American Mineralogist, Volume 66, pages 1092–1094, 1981

Memorial of Philip Moore Orville 1930–1980

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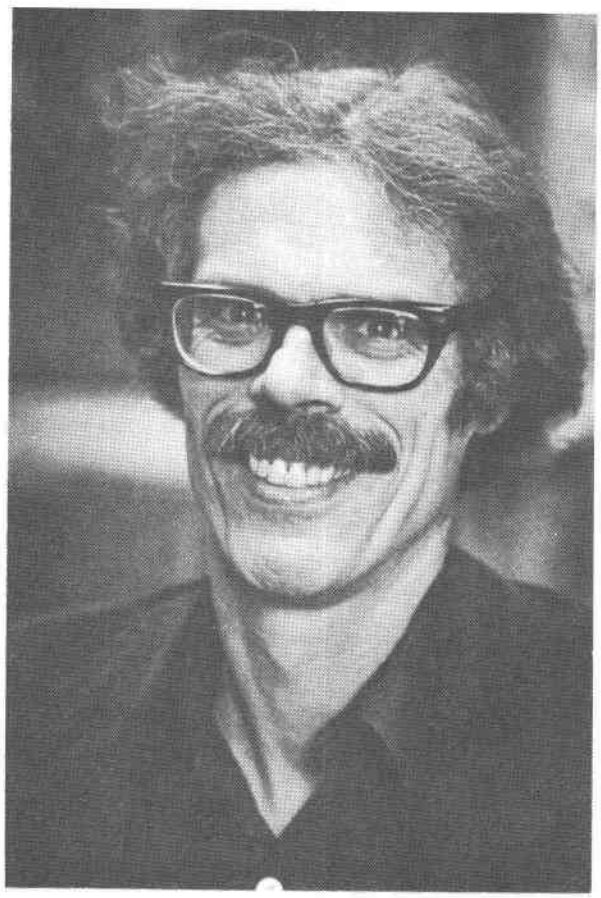
The day Phil Orville died a little bit of the fun of living was lost to all who knew him. His friends, when they learned this article was to be written, offered their help and memories, and without exception their memories carried the same message—friendship with Phil Orville was an exceptionally rewarding experience. He was an adventurous, fun-loving, open-hearted man whose concerns and efforts on behalf of his friends knew no limits. How typical it was that among the activities of his last day he sent out invitations for a party at which graduate students and other friends would gather at his home for an evening of high spirits and good humor. He had signalled the mood of the party by adding the footnote, A.B.D.—anything but disco. On the day of the party we gathered instead for a moving memorial service.



When Phil tackled anything, he did it whole heartedly, no holds barred. He started long distance running in 1967, for example, in order to get into shape for field work in the Alps, but soon competitive marathon races became his goal. Tall, lean and full of energy, no one who saw his long strides bearing him through the trails of his beloved East Rock Park in New Haven or along the city streets of a marathon course, could imagine that such vibrant good health could be struck down so suddenly and so unexpectedly. There was, in his paternal lineage, a history of middle-life heart trouble, but no one, least of all he and his family, had any inkling that he would extend that history by suffering a massive and fatal heart attack during his sleep on Wednesday, April 2, 1980.

Philip Moore Orville was born in Ottawa, Illinois, on the 24th of February, 1930, the son of Harold C. and Lorene Moore Orville. Much of his schooling was in California where he attended the Santa Monica High School and later the California Institute of Technology (B.S., 1952). Following Caltech, he spent the academic year 1952–53 as a Fulbright student at the University of Copenhagen prior to entering into graduate studies at Yale University where he earned his M.A. in 1954 and Ph.D. in 1958 with a thesis titled "The composition of some unzoned pegmatites in the Keystone District, South Dakota."

Orville's professional career was directly and increasingly distinguished as his talents and abilities were recognized. During 1956–57, in order to complete the necessary research for his Ph.D. thesis, he was a Predoctoral Fellow at the Carnegie Institution of Washington's Geophysical Laboratory; this was followed by an appointment as Postdoctoral Fellow for the years 1957–60. The years at the Geophysical Lab. were happy and productive ones as he investigated

0003–004X/81/0910–1092$02.00

topics that arose from his thesis studies—the geochemistry and petrology of the alkali feldspars. They were also years when he associated with and learned from the group of people centered at the Lab., who contributed so much to the revolution of experimental petrology. Friends who shared those years at the Geophysical Lab. such as Werner Schreyer, David Wones, Gene Roseboom and Gary Ernst remember Phil's outgoing, gregarious ways and his ready willingness to help the newcomer get started and feel comfortable among his peers. In 1960 he moved as an Assistant Professor to Cornell University where he taught petrology, petrography, mineralogy and geochemistry. The Cornell years were short, busy and sometimes frustrating, but they confirmed Phil's resolve to be a teacher and deepened his understanding of the needed interaction between field observations, thermochemistry and laboratory tests. Art Bloom, who joined the Cornell faculty at the same time, remarked on some of the difficulties Phil faced as he brought new techniques to an old and tradition-bound department, but he remarked too on the way Phil found fun among the chores even to the point of holding a banquet at which "the hot dogs were grilled over compressed charcoal blocks from the old blowpipe-analysis storage cabinet." In 1962 Orville returned to Yale as an Associate Professor in which rank he remained until 1972 when he was appointed the first incumbent of the Adolph Knopf Chair of Petrology, a chair he occupied with great distinction until his untimely death.

From the record of Phil Orville's published works[1] it is obvious that feldspars, exchange reactions and solid–liquid equilibria were the topics that challenged him most. Yet he never lost sight of the fact that his studies were made in order to understand the rocks he saw in the field. If ever it can be said that a field man brought problems into the laboratory, it can be said for Phil Orville. When David R. Wones remarked on this blend of the practical and the experimental, he wrote, ". . . Phil Orville will always be remembered as the man who gave us an alkali feldspar solvus of substance. Carefully reversed and done with meticulous care, Orville's solvus has been a standard that has withstood the test of time. Still used by many theoreticians, this is one of the great gifts of experimental petrology to the field man."

Not all of Phil Orville's accomplishments are to be sought in his published papers. In 1967, during his tenure as a Guggenheim Fellow, he was introduced to Alpine geology and later, in 1970, explored it further during an absorbing sabbatical leave in Basel. These opportunities to meet and get to know the petrological community in Europe were very important to Orville. His European colleagues played an important role in his life from then on, and he in turn had a major impact on his new friends. In 1971 Phil and Hugh Greenwood organized a Gordon Conference on the "Role of Volatiles in Metamorphism" and to that conference Orville invited some of his European colleagues. Commenting on that conference, one of the attendees, Alain Weisbrod, remarked "for me, as for some other French people, Phil was the man who gave us the opportunity to join the international scientific community." The success of that 1971 conference led Orville to arrange an even more important and influential conference in 1974—a NATO Advanced Study Institute, again around the topic of "Volatiles in Metamorphism," but this time the location was Europe. This extraordinary conference, which balanced lectures, field trips and good fellowship, was considered by Phil as one of the best—sometimes he even suggested it was the best—things he did for geology. Certainly those who attended that 1974 Conference felt the same way; many of his friends remarked on the impact of the conference on petrology and one went so far as to suggest that all of the attendees would remember the "fantastic balance of lectures and field trips. . . for the rest of their existence as one of the very highlights of their geological life."

Teaching at all levels was a passion and a deeply felt responsibility. Phil was not a good lecturer but he so threw himself into his work that he was a very good teacher. Graduate students who worked with him have carried his studies of feldspars, scapolites and metasomatism to new heights—those students must be numbered among his gifts to science. But so too must his teaching of the many colleagues who came to spend time with him. Somehow he managed to be at ease with and serve as a teacher to colleagues who held high ranking positions; no sense of pomposity, possessiveness or propriety was ever allowed to intrude. Indeed many of them remarked on the influence he had on them—Volkmar Trommsdorff remarked, for example, that "Phil was very influential on the young generation of Swiss geologists. He was *the one* who turned us on to use thermodynamics to solve petrological problems . . .". And all geologists

[1] To receive a bibliography, order Document AM-81-175 from the Business Office, Mineralogical Society of America, 2000 Florida Avenue, N.W., Washington, D.C. 20009. Please remit $1.00 in advance for the microfiche.

benefited from another role—a role in which Phil took particular pride—the editorship of the American Journal of Science. He first joined A.J.S. as an Associate Editor in 1968, and served as an Editor from 1971 onward. Under his direction, A.J.S. became the premier journal for papers concerned with the use of thermodynamics in metamorphic petrology.

Phil Orville's door was always open for students and visitors; the openness and welcome found inside were an expression of the open friendly family he and his wife Lise Ore, married in 1957, built together. His brother-in-law, Richard Lytle, observed that Phil "seemed nourished by companionship. It was as if he wanted to expand the wonderful family that he was making together with Lise, and it would include any and all who needed a family. Their warm and expansive household which is filled with so much compassion has been a source of comfort and joy to us all." He could also have remarked that Phil's warmth and compassion have not disappeared—they have been transmitted to his daughters Kate, Wendy and Nina. Perhaps this was Phil's greatest teaching role.