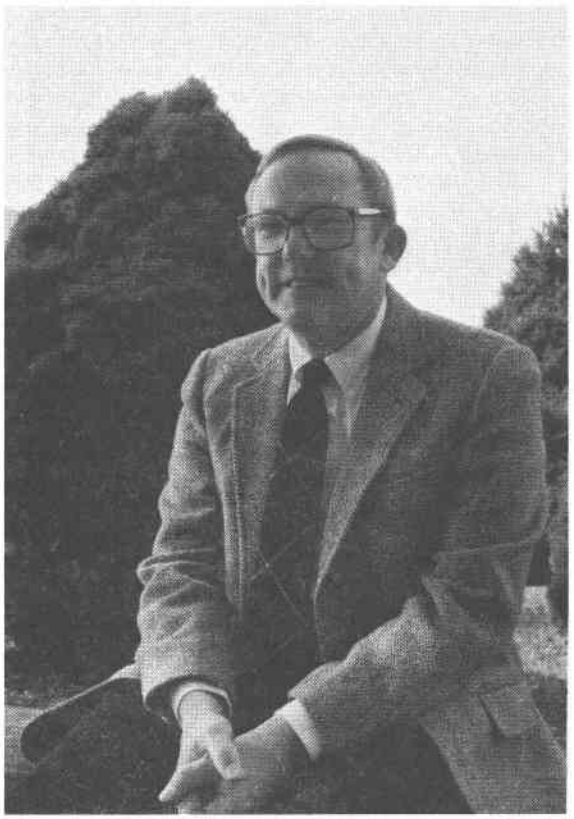
David R. Wones was born in San Francisco to Colonel Edward M. and Mrs. Hannah Pearson Wones, their second son and third child. Colonel Wones was a hospital administrator in the U.S. Army and had assignments in Colorado, Hawaii, Illinois, Kansas, Oklahoma, and Texas during Dave's youth. The Wones family loved literature, drama, and music. Dave's father was especially fond of opera and poetry, and Dave and his father spent their last moments together reciting poetry. Dave was particularly interested in the theater througout his life; he also was shamelessly addicted to composing limericks on short notice, wherein humor and zeal pseudomorphed meter.

Dave graduated in 1950 from Thomas Jefferson High School in San Antonio, Texas. In 1954, he received an S.B. from Massachusetts Institute of Technology, where he studied with H. W. Fairbairn and acquired a life-long interest in the plutonic rocks of northeastern Massachusetts. Dave's graduate work at MIT, at the suggestion of his advisor, G. J. F. MacDonald, combined thermodynamics with experimental geochemistry and petrology. As recipient of the Vannevar Bush Fellowship, he was able to do this work at the Geophysical Laboratory of the Carnegie Institution of Washington. It was there on his first visit that I met him in 1956, and we became close friends for the rest of his life. As a pre-doctoral fellow at the Geophysical Laboratory in the extraordinarily good times of 1957–1959, Dave worked closely with Hans P. Eugster on the phase relations of biotites, on the join phlogopite-annite, and on ferriannite. These studies led to his Ph.D. in 1960 from MIT. He and his colleagues continued to work on micas through the years. One of his last papers, coauthored with his close friend and colleague, David A. Hewitt, summarized 25 years of experimental data on mica stability and noted how deceptive, complex, and difficult this mineral group is. The Mica volume, No. 13 of this Society's *Reviews in Mineralogy*, was dedicated to his memory by colleagues to acknowledge his contributions and the stimulus of his interactions with them on mica problems. Wonesite, a Na-rich trioctaheral mica like phlogopite, was named in his honor in 1981 by his friends Frank S. Spear, Robert M. Hazen, and Douglas Rumble, III.

Dave joined the geological thermometry project at the U.S. Geological Survey in 1959 and performed experimental work on micas and feldspars, while interacting with a large group of experimentalists, crystallographers, and field geologists. To better formulate the experiments that would contribute most to an understanding of geological problems, he spent summers with Robert L. Smith and Roy



A. Bailey in long-established Survey field mapping projects in the Jemez Mountains, New Mexico, and with Paul C. Bateman in the Sierra Nevada. His interests in the stability of micas in the presence of silicate melt and in the relative stability of biotite and hornblende in granitic magma stem from these field seasons. With field observations as his guide, he focussed his experimental work to calibrate the physical properties of phases so that they could be measured and be interpreted to yield estimates of the intensive parameters prevailing during their formation. He also stimulated many colleagues, most notably H. R. Shaw, to develop new methods of controlling hydrogen fugacity for experiments on rock-forming minerals.

In 1967 Frank Press enticed Dave back to MIT as associate professor of geology to teach mineralogy, phase equilibria, and physical geology. Dave enjoyed teaching very much, and his enthusiasm and giving of himself attracted students, several of whom completed advanced degrees

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in geochemistry and petrology of New England granites. When the Apollo 12 and 14 lunar landings took place in 1969–71, Dave was part of the preliminary examination team that described and catalogued the lunar samples immediately after their delivery to Houston.

In 1971 Dave returned to the U.S. Geological Survey as Chief of the Branch of Experimental Geochemistry and Mineralogy. While managing and leading this diverse research group, he also began field mapping of the Lucerne pluton in Maine to meet Paul Bateman's challenge that he should obtain data for New England granitic plutons to complement the data available for Sierra Nevada plutons. He also began to compile data on the granitic plutons of the northern Appalachians, seeking patterns from their chemistry that might yield clues to magma source regions and be used to constrain models for continental accretion. On completion of his branch chief responsibilities, Dave returned to experimental petrology and intensified his mapping and petrographic and geochemical work on plutonic rocks from Maine and Massachusetts. By then he was becoming chronically overcommitted and recognized that he had more ideas and exciting things to do than there ever would be time for. He realized that he needed the interactions with many colleagues to bring some of his hopes to fruition. When the opportunity to teach was offered again in 1977 as Professor of Geology at Virginia Polytechnic Institute and State University, he accepted, knowing that the questions of thoughtful students would prevent his ever becoming "old and stodgy."

The Virginia Tech environment was ideal, and six masters degrees and one doctorate were completed under his direction. Studies by seven other students are in progress. Important new evidence for the juxtaposition of discrete crustal blocks in the northern Appalachians has been developed with his guidance and inspiration.

Dave thought very deeply about what the distribution of granitic rocks in the northern Appalachians can tell us about geologic processes. His own contributions had just begun to be published. His presidential address to this Society in 1979 on the Lucerne batholith was but the beginning. Another installment, the paper with Andrew and Loiselle in 1983, considered oxygen and strontium isotopes for a transect across the orogen from northwestern to eastern Maine. In two abstracts published posthumously, Wones considered the tectonic environment of magma generation in New England; papers on the distribution of plutons and their chemistry and field relations that were in preparation will be completed by colleagues.

Dave contributed much to the International Geological Correlation Project on the Caledonides, especially by his leadership in the study of plutonic rocks, by lecturing at IGCP conferences, by organizing a conference at Blacksburg and editing its proceedings volume, and by hosting and participating in many field trips.

Although some of us remember him more as a scientist than as an administrator, Wones served with dedication for four years as Chairman of the Department of Geological Sciences at Virginia Tech, ending his term in September 1984. A month later he was tragically killed in an automobile accident while fulfilling with typical dedication the additional responsibility to meet an old friend who came to visit the Department.

A scientist with many skills, Dave Wones to a greater extent than anyone I have known brought theory, experiment, and field observations together to interpret the origin of granitic rocks and their constituent minerals. Although technically not a great lecturer (he usually omitted labels on coordinates on graphs, for example), he was so easily able to share his excitement and the joy of discovery that all who listened understood, and old colleagues and young students alike were stimulated to greater effort, new ideas, and more commitment. Charles Gilbert has aptly cited Dave's capacity for developing and holding more relationships than most of us do, and his great patience with others and little with himself. David A. Hewitt tells of Dave's ability to increase the feeling of self worth of all his associates. Dave could convey to everyone a deep and transforming sense of the joy in sharing scientific and social life. He once told Douglas W. Rankin that one of the worst things he could think of would be to eat lunch alone. One of my greatest frustrations with his passing is the inability to share newfound knowledge from seismology about the crust in Maine that we both had sought for years to understand. I know that many others have the same sorts of frustrations in other topics, because Dave's interests and influence were very broad.

Dave Wones was interested in all aspects of natural history, especially birds. Dependent upon eye glasses and afflicted by the limited width of field of view through binoculars, he characteristically made a challenge of adversity and kept a seasonal list of species he had observed at a close enough distance to identify without binoculars. This list was long; and every field trip had the added excitement of possibly adding a new bird to his life list.

Dave's numerous allergies denied him many of the joys of life such as honey, string beans, beer, and clams. He gamely balanced his diet, when appropriate, with fruits such as pinot noir, cabernet sauvignon, chardonnay, riesling, and oaky zinfandel. There simply were no challenges—intellectual or physical—that he turned away from.

Dave was much involved with this Society. He joined it in 1959, was elected a Fellow in 1965, and was President of the Society in 1978–79. He was also a Fellow of the Amerian Geophysical Union and of the Geological Society of America.

Dave married Constance Gilman in 1958, and she and their four children Edward, Andrew, Sarah, and Suzanne survive him. He was devoted to his family and to his church. He had many social concerns and took a leading role in community responsibilities.

Dave Wones was a scholar, a naturalist, a generous and sharing person, and an exceptionally intelligent and broad scientist who happily contributed much to the lives of everyone he knew. His joyful spirit, zest for life, and boundless energy were vital parts of many lives, and he is sorely

missed. At a memorial service for him at Virginia Tech on November 16, 1984, his student, Diana N. Solie, expressed all this in his favorite verse form:

"Twas biotites that first gave him fame
Petrologists all know his name;
But to us Dave was more;
Teacher, friend, and mentor—
To learn from his life is our aim."

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